# Technical Memorandum

# Phase 3 Chemical Data Gap Investigation Sampling Results
# Volume 1 of 2 - Report
# Subarea 7 and Northern Buffer Zone in Area IV




# Santa Susana Field Laboratory
# Ventura County, California

***Prepared for:***

Department of Energy
4100 Guardian Street, Suite 160
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***Prepared by:***

CDM Federal Programs Corporation (CDM Smith)

***Prepared under:***
US Department of Energy, EM Consolidated Business Center
Contract DE-EM0001128
CDM Task Order DE-DT0003515

**October 2014**

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Contract DE-EM0001128
CDM Smith Task Order DE-DT0003515

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# Acronyms and Abbreviations

| | |
|---|---|
| %D | percent difference/percent drift |
| %R | percent recovery |
| mg/L | milligram per liter |
| ng/kg | nanogram per kilogram |
| pg/L | picogram per liter |
| µg/L | microgram per liter |
| AOC | Administrative Order on Consent |
| bgs | below ground surface |
| CAS | chemical abstract number |
| CDD | chlorinated dibenzo-p-dioxins |
| CDF | chlorinated dibenzofurans |
| CDM Smith | CDM Federal Programs Corporation |
| CoC | chain of custody |
| DOE | Department of Energy |
| DPT | direct push technology |
| DQI | data quality indicator |
| DQO | data quality objective |
| DTSC | Department of Toxic Substances Control |
| DUAR | data usability assessment review |
| EFH | extractable fuel hydrocarbon |
| EMPC | estimated maximum possible concentration |
| EPA | U.S. Environmental Protection Agency |
| FSDF | Former Sodium Disposal Facility |
| FSDS | field sample data sheet |
| FSP | field sampling plan |
| ft | feet |
| FTL | field team leader |
| GIS | geographic information system |
| GRO | gasoline range organics |
| HSA | Historical Site Assessment |
| HxCDF | Hexachlorodibenzofuran |
| ICP | inductively coupled plasma |
| ISL | interim screening level |
| LCS | laboratory control sample |
| LCSD | laboratory control sample duplicate |
| LUT | look up table |
| MDL | method detection limit |
| MS | matrix spike |
| MSD | matrix spike duplicate |
| MWH | MWH Americas, Inc. |
| NBZ | Northern Buffer Zone |
| ND | nondetect |
| NDMA | n-Nitrosodimethylamine |
| NW | Northwest |

| | |
|---|---|
| OSWER | Office of Solid Waste and Emergency Response |
| PAH | polycyclic aromatic hydrocarbon |
| PARCCS | precision, accuracy, representativeness, comparability, completeness and sensitivity |
| PCB | polychlorinated biphenyl |
| PCT | polychlorinated triphenyl |
| PECDF | pentachlorodibenzofuran |
| PID | photoionization detector |
| QA | quality assurance |
| QAPP | quality assurance project plan |
| QC | quality control |
| RCRA | Resource Conservation and Recovery Act |
| RL | reporting limit |
| RMHF | Radioactive Material Handling Facility |
| RPD | relative percent difference |
| SDG | sample delivery group |
| SIM | selective ion monitoring |
| SOP | standard operating procedure |
| SOW | statement of work |
| SRE | Sodium Reactor Experiment |
| SSFL | Santa Susana Field Laboratory |
| SVOC | semivolatile organic compound |
| TCDD | 2,3,7,8-tetrachlorodibenzo-p-dioxin |
| TEQ | toxicity equivalence |
| TEF | toxicity equivalence factor |
| TM | technical memorandum |
| TPH | total petroleum hydrocarbon |
| Master FSP | Master Field Sampling Plan |

# Section 1
# Introduction

This Technical Memorandum (TM) presents the results of chemical analyses of surface and subsurface soil samples collected between April and December 2013 from Phase 3 soil borings within Subarea 7 and the Northern Buffer Zone (NBZ) at the Santa Susana Field Laboratory (SSFL) site in Ventura County, California. This work was performed under three planning documents:

- *Master Field Sampling Plan for Chemical Data Gap Investigation Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Federal Programs Corporation [CDM Smith] 2012a) (Master Field Sampling Plan [FSP])
- *Addendum No. 6 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California, Subarea 7* (CDM Smith 2012b) (Addendum to the Master FSP)
- *Addendum No. 9 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Northern Buffer Zone, Santa Susana Field Laboratory, Ventura County, California,* (CDM Smith 2013 (Addendum to the Master FSP))

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

The Addenda to the Master FSP includes several sample locations for trenches and test pits in Subarea 7 and NBZ. All of the trenches and test pits that exist in the various Area IV subareas will be sampled at one time (during subsequent Phase 3 sampling) and the associated analytical results will be reported in a separate TM for the trenching and "go-back" sampling.

This TM also provides a description of the sampling activities and a discussion of the analytical data review findings for Phase 3 sampling in Subarea 7 and NBZ. The TM does not provide an interpretation of the results. The data provided in this TM are intended to be combined with data collected under the prior Resource Conversation and Recovery Act (RCRA) Facility Investigation and the chemical collocated sampling program (Phase 1 sampling) to support the Soil Remedial Action Implementation Plan for chemicals in soil in Area IV. The collocated sampling program was Phase 1 of the chemical investigation activities under the Administrative Order on Consent (AOC) or Remedial Action [Docket Number HSA-CO 10/11-037] between the U.S. Department of Energy (DOE) and the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) (DTSC 2010).

## 1.1 Objective and Basis for Data Gap Investigation Sampling in Subarea 7 and NBZ

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

The document *Subarea 7 Data Gap Analysis Technical Memorandum, Santa Susana Field Laboratory, Ventura County, California*, (SA 7 Data Gap Analysis TM) was prepared by MWH America's, Inc. (MWH) and included as an attachment to *Addendum No. 6 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California, Subarea 7* (CDM Smith 2012b). The document *NBZ Data Gap Analysis Technical Memorandum, Santa Susana Field Laboratory, Ventura County, California*, (NBZ Data Gap Analysis TM) was also prepared by MWH and included as an attachment to *Addendum No. 9 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California, NBZ* (CDM Smith 2012b). The data gap analysis provides the rationale for selection of each sample location and the chemical sampling rationale.

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

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

## 1.2 Geology

Subarea 7and NBZ of Area IV are within the Chatsworth Formation, which is composed predominantly of sandstone interbedded with siltstone and shale. The overlying native soils encountered in Subarea 7 and the NBZ range from predominantly silty sands to sandy silts at shallow depths with increasing clay content to 10 feet below ground surface (bgs). Disturbed areas in Subarea 7 and the NBZ are comprised of fill soils of unknown origin and debris such as concrete, asphalt, and wood. The contact with lithified Chatsworth Formation at many soil boring locations occurs between 2 and 10 feet bgs in Subarea 7. Contact with the Chatsworth Formation in the NBZ occurs between 0.5 and 5 feet bgs. Additional information regarding the geology in Area IV can be found in Volume I of *Group 5 – Central Portion of Areas III and IV RCRA Facility Investigation Report, Santa Susana Field Laboratory, Ventura County, California* (CH2M Hill 2008).

## 1.3 Technical Memorandum Organization

This TM includes the following sections:

- **Section 1 - Introduction** – Summarizes the basis and objectives of Phase 3 soil sampling in Subarea 7 and NBZ
- **Section 2 - Field Sampling and Analytical Methods** – Provides details regarding field sampling procedures and laboratory analytical methods
- **Section 3 – Subarea 7 and NBZ Phase 3 Soil Sample Analytical Results** – Provides a summary of detected analytical results for each chemical; the appendices provide the overall results

- **Section 4 - Data Usability Assessment** – Discusses the results of the data review and validation processes
- **Section 5 – References** – Identifies the documents used in this report

# Section 2
# Field Sampling and Analytical Methods

Ninety- two soil samples were collected from 65 Phase 3 locations in Subarea 7 between April 8 and October 2, 2013. Seventy-six samples were collected from 55 Phase 3 locations in NBZ between December 3 and December 17, 2013. The majority of the Phase 3 borings in Subarea 7 and NBZ were advanced to depths of between approximately 0.3 and 5 feet bgs, with a few locations reaching the total depth of 10 feet bgs. One location in the NBZ was inaccessible and unsafe to sample. Sample locations and depths from Subarea 7 are shown on Figure 2-1 and the sample locations in NBZ are shown on Figure 2-2. Appendix E also provides the specific boring log for each sample location.

Tables 2-1and 2-2 include the data gap rationale for sampling at each Subarea 7 and NBZ location respectively, along with the location description, sample numbers, sample type, date of sample collection, depth of boring, analyses sampled for, description of any fill materials encountered, and reasons for not sampling some of the locations proposed in the Data Gap Analysis TMs (CDM Smith 2012b and 2013). Locations not sampled are highlighted in yellow.

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

## 2.1 Surface Sampling

Prior to the collection of the surface soil samples in Subarea 7 and NBZ, the surface of each sample area was prepared by CDM Smith sampling personnel by removing leaves, grass, and any other surface debris. Surface samples were collected at 60 locations in Subarea 7 and at 48 locations in the NBZ from the ground surface to 6 inches bgs using a slide hammer equipped with a 2-inch diameter and 6-inch long stainless steel sample liner in accordance with SSFL SOP 2 (Surface Soil Sampling) of the Master FSP. The slide hammer sampler was pounded into the soil until the top of the sampler was flush with the ground surface and then removed from the soil. The sample sleeve was removed from the sampler and both ends capped with a Teflon® liner and a plastic cap.

Surface samples were collected at five locations in Subarea 7 and seven locations in the NBZ using the direct push technology (DPT) rig by transferring the soil from the acetate sampling sleeve into one or more glass jars, depending on the volume of sample material needed for the required analyses. This sampling procedure is the same as the subsurface soil sampling procedure. The collection of the samples directly from the acetate sleeves is a deviation from SSFL SOP 2 (Surface Soil Sampling) of the Master FSP for collection of surface soil samples (see Section 2.7).

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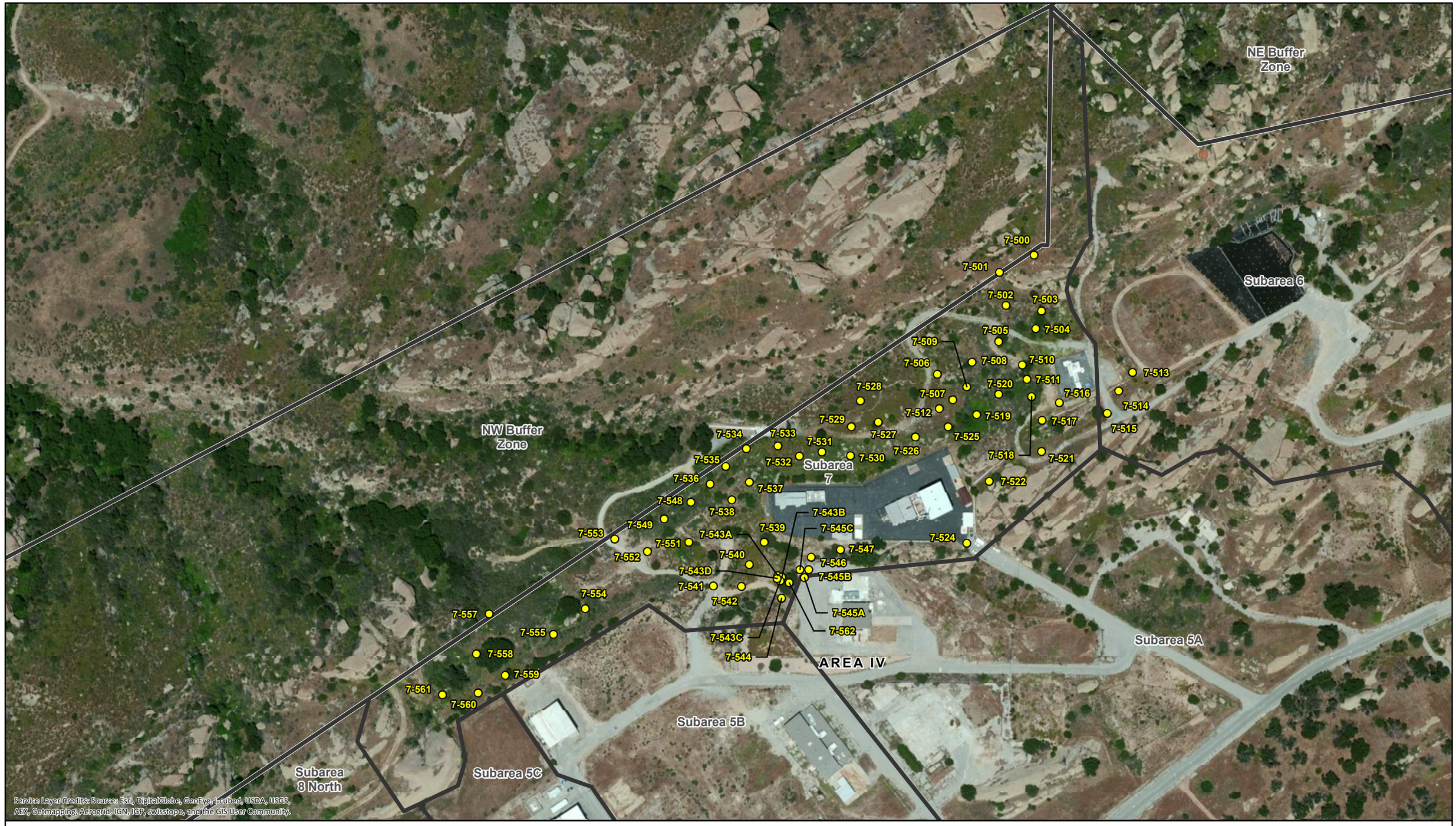



**Legend**

- Sample Location
- Area IV Subarea
- Site Area

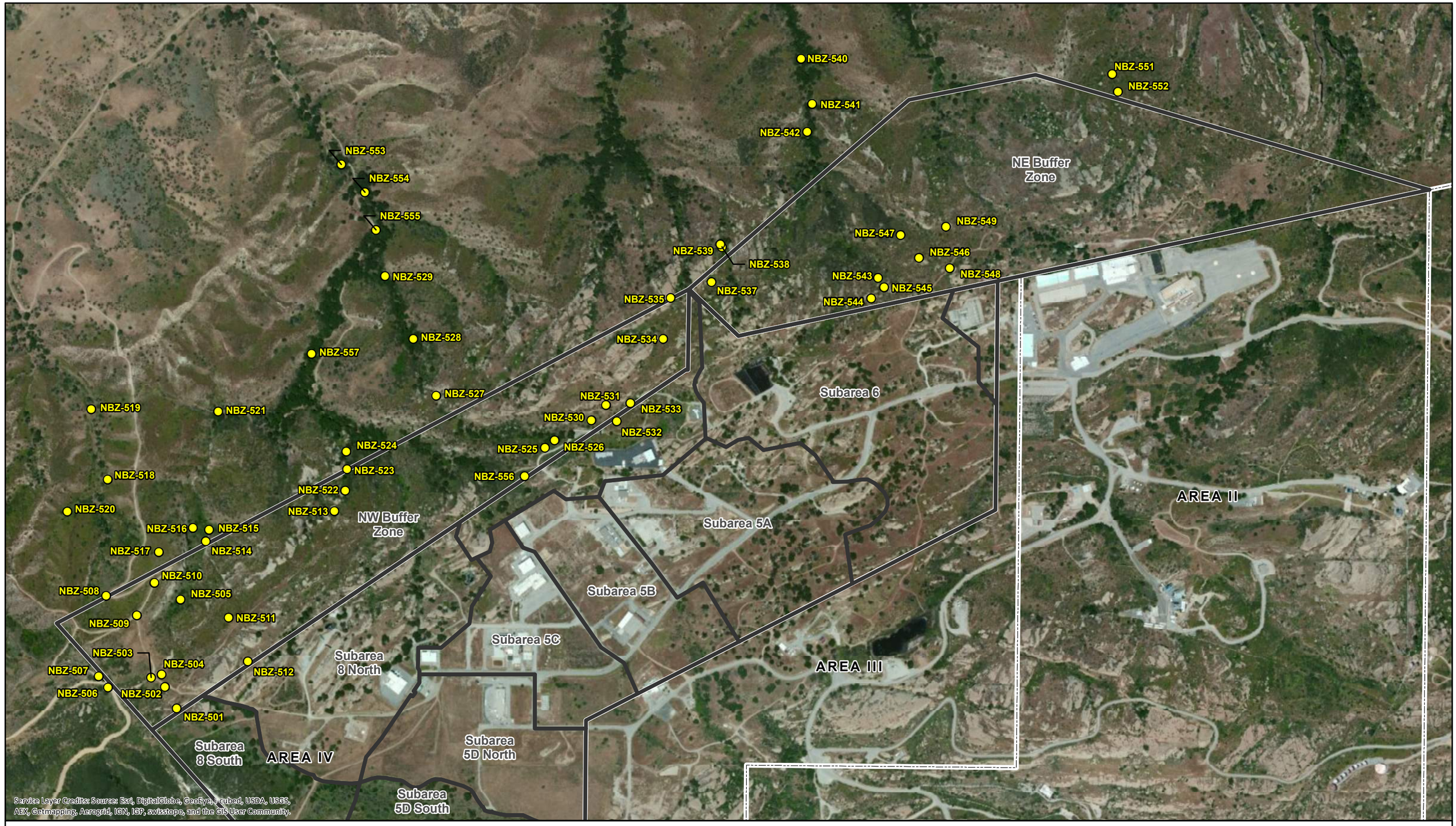
# Subarea 7 Phase 3 Sample Locations

0 105 210 420 Feet

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

CDM Smith

C:_projects\SantaSusana\GIS\MXD\SSFL_Phase3_7_DG_Sampling_Locations_20140708.mxd 9/12/2014




# Northern Buffer Zone Phase 3 Sample Locations

**Legend**

- Sample Location
- Area IV Subarea
- Site Area

0 312.5 625 1,250 Feet

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

CDM Smith

C:_projects\SantaSusana\GIS\MXD\SSFL_Phase3_NBZ_DG_Sampling_Locations_20140708.mxd 9/12/2014

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 7_DG-500 | Hillside north of B4133 | Location targets surface water pathway along road downslope from elevated dioxin and TPH detections. Bedrock anticipated less than 5 feet bgs. If deeper soil encountered, collect and analyze sample just above bedrock. | 2.6 | None indicated. Refusal on bedrock. | 04/17/13 | Surface | SL-500-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-501 | Hillside north of B4133 | Location targets surface water pathway along road downslope from elevated dioxin and TPH detections. Bedrock anticipated less than 5 feet bgs. If deeper soil encountered, collect and analyze sample just above bedrock. | 1 | None indicated. Refusal on bedrock. | 04/17/13 | Surface | SL-501-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-502 | Hillside northwest of B4133 | Location targets area of cleared vegetation observed in aerial photographs during EPA HSA; also targets surface water pathway/road downslope of elevated dioxin and TPH detects southwest of B4686 (SRE Temporary Waste Storage Area). Shallow bedrock anticipated. If deeper soils are present collect and analyze sample just above bedrock. | 0.7 | None indicated. Refusal on bedrock. | 04/17/13 | Surface | SL-502-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-503 | Hillside north of B4133 | Stepout for dioxins and pesticides to the southeast; also targets magnetometer anomaly. Shallow bedrock anticipated (less than 5 feet bgs). | 1.2 | None indicated. Refusal on bedrock. | 04/22/13 | Surface | SL-503-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-504 | Northwest of B4133 | Stepout for PCBs, dioxins and pesticides detected to the east. Shallow bedrock. | 5 | None indicated. Refusal on bedrock. | 04/22/13 | Surface | SL-504-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/22/13 | Subsurface | SL-504-SA7-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| 7_DG-505 | Northwest of B4133 | Stepout for TPH detect to the south; also targets area of cleared vegetation observed in aerial photographs during EPA HSA. Shallow refusal anticipated. | 2.8 | None indicated. Refusal on bedrock. | 04/17/13 | Surface | SL-505-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-506 | Northeast of B4021 Leach Field | Stepout for elevated TPH to the northwest and east. Bedrock anticipated less than 5 feet bgs. | 0.7 | None indicated. Refusal on bedrock. | 04/25/13 | Surface | SL-506-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-507 | Northeast of B4021 Leach Field | Stepout in surface water pathway downslope from TPH and dioxins. Shallow bedrock anticipated (approximately 5 feet bgs); however potential for deeper soils due to sediment deposition/collection. If deeper soils encountered, collect and analyze sample just above bedrock. | 0.9 | None indicated. Refusal on bedrock. | 04/24/13 | Surface | SL-507-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-508 | Hillslope west of B4133 | Stepout for upslope dioxins and TPH. Shallow bedrock anticipated (less than 5 feet bgs). | 1 | Fill described as poorly graded sand with metal. Refusal on bedrock. | 04/25/13 | Surface | SL-508-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-509 | Hillslope west of B4133 | Stepout in surface water pathway downslope from PAHs, dioxins, metals, and TPH. Shallow bedrock refusal anticipated. | 1.4 | None indicated. Refusal on bedrock. | 04/25/13 | Surface | SL-509-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |

Table 2-1
Soil Samples Designated to be Collected from Subarea 7
Phase 3

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 7_DG-510 | Hillslope west of B4133 | Stepout in surface water pathway downslope of PAHs, PCBs, TPH, dioxins, metals, and pesticides; defines extent of Area West of B4133 Clearly Contaminated Area. | 1.2 | None indicated. Refusal on bedrock. | 04/22/13 | Surface | SL-510-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/22/13 | Surface (Duplicate) | SL-810-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-511 | Hillslope west of B4133 | Stepout to delineate downslope extent of clearly contaminated area (PAHs, PCBs, dioxins, TPH, and pesticides); also stepout for TPH, dioxins, and metals to the west. | 1.4 | None indicated. Refusal on bedrock. | 04/19/13 | Surface | SL-511-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-512 | Northeast of B4021 Leach Field | Stepout in surface water pathway downslope of TPH detects. Shallow bedrock anticipated (approximately 5 feet bgs); however potential for deeper soils due to sediment deposition/collection. If deeper soils encountered, collect and analyze sample just above bedrock. | 3.7 | None indicated. Refusal on bedrock. | 04/23/13 | Surface | SL-512-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-513 | Hillslope east of B4133 (above SRE asphalt-lined ditch) | Stepout for PCBs, dioxins, and TPH on hillslope east of B4133 area. Location delineates potential migration downslope into asphalt-lined ditch surrounding SRE. Analyze pesticides since detected in drainage. Shallow bedrock refusal anticipated. If deeper soils are present, collect and analyze sample just above bedrock. | 1.7 | None indicated. Refusal on bedrock. | 06/04/13 | Surface | SL-513-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 06/04/13 | Surface (Duplicate) | SL-913-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-514 | Southeast of B4133 | Stepout for PCBs, TPH, and dioxins. Shallow bedrock refusal anticipated. If deeper soils are present, collect and analyze sample just above bedrock. | 1.9 | None indicated. Refusal on bedrock. | 06/06/13 | Surface | SL-514-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-515 | Northeast of Interim Storage Facility (ISF) | Stepout downslope from dioxin and TPH detections at the ISF. Shallow bedrock refusal anticipated (less than 5 feet bgs). If deeper soils are present, collect and analyze sample just above bedrock. | 0.3 | None indicated. Refusal on bedrock. | 06/06/13 | Surface | SL-515-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-516 | Southwest corner of B4133 | Stepout upslope of PAHs, PCBs, and dioxins, and downslope from TPH detections in B4133 operational area. | 0.5 | No fill in soil above concrete at 0.5 ft bgs. Boring ceased due to suspected concrete vault or pipe. | 06/04/13 | Surface | SL-516-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-517 | Downslope of ISF | Stepout from dioxins to the west. Bedrock anticipated at approximately 5 feet bgs. If deeper soil is present, collect and analyze sample just above bedrock. | 2.9 | None indicated. Bedrock at 0.5 ft bgs Refusal on bedrock. | 04/22/13 | Surface | SL-517-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-518 | West of B4133 | Stepout for PAHs, PCBs, dioxins, metals and TPH; also targets geophysical anomaly. Shallow bedrock refusal anticipated. If deeper soil is present, collect and analyze sample just above bedrock. | 0.6 | None indicated. Refusal on bedrock. | 04/19/13 | Surface | SL-518-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 7_DG-519 | West of B4133 | Location targets surface water pathway downslope from B4133 area. Shallow bedrock observed in the area (less than 5 feet bgs); | 2.8 | None indicated. Refusal on bedrock. | 04/25/13 | Surface | SL-519-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/25/13 | Surface (Duplicate) | SL-819-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/25/13 | Subsurface | SL-519-SA7-SB-2.0-3.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-520 | Hillslope southwest of B4133 | Stepout in surface water pathway downslope from dioxins and TPH. Bedrock anticipated at less than 5 feet bgs. | 3.1 | None indicated. Refusal on bedrock. | 04/19/13 | Surface | SL-520-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-521 | West of ISF | Stepout for PCBs, dioxins, TPH, and pesticides. Bedrock anticipated at approximately 5 feet bgs. If deeper soil is present, collect and analyze deeper sample just above bedrock. | 1.5 | None indicated. Refusal on bedrock. | 04/15/13 | Surface | SL-521-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-522 | East of B4044 | Location targets surface water pathway upslope from elevated PAHs, PCBs, dioxins, TPH, and pesticides. Shallow bedrock refusal anticipated. | 2.7 | None indicated. Refusal on bedrock. | 04/15/13 | Surface | SL-522-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-524 | Paved road entering RMHF | Location targets entrance to RMHF and addresses potential storage (historical photograph provided by public stakeholder showed storage/staging in area). Shallow bedrock anticipated (less than 5 feet bgs). | 2.2 | None indicated. Refusal on bedrock. | 06/04/13 | Surface | SL-524-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 06/04/13 | Subsurface | SL-524-SA7-SB-1.0-2.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| | | | | | 06/04/13 | Subsurface (Duplicate) | SL-924-SA7-SB-1.0-2.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |

Table 2-1
Soil Samples Designated to be Collected from Subarea 7
Phase 3

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 7_DG-525 | Southeast of the B4021 Leach Field | Stepout downslope of PAHs, dioxins, and TPH in the RMHF asphalt swale (RMHF Northern Fenceline Clearly Contaminated Area). Bedrock anticipated less than 5 feet bgs. If deep soil encountered, collect and analyze sample just above bedrock to assess potential migration from swale. | 10 | None indicated. Bedrock at 7.5 ft bgs. Refusal on bedrock. | 04/23/13 | Surface | SL-525-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 06/03/13 | Subsurface | SL-525-SA7-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| | | | | | 04/23/13 | Subsurface | SL-525-SA7-SB-6.5-7.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 06/03/13 | Subsurface | SL-525-SA7-SB-9.5-10.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| 7_DG-526 | South of the B4021 Leach Field | Stepout downslope of PAHs, dioxins, and TPH in the RMHF asphalt swale (RMHF Northern Fenceline Clearly Contaminated Area). Bedrock anticipated less than 5 feet bgs. If deep soil encountered, collect and analyze sample just above bedrock to assess potential migration from swale. | 10 | None indicated. Bedrock at 4.5 ft bgs. Refusal on bedrock. | 04/23/13 | Surface | SL-526-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/23/13 | Subsurface | SL-526-SA7-SB-3.5-4.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| | | | | | 06/03/13 | Subsurface | SL-526-SA7-SB-9.0-10.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| 7_DG-527 | Northwest of the B4021 Leach Field | Stepout downslope of TPH at the leach field excavation area. Shallow bedrock anticipated. If deep soil encountered, collect and analyze sample just above bedrock. | 3.7 | None indicated. Refusal on bedrock. | 04/24/13 | Surface | SL-527-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/24/13 | Subsurface | SL-527-SA7-SB-2.5-3.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| 7_DG-528 | North of drainage and RMHF hillslope | Stepout upslope of dioxins in drainage; also addresses area downslope of TPH detect on hillside. Shallow bedrock anticipated (5 feet bgs or less). If deeper soil is present, collect and analyze sample just above bedrock. | 2 | None indicated. Refusal on bedrock. | 04/24/13 | Surface | SL-528-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-529 | Hillslope north of B4664 | Stepout for elevated TPH; location also addresses potential surface water migration pathway from B4021 leach field and the debris area north of B4664. Shallow bedrock anticipated. If deep soil encountered, collect and analyze sample just above bedrock. | 2.1 | None indicated. Refusal on bedrock. | 04/24/13 | Surface | SL-529-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 7_DG-530 | Hillslope north of RMHF | Stepout downslope from elevated detects for PAHs, TPH, and dioxins in the asphalt swale (RMHF Northern Fenceline Clearly Contaminated Area) and TPH in the debris area north of B4664 to the east. Shallow bedrock anticipated (less than 5 feet bgs). If deep soil encountered, collect and analyze sample just above bedrock to assess potential migration from swale. | 1.9 | None indicated. Refusal on bedrock. | 04/24/13 | Surface | SL-530-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-531 | Hillslope north of RMHF | Stepout for elevated PAHs, TPH, and dioxins downslope of the RMHF asphalt swale, and Northern Fenceline Clearly Contaminated Area. Shallow bedrock anticipated (5 feet bgs or less). If deeper soil is present, collect and analyze sample just above bedrock to assess potential migration from swale. | 0.7 | None indicated. Refusal on bedrock. | 04/18/13 | Surface | SL-531-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-532 | Hillslope north of RMHF | Stepout for elevated PAHs, dioxins, metals and TPH in the asphalt swale (RMHF Northern Fenceline Clearly Contaminated Area) and TPH in the debris area north of B4075 to the west; also characterizes area downslope of the RMHF asphalt swale (RMHF Northern Fenceline Clearly Contaminated Area). Shallow bedrock anticipated (less than 5 feet bgs). If deep soil encountered, collect and analyze sample just above bedrock to assess potential migration from swale. | 4 | None indicated. Refusal on bedrock. | 04/18/13 | Surface | SL-532-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/18/13 | Subsurface | SL-532-SA7-SB-3.0-4.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| 7_DG-533 | Hillslope north of B4075 | Stepout downslope of TPH in the debris area north of B4075; also characterizes area downslope from asphalt swale and RMHF Northern Fenceline Clearly Contaminated Area. Shallow bedrock anticipated. If deep soil encountered, collect and analyze sample just above bedrock to assess potential migration from swale. | 3 | None indicated. Refusal on bedrock. | 04/18/13 | Surface | SL-533-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 06/03/13 | Subsurface | SL-533-SA7-SB-2.5-3.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| 7_DG-534 | Hillslope northwest of RMHF | Stepout for elevated TPH in the debris area north of B4075; also characterizes area downslope from RMHF swale and Northern Fenceline Clearly Contaminated Area. Shallow bedrock anticipated (5 feet bgs or less). If deeper soil is present, collect and analyze sample just above bedrock to assess potential migration from swale. | 6.8 | None indicated. Refusal on bedrock. | 04/12/13 | Surface | SL-534-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/15/13 | Subsurface | SL-534-SA7-SB-5.5-6.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| 7_DG-535 | Northeast of catch basin | Location targets surface water pathway from catch basin along road and addresses potential migration of PAHs, TPH, and dioxins detected upgradient. Bedrock anticipated less than 5 feet bgs. If deep soil encountered, collect and analyze just above bedrock. | 10 | None indicated. Refusal on bedrock. | 04/12/13 | Surface | SL-535-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/12/13 | Subsurface | SL-535-SA7-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| | | | | | 04/12/13 | Subsurface | SL-535-SA7-SB-9.0-10.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |

Table 2-1
Soil Samples Designated to be Collected from Subarea 7
Phase 3

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 7_DG-536 | Northeast of RMHF Catch Basin | Stepout for elevated PAHs, TPH and dioxins in RMHF Catch Basin Clearly Contaminated Area; location positioned in surface water pathway to addresses potential surface water migration from the catch basin. Shallow bedrock anticipated (5 feet bgs or less). If deeper soil is present, collect and analyze sample just above bedrock. | 7.1 | None indicated. Refusal on bedrock. | 04/11/13 | Surface | SL-536-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/12/13 | Subsurface | SL-536-SA7-SB-3.0-4.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| | | | | | 04/12/13 | Subsurface (Duplicate) | SL-836-SA7-SB-3.0-4.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| 7_DG-537 | Hillslope northwest of RMHF | Stepout for elevated PAHs, dioxins, metals, and TPH downslope of the RMHF asphalt swale, and Northern Fenceline Clearly Contaminated Area. Shallow bedrock anticipated (5 feet bgs or less). If deeper soil is present, collect and analyze sample just above bedrock to assess potential migration from swale. | 1.9 | None indicated. Refusal on bedrock. | 04/15/13 | Surface | SL-537-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-538 | Northeast of RMHF Catch Basin | Stepout for elevated PAHs, TPH and dioxins and defines northwest extent of RMHF Catch Basin Clearly Contaminated Area. Shallow bedrock anticipated (less than 5 feet bgs). | 2.8 | None indicated. Refusal on bedrock. | 04/15/13 | Surface | SL-538-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-539 | North of B4028 | Stepout for TPH and metals at B4028 and provides representative data downslope of the RMHF southern slope. If deeper soils encountered, collect 10-foot sample and analyze to assess chemical migration due to surface water runoff from RMHF asphalt area. | 2.5 | None indicated. Refusal on bedrock. | 04/08/13 | Surface | SL-539-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-540 | B4811 | Location targets the previously sampled cooling tower formerly located at B4811. Analyze for corrosion inhibitors to characterize former cooling tower; dioxins and PCB analyses added to complete general characterization of the area. | 1.4 | None indicated. Refusal on bedrock. | 04/09/13 | Surface | SL-540-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Formaldehyde EPA 8315, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Hexavalent Chromium EPA 7196/7199, TPH-EFH EPA 8015 |
| | | | | | 04/09/13 | Surface (Duplicate) | SL-840-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Formaldehyde EPA 8315, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Hexavalent Chromium EPA 7196/7199, TPH-EFH EPA 8015 |
| 7_DG-541 | South of RMHF Catch Basin | Location targets the pipeline leading from the RMHF Catch Basin to the discharge inlet to the south and also serves as a stepout for dioxins and metals to the north. Shallow bedrock anticipated (less than 5 feet bgs). If deep soil encountered, collect and analyze sample just above bedrock. | 2.9 | 0-3.0 ft bgs: fill described as igneous/metamorphic and sandstone gravel. Refusal on bedrock. | 10/02/13 | Surface | SL-541-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 10/02/13 | Subsurface | SL-541-SA7-SB-2.0-3.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 7_DG-542 | Southwest of B4028 | Stepout for TPH and metals at B4028 to the northeast, PAH to the east, and dioxins and metals to the northwest; location is in area that is downslope of B4028 area. Shallow bedrock anticipated (less than 5 feet bgs). | 2.5 | None indicated. Refusal on bedrock. | 04/09/13 | Surface | SL-542-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 7_DG-543A | Former substation southeast of B4028 | Previous sample was a composite of four discrete samples with ND result. Transformers in Area IV with previous ND results are being resampled with discrete samples. Recollect samples at four former discrete locations and analyze each sample for PCBs. | 0.5 | None indicated. Refusal on bedrock. | 04/25/13 | Surface | SL-543A-SA7-SB-0.0-0.5 | PCBs/PCTs EPA 8082 |
| 7_DG-543B | Former substation southeast of B4028 | Previous sample was a composite of four discrete samples with ND result. Transformers in Area IV with previous ND results are being resampled with discrete samples. Recollect samples at four former discrete locations and analyze each sample for PCBs. | 0.5 | None indicated. Refusal on bedrock. | 04/25/13 | Surface | SL-543B-SA7-SB-0.0-0.5 | PCBs/PCTs EPA 8082 |
| 7_DG-543C | Former substation southeast of B4028 | Previous sample was a composite of four discrete samples with ND result. Transformers in Area IV with previous ND results are being resampled with discrete samples. Recollect samples at four former discrete locations and analyze each sample for PCBs. | 0.5 | None indicated. Refusal on bedrock. | 04/25/13 | Surface | SL-543C-SA7-SB-0.0-0.5 | PCBs/PCTs EPA 8082 |
| 7_DG-543D | Former substation southeast of B4028 | Previous sample was a composite of four discrete samples with ND result. Transformers in Area IV with previous ND results are being resampled with discrete samples. Recollect samples at four former discrete locations and analyze each sample for PCBs. | 0.5 | None indicated. Refusal on bedrock. | 04/25/13 | Surface | SL-543D-SA7-SB-0.0-0.5 | PCBs/PCTs EPA 8082 |
| 7_DG-544 | South of B4028 | Stepout for TPH and metals at B4028 to the north, and PAH to the northwest and east. Shallow bedrock anticipated. | 2.4 | None indicated. Refusal on bedrock. | 04/09/13 | Surface | SL-544-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-545A | Former transformer pole southwest of RMHF | Previous sample was a composite of four discrete samples with ND result. Transformers in Area IV with previous ND results are being resampled with discrete samples. Recollect samples at former discrete locations and analyze each sample for PCBs; hold deep samples pending shallow results.<br><br>Note: The fourth discrete location is being targeted by proposed data gap sample 5A_DG-502 which includes PCB analysis; therefore only three discrete samples are being proposed for reanalysis as part of this SAP. | 0.5 | None indicated. Refusal on bedrock. | 06/03/13 | Surface | SL-545A-SA7-SB-0.0-0.5 | PCBs/PCTs EPA 8082 |
| 7_DG-545B | Former transformer pole southwest of RMHF | | 0.5 | None indicated. Refusal on bedrock. | 06/03/13 | Surface | SL-545B-SA7-SB-0.0-0.5 | PCBs/PCTs EPA 8082 |
| 7_DG-545C | Former transformer pole southwest of RMHF | | 0.5 | None indicated. Refusal on bedrock. | 06/03/13 | Surface | SL-545C-SA7-SB-0.0-0.5 | PCBs/PCTs EPA 8082 |
| 7_DG-546 | Southwest of RMHF southern slope Clearly Contaminated Area | Location completes analytical suite for dioxins at previous location RMBS0149. | 1.1 | Trace asphalt from 0.0 to 0.5-ft bgs. Broken asphalt also observed on slope around borehole area. Appears to have been used for stabilization/erosion control. Refusal on bedrock. | 04/09/13 | Surface | SL-546-SA7-SB-0.0-0.5 | Dioxins EPA 1613 |
| 7_DG-547 | South of the RMHF southern fenceline | Defines extent of RMHF Southern Fenceline Clearly Contaminated Area (PAH, PCBs, dioxins, metals, and TPH). | 1.3 | None indicated. Refusal on bedrock. | 04/09/13 | Surface | SL-547-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |

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Soil Samples Designated to be Collected from Subarea 7
Phase 3

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 7_DG-548 | North of RMHF Catch Basin | Stepout for elevated PAHs, TPH and dioxins and defines northern extent of RMHF Catch Basin Clearly Contaminated Area. Shallow bedrock anticipated (less than 5 feet bgs). If deep soil encountered, collect and analyze sample just above bedrock. | 1.1 | None indicated. Refusal on bedrock. | 04/10/13 | Surface | SL-548-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-549 | Northwest of RMHF Catch Basin | Stepout for elevated PAHs, TPH, metals, and dioxins and defines northwest extent of RMHF Catch Basin Clearly Contaminated Area. Shallow bedrock anticipated (less than 5 feet bgs). If deep soil encountered, collect and analyze sample just above bedrock. | 1.8 | None indicated. Refusal on bedrock. | 04/10/13 | Surface | SL-549-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-551 | Southwest of RMHF Catch Basin | Stepout for elevated PAHs, TPH, and dioxins to the northeast and provides delineation of the western extent of the RMHF Catch Basin Clearly Contaminated Area. Shallow bedrock refusal anticipated (5 feet bgs or less). If deeper soils are present, collect and analyze sample just above bedrock. | 3 | None indicated. Refusal on bedrock. | 04/10/13 | Surface | SL-551-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/10/13 | Subsurface | SL-551-SA7-SB-2.0-3.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| 7_DG-552 | West of RMHF Catch Basin | Stepout for dioxins to the northwest; location also targets historical dirt road. Bedrock anticipated less than 5 feet bgs. If deep soil encountered, collect and analyze sample just above bedrock. | 0.5 | None indicated. Refusal on bedrock. | 04/10/13 | Surface | SL-552-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-553 | West of RMHF Catch Basin | Stepout for metals, dioxins, and TPH. PAHs and PCBs added to complete the standard analytical suite since location adjacent to historical dirt road. Bedrock anticipated less than 5 feet bgs. | 0.5 | None indicated. Refusal on bedrock. | 04/11/13 | Surface | SL-553-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-554 | Eastern portion of area downslope of SNAP operations area | Stepout for PAHs, dioxins, and TPH detected along the fenceline north of the SNAP operations area. Locations assess potential contaminant migration from SNAP operational area. Shallow bedrock anticipated (less than 5 feet). | 2.2 | None indicated. Refusal on bedrock. | 04/11/13 | Surface | SL-554-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-555 | Downslope of SNAP operations area at B4013 | Stepout for PAHs, dioxins, and TPH detected along the fenceline north of the SNAP operations area. Locations assess potential contaminant migration from SNAP operational area. Shallow bedrock anticipated (less than 5 feet). | 2.1 | None indicated. Refusal on bedrock. | 04/11/13 | Surface | SL-555-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-557 | Central portion of area downslope of SNAP operations area | Location targets surface water pathway downslope of SNAP operational area. Shallow bedrock anticipated. | 4.2 | None indicated. Refusal on bedrock. | 04/17/13 | Surface | SL-557-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-558 | Central portion of area downslope of SNAP operations area | Location targets surface water pathway downslope of SNAP operational area. Shallow bedrock anticipated. | 4.3 | None indicated. Refusal on bedrock. | 04/16/13 | Surface | SL-558-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/17/13 | Subsurface | SL-558-SA7-SB-3.0-4.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 7_DG-559 | Downslope of SNAP operations area at B4019 | Stepout for PAHs, PCBs, dioxins, and TPH detected along the fenceline north of the SNAP operations area. Locations assess potential contaminant migration from SNAP operational area. Shallow bedrock anticipated (less than 5 feet). | 2.8 | None indicated. Refusal on bedrock. | 04/16/13 | Surface | SL-559-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/16/13 | Subsurface | SL-559-SA7-SB-2.0-3.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| 7_DG-560 | Downslope of SNAP operations area at B4059 | Stepout for PAHs, dioxins, and TPH detected along the fenceline north of the SNAP operations area. Locations assess potential contaminant migration from SNAP operational area. Shallow bedrock anticipated (less than 5 feet). | 4.3 | None indicated. Refusal on bedrock. | 04/16/13 | Surface | SL-560-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/16/13 | Subsurface | SL-560-SA7-SB-3.0-4.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| 7_DG-561 | Western portion of area downslope of SNAP operations area | Location targets surface water pathway downslope of SNAP operational area. Shallow bedrock anticipated. | 1.9 | None indicated. Refusal on bedrock. | 04/16/13 | Surface | SL-561-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 7_DG-562 | Hill Slope Southeast of B4028 | Location targets area adjacent to sewer manhole. Shallow soil anticipated (5 feet or less bgs). | 2.8 | None indicated. Refusal on bedrock. | 04/26/13 | Surface | SL-562-SA7-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 04/26/13 | Subsurface | SL-562-SA7-SB-2.0-3.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |

**Notes & Abbreviations:**
Note: The sample number for a "duplicate sample" was increased by 300 (e.g. SB-530 and SB-830)
bgs = below ground surface
EFH = extractable fuel hydrocarbons
EPA = Environmental Protection Agency
ft = feet
GRO = gasoline range organics
HSA = Historical Site Assessment
ID = identifier
ISF = interim storage facility
ND = nondetect
PAH = polyaromatic hydrocarbon
PCB = polychlorinated biphenyl
PCT = polychlorinated triphenyl
PID = photoionization detector
RMHF = Radioactive Material Handling Facility
SIM = selective ion monitoring
SNAP = Streamlined New Acquisition Process
SRE = Sodium Reactor Experiment
TPH = total petroleum hydrocarbons

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| NBZ_DG-501 | Southwestern Portion of NBZ-NW | Resample for cadmium at 92-886-1A-1 and 93-886-25A to confirm detects that were above LUT value. Also addresses elevated RLs for antimony and silver results. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 feet only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 2.4 | None indicated. Refusal on bedrock. | 12/06/2013 | Surface | SL-501-NBZ-SB-0.0-0.5 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, pH EPA 9045 |
| NBZ_DG-502 | Southwestern Portion of NBZ-NW | Stepout for pesticides and TPH at SL-002-NBZ. Also targets historic dirt road. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 5 | None indicated. Refusal on bedrock. | 12/03/2013 | Surface | SL-502-NBZ-SB-0.0-0.5 | Pesticides EPA 8081, TPH-EFH EPA 8015 |
| | | | | | 12/03/2013 | Subsurface | SL-502-NBZ-SB-4.0-5.0 | Pesticides EPA 8081, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| NBZ_DG-503 | Southwestern Portion of NBZ-NW | Stepout for pesticides and TPH at SL-002-NBZ. Also targets historic dirt road. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 3 | None indicated. Refusal on bedrock. | 12/03/2013 | Surface | SL-503-NBZ-SB-0.0-0.5 | Pesticides EPA 8081, TPH-EFH EPA 8015 |
| | | | | | 12/03/2013 | Subsurface | SL-503-NBZ-SB-2.0-3.0 | Pesticides EPA 8081, TPH-EFH EPA 8015 |
| NBZ_DG-504 | Southwestern Portion of NBZ-NW | Stepout for pesticides and TPH at SL-002-NBZ. Also targets historic dirt road. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 2.5 | None indicated. Refusal on bedrock. | 12/03/2013 | Surface | SL-504-NBZ-SB-0.0-0.5 | Pesticides EPA 8081, TPH-EFH EPA 8015 |
| | | | | | 12/03/2013 | Surface (Duplicate) | SL-804-NBZ-SB-0.0-0.5 | Pesticides EPA 8081, TPH-EFH EPA 8015 |
| NBZ_DG-505 | Western Portion of NBZ-NW | Assesses potential air dispersion impacts related to burning and treatment activities at the former FSDF ponds and is located northwest of FSDF in the prevailing wind direction. Location is in a blind drainage and is one of nine locations proposed (e.g., NBZ_DG-505 -511, -512, -516, -517, -518, -519, -520, -521) that will assess this migration pathway. Additional sampling to address this pathway was also proposed in Subarea 8. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.4 | None indicated. Refusal on bedrock. | 12/13/2013 | Surface | SL-505-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-506 | Southwest of NBZ-NW | Stepout for pesticides and TPH at SL-001-NBZ. Also targets an offsite historic dirt road. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1 | None indicated. Refusal on bedrock. | 12/04/2013 | Surface | SL-506-NBZ-SB-0.0-0.5 | Pesticides EPA 8081, TPH-EFH EPA 8015 |

Table 2-2
Soil Samples Designated to be Collected from NBZ
Phase 3

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| NBZ_DG-507 | Southwest of NBZ-NW | Stepout for pesticides and TPH at SL-001-NBZ. Also targets an offsite historic dirt road. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 4.5 | None indicated. Refusal on bedrock. | 12/04/2013 | Surface | SL-507-NBZ-SB-0.0-0.5 | Pesticides EPA 8081, TPH-EFH EPA 8015 |
| | | | | | 12/04/2013 | Subsurface | SL-507-NBZ-SB-3.5-4.5 | Pesticides EPA 8081, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| NBZ_DG-508 | North of NBZ-NW | Stepout for benzylbutyl phthalate at SL-148-NBZ to the south. Also targets an historic dirt road. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 5 | None indicated. No refusal. | 12/04/2013 | Surface | SL-508-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 12/04/2013 | Subsurface | SL-508-NBZ-SB-4.0-5.0 | Dioxins EPA 1613, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| NBZ_DG-509 | Northwestern Portion of NBZ-NW | Location targets historic dirt road upslope and downslope of pesticide and TPH detections. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 3.5 | None indicated. Refusal on bedrock. | 12/03/2013 | Surface | SL-509-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 12/03/2013 | Subsurface | SL-509-NBZ-SB-2.5-3.5 | TPH-GRO EPA 8015, Dioxins EPA 1613, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 12/03/2013 | Subsurface (Duplicate) | SL-809-NBZ-SB-2.5-3.5 | TPH-GRO EPA 8015, Dioxins EPA 1613, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015 |
| NBZ_DG-510 | Northwestern Portion of NBZ-NW | Location targets historic dirt road upslope and downslope of pesticide and TPH detections. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 5 | None indicated. No refusal. | 12/03/2013 | Surface | SL-510-NBZ-SB-0.0-0.5 | pH EPA 9045, Dioxins EPA 1613, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015 |
| | | | | | 12/03/2013 | Subsurface | SL-510-NBZ-SB-4.0-5.0 | TPH-GRO EPA 8015, Dioxins EPA 1613, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015 |
| NBZ_DG-511 | Western Portion of NBZ-NW | Assesses potential air dispersion impacts related to burning and treatment activities at the former FSDF ponds, located northwest of FSDF in the prevailing wind direction. Location is one of nine locations (e.g., NBZ_DG-505 -511, -512, -516, -517, -518, -519, -520, -521) proposed to assess this migration pathway. Additional sampling to address this pathway was also proposed in Subarea 8. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 3.5 | None indicated. Refusal on bedrock. | 12/04/2013 | Surface | SL-511-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 12/04/2013 | Subsurface | SL-511-NBZ-SB-2.5-3.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| NBZ_DG-512 | Southwestern Portion of NBZ-NW | Assesses potential air dispersion impacts related to burning and treatment activities at the former FSDF ponds, located northwest of FSDF in the prevailing wind direction. Location is one of nine locations (e.g., NBZ_DG-505 -511, -512, -516, -517, -518, -519, -520, -521) proposed to assess this migration pathway. Additional sampling to address this pathway was also proposed in Subarea 8. Previous analysis at this location was performed at the surface for metals only. Resample at 0.5 ft bgs for cadmium at 92-886-1B-1 to confirm detects above the LUT value. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.2 | None indicated. Refusal on bedrock. | 12/06/2013 | Surface | SL-512-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015 |
| NBZ_DG-513 | Western Portion of NBZ-NW | Location targets surface water flow pathway downgradient from TPH exceedance at SL-011-NBZ. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.9 | 0-1.9 ft bgs: Fill described as siltstone. Refusal on bedrock. | 12/09/2013 | Surface | SL-513-NBZ-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| NBZ_DG-514 | North of NBZ-NW | Location targets surface water pathway downgradient from pesticide exceedance at SED-036-SIV. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 2.6 | None indicated. Refusal on bedrock. | 12/09/2013 | Surface | SL-514-NBZ-SB-0.0-0.5 | Pesticides EPA 8081 |
| NBZ_DG-515 | North of NBZ-NW | Location targets surface water pathway downgradient from pesticide exceedance at SED-036-SIV. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 2.3 | None indicated. Refusal on bedrock. | 12/09/2013 | Surface | SL-515-NBZ-SB-0.0-0.5 | Pesticides EPA 8081 |
| NBZ_DG-516 | North of NBZ-NW | Assesses potential air dispersion impacts related to burning and treatment activities at the former FSDF ponds, located on the hillslope north of the Northeast NBZ and northwest of FSDF in the prevailing wind direction. Location is one of nine locations (e.g., NBZ_DG-505 -511, -512, -516, -517, -518, -519, -520, -521) proposed to assess this migration pathway. Additional sampling to address this pathway was also proposed in Subarea 8. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 5 | None indicated. No refusal. | 12/09/2013 | Surface | SL-516-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 12/09/2013 | Subsurface | SL-516-NBZ-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |

Table 2-2
Soil Samples Designated to be Collected from NBZ
Phase 3

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| NBZ_DG-517 | North of NBZ-NW | Assesses potential air dispersion impacts related to burning and treatment activities at the former FSDF ponds, located on the hillslope north of the Northeast NBZ and northwest of FSDF in the prevailing wind direction. Location is one of nine locations (e.g., NBZ_DG-505 -511, -512, -516, -517, -518, -519, -520, -521) proposed to assess this migration pathway. Additional sampling to address this pathway was also proposed in Subarea 8. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 4.2 | None indicated. Refusal on bedrock. | 12/16/2013 | Surface | SL-517-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 12/16/2013 | Subsurface | SL-517-NBZ-SB-2.0-3.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |
| NBZ_DG-518 | North of NBZ-NW | Location targets the bottom of a blind surface water pathway/drainage northwest of FSDF in the prevailing wind direction. Assesses potential air dispersion impacts related to burning and treatment activities at the former FSDF ponds and is one of nine locations (e.g., NBZ_DG-505 -511, -512, -516, -517, -518, -519, -520, -521) proposed to assess this migration pathway. Additional sampling to address this pathway was also proposed in Subarea 8. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 2 | 0-2.0 ft bgs: Fill described as igneous/metamorphic gravel. Refusal on bedrock. | 12/16/2013 | Surface | SL-518-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-519 | North of NBZ-NW | Location targets area further downdrainage from NBZ-DG-518. Assesses potential air dispersion impacts related to burning and treatment activities at the former FSDF ponds and is one of nine locations (e.g., NBZ_DG-505 -511, -512, -516, -517, -518, -519, -520, -521) proposed to assess this migration pathway. Additional sampling to address this pathway was also proposed in Subarea 8. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.7 | 0-0.7 ft bgs: Fill described as igneous/metamorphic gravel. Refusal on bedrock. | 12/16/2013 | Surface | SL-519-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-520 | North of NBZ-NW | Location targets blind surface water pathway/drainage northwest of FSDF in the prevailing wind direction. Assesses potential air dispersion impacts related to burning and treatment activities at the former FSDF ponds and is one of nine locations (e.g., NBZ_DG-505 -511, -512, -516, -517, -518, -519, -520, -521) proposed to assess this migration pathway. Additional sampling to address this pathway was also proposed in Subarea 8. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.5 | 0-0.5 ft bgs: Fill described as igneous/metamorphic gravel. Refusal on bedrock. | 12/16/2013 | Surface | SL-520-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015, pH EPA 9045 |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| NBZ_DG-521 | North of NBZ-NW | Assesses potential air dispersion impacts related to burning and treatment activities at the former FSDF ponds, located on the hillslope north of the Northeast NBZ and northwest of FSDF in the prevailing wind direction. Location is one of nine locations (e.g., NBZ_DG-505 -511, -512, -516, -517, -518, -519, -520, -521) proposed to assess this migration pathway. Additional sampling to address this pathway was also proposed in Subarea 8. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.8 | 0-0.8 ft bgs: Fill described as igneous/metamorphic gravel. Refusal on bedrock. | 12/13/2013 | Surface | SL-521-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-522 | Central Portion of NBZ-NW | Location targets surface water pathway upgradient from exceedances of PAHs, TPH, and nitrate at SL-081-NBZ. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 3.9 | 0-3.9 ft bgs: Fill described as siltstone. Refusal on bedrock. | 12/09/2013 | Surface | SL-522-NBZ-SB-0.0-0.5 | Nitrates EPA 300.0/9056, PAH EPA 8270 SIM, TPH-EFH EPA 8015 |
| | | | | | 12/09/2013 | Subsurface | SL-522-NBZ-SB-2.5-3.5 | Nitrates EPA 300.0/9056, PAH EPA 8270 SIM, TPH-EFH EPA 8015,TPH-GRO EPA 8015 |
| NBZ_DG-523 | North of NBZ-NW | Location targets surface water pathway downgradient from exceedances of PAHs, TPH, and nitrate at SL-081-NBZ. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 2.3 | 0-2.3 ft bgs: Fill described as siltstone. Refusal on bedrock. | 12/09/2013 | Surface | SL-523-NBZ-SB-0.0-0.5 | Nitrates EPA 300.0/9056, PAH EPA 8270 SIM, TPH-EFH EPA 8015 |
| NBZ_DG-524 | North of NBZ-NW | Location targets surface water pathway downgradient from exceedances of PAHs, TPH, and nitrate at SL-081-NBZ. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.1 | 0-1.1 ft bgs: Fill described as siltstone. Refusal on bedrock. | 12/09/2013 | Surface | SL-524-NBZ-SB-0.0-0.5 | Nitrates EPA 300.0/9056, PAH EPA 8270 SIM, TPH-EFH EPA 8015 |
| | | | | | 12/09/2013 | Surface (Duplicate) | SL-824-NBZ-SB-0.0-0.5 | Nitrates EPA 300.0/9056, PAH EPA 8270 SIM, TPH-EFH EPA 8015 |
| NBZ_DG-525 | Central Portion of NBZ-NW | Stepout for TPH and herbicides at SL-021-NBZ. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 5 | None indicated. No refusal. | 12/05/2013 | Surface | SL-525-NBZ-SB-0.0-0.5 | Herbicides EPA 8151, TPH-EFH EPA 8015 |
| | | | | | 12/05/2013 | Subsurface | SL-525-NBZ-SB-4.0-5.0 | Herbicides EPA 8151, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 12/05/2013 | Subsurface (Duplicate) | SL-825-NBZ-SB-4.0-5.0 | Herbicides EPA 8151, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| NBZ_DG-526 | Central Portion of NBZ-NW | Stepout for TPH and herbicides at SL-021-NBZ, and pesticides at SL-023-NBZ. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 3.7 | None indicated. Refusal on bedrock. | 12/05/2013 | Surface | SL-526-NBZ-SB-0.0-0.5 | Herbicides EPA 8151, Pesticides EPA 8081, TPH-EFH EPA 8015 |
| | | | | | 12/05/2013 | Subsurface | SL-526-NBZ-SB-2.5-3.5 | Herbicides EPA 8151, Pesticides EPA 8081, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |

Table 2-2
Soil Samples Designated to be Collected from NBZ
Phase 3

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| NBZ_DG-527 | North of NBZ-NW | One of three locations downdrainage from exceedances of dioxins, pesticides, and bis(2-ethylhexyl)phthalate at SED-011-SIV. Analyze for PCBs to support evaluation in FSDF drainage to the west and downstream of confluence. Bedrock anticipated <5 feet bgs.Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.5 | 0-0.5 ft bgs: Fill described as igneous/metamorphic gravel. Refusal on bedrock. | 12/05/2013 | Surface | SL-527-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081 |
| NBZ_DG-528 | North of NBZ-NW | One of three locations downdrainage from exceedances of dioxins, pesticides, and bis(2-ethylhexyl)phthalate at SED-011-SIV. Analyze for PCBs to support evaluation in FSDF drainage to the west and downstream of confluence. Bedrock anticipated <5 feet bgs.Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.9 | 0-0.9 ft bgs: Fill described as sandstone and siltstone gravel in lower interval. Refusal on bedrock. | 12/05/2013 | Surface | SL-528-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081 |
| NBZ_DG-529 | North of NBZ-NW | One of three locations downdrainage from exceedances of dioxins, pesticides, and bis(2-ethylhexyl)phthalate at SED-011-SIV. Analyze for PCBs to support evaluation in FSDF drainage to the west and downstream of confluence. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.8 | 0-0.8 ft bgs: Fill described as sandstone and siltstone gravel. Refusal on bedrock. | 12/05/2013 | Surface | SL-529-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081 |
| NBZ_DG-530 | Eastern Portion of NBZ-NW | Stepout for pesticides and TPH at SL-025-NBZ. Bedrock anticipated <5 feet bgs.Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.1 | 0-1.1 ft bgs: Fill described as igneous/metamorphic and sandstone formation gravel with burnt wood. Refusal on bedrock. | 12/03/2013 | Surface | SL-530-NBZ-SB-0.0-0.5 | Pesticides EPA 8081, TPH-EFH EPA 8015 |
| NBZ_DG-531 | Eastern Portion of NBZ-NW | Stepout for pesticides and TPH at SL-025-NBZ and TPH at SL-026-NBZ. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 feet only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 2.6 | 1.0-2.6 ft bgs: Fill described as silty sand. Refusal on bedrock. | 12/03/2013 | Surface | SL-531-NBZ-SB-0.0-0.5 | Pesticides EPA 8081, TPH-EFH EPA 8015 |
| NBZ_DG-532 | Eastern Portion of NBZ-NW | Stepout for pesticides and TPH at SL-025-NBZ and TPH at SL-026-NBZ. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.8 | 0-0.8 ft bgs: Fill described as igneous/metamorphic and sandstone formation gravel. Refusal on bedrock. | 12/03/2013 | Surface | SL-532-NBZ-SB-0.0-0.5 | Pesticides EPA 8081, TPH-EFH EPA 8015 |
| NBZ_DG-533 | Eastern Portion of NBZ-NW | Stepout for TPH at SL-026-NBZ, HFBS0065, SL-019-SA7, and herbicides at SL-019-SA7. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.6 | 0-0.6 ft bgs: Fill described as igneous/metamorphic gravel and wood. Refusal on bedrock. | 12/03/2013 | Surface | SL-533-NBZ-SB-0.0-0.5 | Herbicides EPA 8151, TPH-EFH EPA 8015 |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| NBZ_DG-534 | Northeastern Portion of NBZ-NW | Stepout in upslope surface water pathway from TPH exceedance at SRBS1099. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.9 | None indicated. Refusal on bedrock. | 12/06/2013 | Surface | SL-534-NBZ-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| NBZ_DG-535 | North of NBZ-NW | Location targets surface water pathway downslope from TPH exceedances at SL-032-NBZ and SRBS1099. Bedrock anticipated <5 feet bgs.Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 2 | None indicated. Refusal on bedrock. | 12/06/2013 | Surface | SL-535-NBZ-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| NBZ_DG-536 | North of NBZ-NW | Location targets surface water pathway downslope from TPH exceedances at SL-032-NBZ, SL-033-NBZ, and SRBS1099. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | NA | NA | Not Sampled, location inaccessible | | | |
| NBZ_DG-537 | Northwestern Portion of NBZ-NE | Location targets surface water pathway downdrainage from exceedances of TPH and pesticides at SL-034-NBZ. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 2 | 0-2.0 ft bgs: Fill described as igneous/metamorphic gravel. Refusal on bedrock. | 12/06/2013 | Surface | SL-537-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Pesticides EPA 8081, TPH-EFH EPA 8015 |
| NBZ_DG-538 | North of NBZ-NE | Location targets surface water pathway downdrainage from exceedances of TPH and pesticides at SL-034-NBZ, and bis-(2-ethylhexyl)phthalate, dioxins, and PAHs at SED-015-SIV. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.8 | 0-0.8 ft bgs: Fill described as igneous/metamorphic gravel. Refusal on bedrock. | 12/06/2013 | Surface | SL-538-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, PAH EPA 8270 SIM, Pesticides EPA 8081, TPH-EFH EPA 8015 |
| NBZ_DG-539 | North of NBZ-NE | Location targets surface water pathway downdrainage from exceedances of TPH and pesticides at SL-034-NBZ, and bis-(2-ethylhexyl)phthalate, dioxins, and PAHs at SED-015-SIV. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.4 | None indicated. Refusal on bedrock. | 12/12/2013 | Surface | SL-539-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, PAH EPA 8270 SIM, Pesticides EPA 8081, TPH-EFH EPA 8015 |
| NBZ_DG-540 | North of NBZ-NE | One of three stepout locations (NBZ_DG-540, -541, -542) downdrainage from exceedances of PAHs, dioxins, pesticides, and herbicides at SED-022-SIV and pesticides/herbicides at SED-023-SIV. Bedrock anticipated <5 feet bgs.Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.6 | 0-1.6 ft bgs: Fill described as siltstone. Refusal on bedrock. | 12/11/2013 | Surface | SL-540-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Herbicides EPA 8151, PAH EPA 8270 SIM, Pesticides EPA 8081 |
| | | | | | 12/11/2013 | Surface (Duplicate) | SL-840-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Herbicides EPA 8151, PAH EPA 8270 SIM, Pesticides EPA 8081 |

Table 2-2
Soil Samples Designated to be Collected from NBZ
Phase 3

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| NBZ_DG-541 | North of NBZ-NE | One of three stepout locations (NBZ_DG-540, -541, -542) downdrainage from exceedances of PAHs, dioxins, pesticides, and herbicides at SED-022-SIV and pesticides/herbicides at SED-023-SIV. Bedrock anticipated <5 feet bgs.Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.8 | 0-1.8 ft bgs: Fill described as siltstone. Refusal on bedrock. | 12/11/2013 | Surface | SL-541-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Herbicides EPA 8151, PAH EPA 8270 SIM, Pesticides EPA 8081 |
| NBZ_DG-542 | North of NBZ-NE | One of three stepout locations (NBZ_DG-540, -541, -542) downdrainage from exceedances of PAHs, dioxins, pesticides, and herbicides at SED-022-SIV and pesticides/herbicides at SED-023-SIV. Bedrock anticipated <5 feet bgs.Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.1 | 0-1.1 ft bgs: Fill described as siltstone. Refusal on bedrock. | 12/11/2013 | Surface | SL-542-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Herbicides EPA 8151, PAH EPA 8270 SIM, Pesticides EPA 8081 |
| NBZ_DG-543 | Western Portion of NBZ-NE | Stepout upslope from exceedances of PAHs and TPH at SL-080-NBZ. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.7 | None indicated. Refusal on bedrock. | 12/12/2013 | Surface | SL-543-NBZ-SB-0.0-0.5 | PAH EPA 8270 SIM, TPH-EFH EPA 8015 |
| NBZ_DG-544 | Western Portion of NBZ-NE | Location targets potential surface water pathway downslope from exceedances of pesticides at SL-095-NBZ, TPH at SL-043-NBZ, and PAHs, metals, and TPH at OCBS92. Aerial photographs show bedrock outcrop in the area; field place sample in area of soil if possible. Bedrock anticipated <5 feet bgs; Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.2 | None indicated. Refusal on bedrock. | 12/12/2013 | Surface | SL-544-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 12/12/2013 | Surface (Duplicate) | SL-844-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-545 | Western Portion of NBZ-NE | Stepout downslope from exceedances of PCBs at SL-047-NBZ, cyanide, dioxins, PAHs, and TPH at SL-048-NBZ, and TPH at SL-049-NBZ. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.8 | 0-0.8 ft bgs: fill described as igneous/metamorphic gravel and concrete. Refusal on bedrock. | 12/04/2013 | Surface | SL-545-NBZ-SB-0.0-0.5 | Cyanide EPA 9012, Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 12/04/2013 | Surface (Duplicate) | SL-845-NBZ-SB-0.0-0.5 | Cyanide EPA 9012, Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-546 | Western Portion of NBZ-NE | Location targets surface water pathway upslope from exceedance of TPH at OCBS88. Bedrock anticipated <5 feet bgs.Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.6 | None indicated. Refusal on bedrock. | 12/04/2013 | Surface | SL-546-NBZ-SB-0.0-0.5 | TPH-EFH EPA 8015 |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| NBZ_DG-547 | Western Portion of NBZ-NE | Location targets surface water pathway downslope from exceedance of TPH at OCBS88. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.4 | 0-0.4 ft bgs: fill described as igneous/metamorphic gravel and wood. Refusal on bedrock. | 12/04/2013 | Surface | SL-547-NBZ-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| NBZ_DG-548 | Western Portion of NBZ-NE | Stepout for PCBs, dioxins, and TPH at SL-062-NBZ. Also targets historical dirt road. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.5 | None indicated. Refusal on bedrock. | 12/04/2013 | Surface | SL-548-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015 |
| NBZ_DG-549 | Western Portion of NBZ-NE | Location targets surface water pathway downslope from exceedance of TPH at SL-065-NBZ. Bedrock anticipated <5 feet bgs.Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.1 | None indicated. Refusal on bedrock. | 12/04/2013 | Surface | SL-549-NBZ-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| NBZ_DG-551 | Northeast of NBZ-NE | One of two locations (NBZ_DG-551, -552) targeting surface water pathway downslope from exceedance of PAHs at SL-101-NBZ. Bedrock anticipated <5 feet bgs;Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.7 | 0-1.7 ft bgs: fill described red brick. Refusal on bedrock. | 12/17/2013 | Surface | SL-551-NBZ-SB-0.0-0.5 | PAH EPA 8270 SIM |
| NBZ_DG-552 | Northeast of NBZ-NE | One of two locations (NBZ_DG-551, -552) targeting surface water pathway downslope from exceedance of PAHs at SL-101-NBZ. Bedrock anticipated <5 feet bgs;Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 3 | None indicated. Refusal on bedrock. | 12/10/2013 | Surface | SL-552-NBZ-SB-0.0-0.5 | PAH EPA 8270 SIM |
| | | | | | 12/10/2013 | Subsurface | SL-552-NBZ-SB-2.0-3.0 | PAH EPA 8270 SIM |
| NBZ_DG-553 | North of NBZ-NE | Down-drainage stepout for PCBs at 428480. Bedrock anticipated <5 feet bgs.Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.9 | 0-0.9 ft bgs: fill described as igneous/metamorphic gravel. Refusal on bedrock. | 12/10/2013 | Surface | SL-553-NBZ-SB-0.0-0.5 | PCBs/PCTs EPA 8082 |
| NBZ_DG-554 | North of NBZ-NE | Down-drainage stepout for PCBs at 428480. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.7 | 0-0.7 ft bgs: fill described as igneous/metamorphic gravel. Refusal on bedrock. | 12/10/2013 | Surface | SL-554-NBZ-SB-0.0-0.5 | PCBs/PCTs EPA 8082 |

Table 2-2
Soil Samples Designated to be Collected from NBZ
Phase 3

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| NBZ_DG-555 | North of NBZ-NE | Down-drainage stepout for PCBs at 428480. Bedrock anticipated <5 feet bgs.Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 1.3 | 0-1.3 ft bgs: fill described as igneous/metamorphic gravel. Refusal on bedrock. | 12/10/2013 | Surface | SL-555-NBZ-SB-0.0-0.5 | PCBs/PCTs EPA 8082 |
| NBZ_DG-556 | Central Portion of NBZ-NW | Stepout upslope from TPH exceedance at U7BS0006. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 5 | None indicated. No refusal. | 12/6/2014 | Surface | SL-556-NBZ-SB-0.0-0.5 | Herbicides EPA 8151, Pesticides EPA 8081, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 12/06/2013 | Subsurface | SL-556-NBZ-SB-4.0-5.0 | Herbicides EPA 8151, Pesticides EPA 8081, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| NBZ_DG-557 | North of NBZ-NW | Stepout downdrainage from PCB exceedance at Brandeis-2. Bedrock anticipated <5 feet bgs. Collect surface sample & 5 ft. only. If fill/staining/disturbance/PID hit encountered, sample deeper intervals. Sample fill/native contact and/or default sample depths. | 0.8 | None indicated. Refusal on bedrock. | 12/13/2013 | Surface | SL-557-NBZ-SB-0.0-0.5 | PCBs/PCTs EPA 8082 |

**Notes & Abbreviations:**
Note: The sample number for a "duplicate sample" was increased by 300 (e.g. SB-530 and SB-830)
bgs = below ground surface
EFH = extractable fuel hydrocarbon
EPA = Environmental Protection Agency
ft = feet
FSDF= Former Sodium Disposal Facility
GRO = gasoline range organic
ID = identifier
LUT= Look Up Table
NBZ = Northern Buffer Zone
NW= Northwest
PAH = polyaromatic hydrocarbon
PCB = polychlorinated biphenyl
PCT = polychlorinated triphenyl
PID= photoionization detector
RL = reporting limit
SIM = selective ion monitoring
TPH = total petroleum hydrocarbon
Samples not collected

After the samples were collected and labeled "Top" and "Bottom," adhesive sample labels, completed with all sampling information, were affixed to all sample sleeves and jars, which were then placed into plastic zip top bags and stored in a cooler with double bagged ice until the samples were relinquished to the project sample coordinator or field team leader (FTL). Each surface sample was to be analyzed for the analytes identified for each sample location as indicated in Table 1 of the Subarea 7 Data Gap Analysis TM (CDM Smith 2012b) and Table 2 of the NBZ Data Gap Analysis TM (CDM Smith 2013).

## 2.2 Subsurface Sampling

Collection of subsurface soil samples at most locations in Subarea 7 and the NBZ was performed in accordance with SSFL SOP 3 (Subsurface Soil Sampling with Hang Auger) of the Master FSP using a hand auger and slide hammer equipped with stainless steel sleeves. Subsurface samples were collected from 19 locations in Subarea 7 and from nine locations in the NBZ via hand auger and slide hammer.

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

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

Collection of subsurface soil samples at easily accessible locations in Subarea 7 and the NBZ was performed by a California-licensed DPT subcontractor under CDM Smith oversight and in accordance with SSFL SOP 4 (Direct Push Technology [DPT] Sampling) of the Master FSP. Subsurface samples were collected from two locations in SA7 and five locations in the NBZ using DPT. Soil cores were collected using the DPT dual-tube sampling method, which consists of a 2-inch outer steel drive casing and an inner 1¾-inch diameter acetate soil sampling sleeve. After the liner was retracted from the core barrel, it was opened lengthwise with a cutting tool. Samples were collected from the acetate sleeve by the CDM Smith sampler at the depths specified in Table 1 of the Subarea 7 and NBZ Data Gap Analysis TM. Samples were also collected from any depths where the PID detected concentrations above background or where there was visual evidence of possible contamination.

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

## 2.3 Sample Handling

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

All sampling information on the FSDS was input into the Scribe electronic database by the sampling coordinator and one or more chain-of-custody (CoC) forms were generated at the end of the day from the database. The FTL reviewed each CoC, corrected any discrepancies, and reprinted the CoC, as needed. All CoCs for the Phase 3 Subarea 7 and NBZ sampling activities are presented in Appendix F. Each completed CoC was signed by the sampler and the FTL as the individual responsible for release of the samples to the courier. All samples were packed into coolers and shipped in accordance with SSFL SOP 11 (Packaging and Shipping Environmental Samples).

## 2.4 Field Quality Control Procedures

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

### 2.4.1 Field Duplicates and MS/MSD Samples

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

During sampling in Subarea 7, a total of six field duplicate/MS/MSD samples were collected equating to approximately fifteen percent. For NBZ, a total of seven field duplicate and MS/MSD samples were collected equating to approximately ten percent. On an individual method basis, the five percent goal was exceeded for all analyses.

### 2.4.2 Equipment Rinsate Blank Samples

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

### 2.4.3 Field Blank Samples

Field blanks were collected once for each lot number of ASTM International Type II water that was used for decontamination. One field blank was collected during Phase 3 sampling in Subarea 7 and NBZ. Other field blanks are associated with samples in Subarea 7 and NBZ but were collected prior to the sampling conducted in these subareas.

### 2.4.4 Decontamination of Sampling Equipment

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

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

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

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

## 2.5 Analytical Laboratory Methods and Procedures

### 2.5.1 Analytical Methods

The Subarea 7 and NBZ Phase 3 soil samples were subject to analysis using at least one of the following analytical methods:

- Metals using EPA Methods 6010C/6020A, 7471B (mercury), and 7199 (chromium VI)
- Soil pH using EPA Method 9045M
- PAHs using Method 8270D selective ion monitoring (SIM)
- N-Nitrosodimethylamine (NDMA) using EPA Method 8270D SIM
- Pesticides using EPA Method 8081B
- Herbicides using EPA Method 8151A
- PCBs/PCTs using EPA Method 8082A
- Dioxins/furans using EPA Method 1613B
- Formaldehyde using EPA Method 8315A
- TPH-EFH using EPA Method 8015M
- TPH-GRO using EPA Method 8015M

Eurofins Lancaster Laboratory in Lancaster, Pennsylvania analyzed all parameters for the Phase 3 Subarea 7 and NBZ samples. The laboratory was selected using a competitive procurement process.

## 2.6 Data Review Processes

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

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

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

- Reconciliation of the reported analyses against the analyses that were requested on the CoCs.
- Review of the laboratory case narratives. The case narrative identifies and explains quality issues encountered during the analysis of the samples. Quality issues may include (but are not limited to) missed holding times, poor spike recoveries in matrix or batch-specific QC samples, instrument calibration exceedances, and blank contamination.
- Review of the laboratory-specific QC data. These data are provided by the laboratory in summary form. Any unanticipated deviations from the project or method-specific criteria are reconciled with the laboratory at this stage.

## 2.7 Deviations from the Master FSP

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

### 2.7.1 Field Sampling

The SSFL SOP 2 (Surface Soil Sampling) requires soil to be collected in decontaminated stainless steel sleeves during soil sample collection by slide hammer. Due to loose, sand soil conditions that prevented soil from remaining within the stainless steel sleeve, four samples in the NBZ and three samples in Subarea 7 were collected using a clean slide hammer and placed directly into glass jars.

### 2.7.2 Analytical

No analytical deviations were encountered during analyses of samples collected for Phase 3 in Subarea 7 and NBZ.

# Section 3

# Subarea 7 and NBZ Phase 3 Soil Sampling Results

Because this TM only provides the analytical results, data in this section are presented in a summary fashion. Tables 3-1, 3-2 and 3-3 summarize the Phase 3 Subarea 7 surface, subsurface and combined soil sample data respectively. Tables 3-4, 3-5 and 3-6 summarize the Phase 3 NBZ surface, subsurface and combined soil sample data respectively. The tables detail the chemicals analyzed, their associated chemical abstract service (CAS) number, frequency of detection, minimum and maximum detected concentrations, range of observed detection limits and reporting limits (RLs), and the sample location where the maximum concentration of each analyte was detected. If two locations for the maximum concentration are listed and only one maximum concentration value is provided, this indicates that the concentration was the same at the specified depth at both locations.

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

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| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 57 / 58 | 0.988 J Z | 2000 J *# | 0.0139 - 0.223 | 4.85 - 5.3 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 57 / 58 | 0.247 J Z | 101 | 0.00962 - 0.0684 | 4.85 - 5.3 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 42 / 58 | 0.0981 J Z | 12.2 | 0.0127 - 0.0792 | 4.85 - 5.3 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 51 / 58 | 0.0344 J Z | 3660 J *# | 0.017 - 0.114 | 4.85 - 5.3 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 42 / 58 | 0.117 J Z | 6.59 | 0.0126 - 0.0764 | 4.85 - 5.3 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 57 / 58 | 0.0704 J Z | 54.8 | 0.0176 - 0.128 | 4.85 - 5.3 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 48 / 58 | 0.0854 J Z | 7.55 | 0.012 - 0.0745 | 4.85 - 5.3 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 52 / 58 | 0.121 J Z | 18.1 | 0.0174 - 0.118 | 4.85 - 5.3 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 20 / 58 | 0.0737 J Z | 1.07 J Z | 0.0137 - 0.101 | 4.85 - 5.3 | ng/kg | 7_DG-561 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 39 / 58 | 0.217 J Z | 18 | 0.00936 - 0.0771 | 4.85 - 5.3 | ng/kg | 7_DG-517 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 39 / 58 | 0.039 J Z | 15.9 | 0.0158 - 0.107 | 4.85 - 5.3 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 45 / 58 | 0.0959 J Z | 9.07 | 0.0125 - 0.0853 | 4.85 - 5.3 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 43 / 58 | 0.0636 J Z | 3.48 J Z | 0.00892 - 0.0678 | 4.85 - 5.3 | ng/kg | 7_DG-514 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 34 / 58 | 0.0231 J Z | 4.35 | 0.0173 - 0.148 | 0.971 - 1.06 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 51 / 58 | 0.0282 J Z | 3.69 | 0.0189 - 0.122 | 0.971 - 1.06 | ng/kg | 7_DG-517 | LL | 1613B | 0 - 0.5 |
| Dioxins | OCDD | 3268-87-9 | 57 / 58 | 7.79 J Z | 23100 J *# | 0.0134 - 0.134 | 9.71 - 10.6 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | OCDF | 39001-02-0 | 56 / 58 | 0.856 J Z | 177 | 0.0157 - 0.151 | 9.71 - 10.6 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Formaldehyde | Formaldehyde | 50-00-0 | 0 / 1 | - | - | 1200 - 1200 | 2100 - 2100 | µg/kg | - | - | - | - |
| Hexavalent Chromium | Chromium (Hexavalent Compounds) | 18540-29-9 | 1 / 1 | 0.37 J Z | 0.37 J Z | 0.15 - 0.15 | 0.42 - 0.42 | mg/kg | 7_DG-540 | LL | 7199 | 0 - 0.5 |
| Mercury | Mercury | 7439-97-6 | 47 / 57 | 0.0108 J Z | 0.414 | 0.0095 - 0.011 | 0.0158 - 0.0213 | mg/kg | 7_DG-508 | LL | 7471B | 0 - 0.5 |
| Metals | Aluminum | 7429-90-5 | 57 / 57 | 8670 | 18900 | 7.55 - 8.35 | 39.2 - 43.3 | mg/kg | 7_DG-502 | LL | 6010C | 0 - 0.5 |
| Metals | Antimony | 7440-36-0 | 29 / 57 | 0.545 J Q, Z | 4.63 J FD, Q | 0.49 - 0.783 | 3.92 - 4.33 | mg/kg | 7_DG-519 | LL | 6010C | 0 - 0.5 |
| Metals | Arsenic | 7440-38-2 | 57 / 57 | 1.55 J Z | 9.73 | 0.323 - 0.741 | 3.92 - 4.33 | mg/kg | 7_DG-500 | LL | 6010C | 0 - 0.5 |
| Metals | Barium | 7440-39-3 | 57 / 57 | 55.4 | 114 | 0.0323 - 0.0357 | 0.979 - 1.08 | mg/kg | 7_DG-502 | LL | 6010C | 0 - 0.5 |
| Metals | Beryllium | 7440-41-7 | 49 / 57 | 0.378 J Z | 0.74 J Z | 0.0656 - 0.0726 | 0.979 - 1.08 | mg/kg | 7_DG-557 | LL | 6010C | 0 - 0.5 |
| Metals | Boron | 7440-42-8 | 21 / 57 | 1.67 J Z | 6.79 J Z | 0.813 - 0.899 | 9.79 - 10.8 | mg/kg | 7_DG-555 | LL | 6010C | 0 - 0.5 |
| Metals | Cadmium | 7440-43-9 | 48 / 57 | 0.0439 J Z | 1.19 J FD | 0.0323 - 0.0804 | 0.979 - 1.08 | mg/kg | 7_DG-519 | LL | 6010C | 0 - 0.5 |
| Metals | Calcium | 7440-70-2 | 57 / 57 | 1360 J E | 12000 J E | 3.53 - 4.35 | 19.6 - 21.7 | mg/kg | 7_DG-515 | LL | 6010C | 0 - 0.5 |
| Metals | Chromium | 7440-47-3 | 57 / 57 | 9.62 | 30.2 | 0.0862 - 0.169 | 2.94 - 3.25 | mg/kg | 7_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Cobalt | 7440-48-4 | 57 / 57 | 3.19 | 10.8 | 0.0881 - 0.105 | 0.979 - 1.08 | mg/kg | 7_DG-518 | LL | 6010C | 0 - 0.5 |
| Metals | Copper | 7440-50-8 | 57 / 57 | 3.54 | 20.8 | 0.176 - 0.91 | 1.96 - 10.1 | mg/kg | 7_DG-508 | LL | 6010C | 0 - 0.5 |
| Metals | Iron | 7439-89-6 | 57 / 57 | 14000 | 27200 | 3.72 - 7.78 | 39.2 - 81.9 | mg/kg | 7_DG-508 | LL | 6010C | 0 - 0.5 |
| Metals | Lead | 7439-92-1 | 57 / 57 | 4.04 | 30.2 | 0.46 - 0.529 | 2.94 - 3.25 | mg/kg | 7_DG-560 | LL | 6010C | 0 - 0.5 |
| Metals | Lithium | 7439-93-2 | 57 / 57 | 12 | 32.7 | 0.36 - 0.6 | 3.9 - 4.3 | mg/kg | 7_DG-502 | LL | 6010C | 0 - 0.5 |
| Metals | Magnesium | 7439-95-4 | 57 / 57 | 2600 | 7080 | 1.69 - 1.87 | 9.79 - 10.8 | mg/kg | 7_DG-506 | LL | 6010C | 0 - 0.5 |
| Metals | Manganese | 7439-96-5 | 57 / 57 | 198 | 560 | 0.0813 - 0.0899 | 0.979 - 1.08 | mg/kg | 7_DG-561 | LL | 6010C | 0 - 0.5 |
| Metals | Molybdenum | 7439-98-7 | 2 / 57 | 0.403 J Z | 2.79 J FD | 0.166 - 0.184 | 1.96 - 2.17 | mg/kg | 7_DG-519 | LL | 6010C | 0 - 0.5 |
| Metals | Nickel | 7440-02-0 | 57 / 57 | 5.31 | 18.2 | 0.108 - 0.138 | 1.96 - 2.17 | mg/kg | 7_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Phosphorus | 7723-14-0 | 57 / 57 | 267 | 679 J E, A | 0.499 - 3.06 | 9.79 - 10.8 | mg/kg | 7_DG-519 | LL | 6010C | 0 - 0.5 |
| Metals | Potassium | 9/7/7440 | 57 / 57 | 1850 J Q | 4520 J Q | 8.83 - 14.6 | 97.9 - 108 | mg/kg | 7_DG-518 | LL | 6010C | 0 - 0.5 |
| Metals | Selenium | 7782-49-2 | 33 / 57 | 0.102 J FD, Z | 0.572 | 0.0979 - 0.108 | 0.392 - 0.433 | mg/kg | 7_DG-541 | LL | 6020A | 0 - 0.5 |
| Metals | Silver | 7440-22-4 | 47 / 57 | 0.0205 J Z | 0.0918 J Z | 0.0196 - 0.0275 | 0.196 - 0.217 | mg/kg | 7_DG-518 | LL | 6020A | 0 - 0.5 |
| Metals | Sodium | 7440-23-5 | 41 / 57 | 53 J Z | 319 | 16.4 - 18.1 | 97.9 - 108 | mg/kg | 7_DG-516 | LL | 6010C | 0 - 0.5 |
| Metals | Strontium | 7440-24-6 | 57 / 57 | 7.03 J Q | 37.5 | 0.0333 - 0.18 | 0.392 - 1.06 | mg/kg | 7_DG-519 | LL | 6020A | 0 - 0.5 |
| Metals | Thallium | 7440-28-0 | 57 / 57 | 0.138 J Z | 0.398 | 0.0294 - 0.0325 | 0.196 - 0.217 | mg/kg | 7_DG-529 | LL | 6020A | 0 - 0.5 |
| Metals | Tin | 7440-31-5 | 1 / 57 | 10.9 J FD | 10.9 J FD | 0.215 - 0.238 | 9.79 - 10.8 | mg/kg | 7_DG-519 | LL | 6010C | 0 - 0.5 |
| Metals | Titanium | 7440-32-6 | 57 / 57 | 713 | 1470 | 0.166 - 0.184 | 0.979 - 1.08 | mg/kg | 7_DG-502 | LL | 6010C | 0 - 0.5 |
| Metals | Vanadium | 7440-62-2 | 57 / 57 | 19 | 50 | 0.108 - 0.138 | 0.979 - 1.08 | mg/kg | 7_DG-506 | LL | 6010C | 0 - 0.5 |
| Metals | Zinc | 7440-66-6 | 57 / 57 | 42.5 | 115 | 0.196 - 0.217 | 3.92 - 4.33 | mg/kg | 7_DG-504 | LL | 6010C | 0 - 0.5 |
| Metals | Zirconium | 7440-67-7 | 39 / 57 | 0.902 J Z | 12.5 | 0.813 - 0.899 | 4.9 - 5.42 | mg/kg | 7_DG-517 | LL | 6010C | 0 - 0.5 |
| Moisture Content | Moisture | MOIST | 65 / 65 | 1.1 | 9.5 | 0.1 - 0.1 | 0.1 - 0.1 | % | 7_DG-526 | LL | 160.3M | 0 - 0.5 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 17 / 57 | 0.75 J Z | 1.7 J Z | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-524 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 26 / 57 | 0.72 J Z | 13 J Z | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-517 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Acenaphthene | 83-32-9 | 0 / 57 | - | - | 0.67 - 71 | 1.7 - 180 | µg/kg | - | - | - | - |

Table 3-1
Summary of Analytical Results for Chemicals - Validated Data
Surface Soils – Subarea 7 – Phase 3

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PAHs | Acenaphthylene | 208-96-8 | 5 / 57 | 0.39 J FD, Z | 1 J Z | 0.33 - 36 | 1.7 - 180 | µg/kg | 7_DG-508 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Anthracene | 120-12-7 | 24 / 57 | 0.35 J Z | 6 J Z | 0.33 - 36 | 1.7 - 180 | µg/kg | 7_DG-539 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(a)anthracene | 56-55-3 | 30 / 57 | 0.71 J Z | 42 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-560 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 37 / 57 | 0.71 J Z | 41 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-560 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 50 / 57 | 1.1 J Z | 68 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-554 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 14 / 57 | 3.5 J Z | 80 J Z | 3.3 - 360 | 17 - 1800 | µg/kg | 7_DG-554 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 37 / 57 | 0.82 J Z | 35 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-554 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 39 / 57 | 0.75 J Z | 52 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-504 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 35 / 57 | 6.3 J Z | 610 | 6 - 640 | 18 - 1900 | µg/kg | 7_DG-509 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Butylbenzylphthalate | 85-68-7 | 10 / 57 | 6.4 J Z | 19<br>19 | 6 - 640 | 18 - 1900 | µg/kg | 7_DG-557<br>7_DG-527 | LL<br>LL | 8270D SIM<br>8270D SIM | 0 - 0.5<br>0 - 0.5 |
| PAHs | Chrysene | 218-01-9 | 52 / 57 | 0.34 J Z | 47 | 0.33 - 36 | 1.7 - 180 | µg/kg | 7_DG-560 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 12 / 57 | 0.89 J Z | 4.4 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-560 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Diethylphthalate | 84-66-2 | 0 / 57 | - | - | 6 - 640 | 18 - 1900 | µg/kg | - | - | - | - |
| PAHs | Dimethylphthalate | 131-11-3 | 0 / 57 | - | - | 6 - 640 | 18 - 1900 | µg/kg | - | - | - | - |
| PAHs | Di-n-butylphthalate | 84-74-2 | 4 / 57 | 7.4 J Z | 870 | 6 - 640 | 18 - 1900 | µg/kg | 7_DG-558 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Di-n-octylphthalate | 117-84-0 | 0 / 57 | - | - | 6 - 640 | 18 - 1900 | µg/kg | - | - | - | - |
| PAHs | Fluoranthene | 206-44-0 | 51 / 57 | 0.96 J Z | 82 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-539 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Fluorene | 86-73-7 | 16 / 57 | 0.71 J Z | 3.9 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-519 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 33 / 57 | 0.77 J Z<br>0.77 J Z | 13 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-560 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Naphthalene | 91-20-3 | 28 / 57 | 0.88 J Z | 8.7 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-503 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 3 / 57 | 0.81 J Z | 3.4 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-537 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Phenanthrene | 85-01-8 | 44 / 57 | 0.68 J Z | 63 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-539 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Pyrene | 129-00-0 | 51 / 57 | 0.8 J Z | 64 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-539 | LL | 8270D SIM | 0 - 0.5 |
| PCB/PCTs | Aroclor 1016 | 12674-11-2 | 0 / 64 | - | - | 3.3 - 17 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1221 | 11104-28-2 | 0 / 64 | - | - | 5.1 - 26 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1232 | 11141-16-5 | 0 / 64 | - | - | 4.1 - 21 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1242 | 53469-21-9 | 0 / 64 | - | - | 3.3 - 17 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1248 | 12672-29-6 | 0 / 64 | - | - | 3.3 - 17 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1254 | 11097-69-1 | 16 / 64 | 6.7 J Z | 430 | 4.4 - 22 | 17 - 87 | µg/kg | 7_DG-518 | LL | 8082A | 0 - 0.5 |
| PCB/PCTs | Aroclor 1260 | 11096-82-5 | 4 / 64 | 5 J Z | 280 J S | 3.9 - 20 | 17 - 87 | µg/kg | 7_DG-517 | LL | 8082A | 0 - 0.5 |
| PCB/PCTs | Aroclor 1262 | 37324-23-5 | 0 / 64 | - | - | 3.3 - 17 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1268 | 11100-14-4 | 0 / 64 | - | - | 3.3 - 17 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5432 | 63496-31-1 | 0 / 64 | - | - | 9.9 - 51 | 33 - 170 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5442 | 12642-23-8 | 0 / 64 | - | - | 9.9 - 51 | 33 - 170 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5460 | 11126-42-4 | 14 / 64 | 16 J S, Z | 250 J S | 9.9 - 51 | 33 - 170 | µg/kg | 7_DG-517 | LL | 8082A | 0 - 0.5 |
| Pesticides | 4,4'-DDD | 72-54-8 | 0 / 8 | - | - | 0.33 - 0.35 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDE | 72-55-9 | 5 / 8 | 0.53 J FD, Z | 2.7 | 0.33 - 1.9 | 1.7 - 1.9 | µg/kg | 7_DG-511 | LL | 8081B | 0 - 0.5 |
| Pesticides | 4,4'-DDT | 50-29-3 | 6 / 8 | 0.62 J Z, *# | 7 J Q | 0.35 - 5.1 | 1.7 - 5.1 | µg/kg | 7_DG-513 | LL | 8081B | 0 - 0.5 |
| Pesticides | Aldrin | 309-00-2 | 0 / 8 | - | - | 0.17 - 0.18 | 0.84 - 0.87 | µg/kg | - | - | - | - |
| Pesticides | Alpha-Bhc | 319-84-6 | 0 / 8 | - | - | 0.17 - 0.18 | 0.84 - 0.87 | µg/kg | - | - | - | - |
| Pesticides | Beta-Bhc | 319-85-7 | 0 / 8 | - | - | 0.97 - 1 | 1.9 - 2 | µg/kg | - | - | - | - |
| Pesticides | Chlordane | 57-74-9 | 0 / 8 | - | - | 4.1 - 8.2 | 17 - 18 | µg/kg | - | - | - | - |
| Pesticides | Delta-Bhc | 319-86-8 | 0 / 8 | - | - | 0.46 - 0.47 | 0.84 - 0.87 | µg/kg | - | - | - | - |
| Pesticides | Dieldrin | 60-57-1 | 0 / 8 | - | - | 0.33 - 0.6 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan I | 959-98-8 | 0 / 7 | - | - | 0.22 - 0.23 | 0.84 - 0.87 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan II | 33213-65-9 | 0 / 8 | - | - | 0.33 - 0.35 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 0 / 8 | - | - | 0.33 - 0.35 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endrin | 72-20-8 | 0 / 8 | - | - | 0.33 - 0.4 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 0 / 8 | - | - | 0.33 - 0.35 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endrin Ketone | 53494-70-5 | 0 / 8 | - | - | 0.61 - 0.63 | 1.8 - 1.9 | µg/kg | - | - | - | - |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 0 / 8 | - | - | 0.17 - 0.18 | 0.84 - 0.87 | µg/kg | - | - | - | - |

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pesticides | Heptachlor | 76-44-8 | 1 / 8 | 0.18 J Z | 0.18 J Z | 0.17 - 0.3 | 0.84 - 0.87 | µg/kg | 7_DG-511 | LL | 8081B | 0 - 0.5 |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 0 / 8 | - | - | 0.17 - 0.54 | 0.84 - 0.87 | µg/kg | - | - | - | - |
| Pesticides | Methoxychlor | 72-43-5 | 0 / 8 | - | - | 1.7 - 1.8 | 6.8 - 7 | µg/kg | - | - | - | - |
| Pesticides | Mirex | 2385-85-5 | 1 / 8 | 0.63 J Z | 0.63 J Z | 0.35 - 0.37 | 1.7 - 1.8 | µg/kg | 7_DG-513 | LL | 8081B | 0 - 0.5 |
| Pesticides | Technical Toxaphene | 8001-35-2 | 0 / 8 | - | - | 12 - 15 | 33 - 35 | µg/kg | - | - | - | - |
| pH | pH | pH | 56 / 56 | 5.94 | 8.34 | 0.01 - 0.01 | 0.01 - 0.01 | pH | 7_DG-542 | LL | 9045M | 0 - 0.5 |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 1 / 57 | 2.5 J FD, Q, Z | 2.5 J FD, Q, Z | 2 - 430 | 5.1 - 1100 | mg/kg | 7_DG-519 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 18 / 57 | 2.1 J Z | 14 | 2 - 430 | 5.1 - 1100 | mg/kg | 7_DG-519 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 56 / 57 | 3 J Z | 2100 | 2 - 430 | 5.1 - 1100 | mg/kg | 7_DG-555 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 56 / 57 | 4.8 J Z | 5100 | 4 - 860 | 10 - 2100 | mg/kg | 7_DG-555 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 1 / 57 | 3 J FD, Q, Z | 3 J FD, Q, Z | 2 - 430 | 5.1 - 1100 | mg/kg | 7_DG-519 | LL | 8015M | 0 - 0.5 |

**Notes**
LL - Eurofins Lancaster Laboratory
µg/kg- microgram per kilogram
mg/kg - milligram per kilogram
ng/kg - nanogram per kilogram
J - Result is an estimated value
% - percent
CAS = chemical abstract service
TPH = total petroleum hydrocarbon
GRO = gasoline range organic
EFH = extractable fuel hydrocarbon
EMPC = estimated maximum possible concentration
Q - Matrix spike recoveries outside of criteria
E - Laboratory control sample and or matrix spike relative percent differences outside of criteria
S - Surrogates outside of criteria
A - Serial dilution results outside of criteria
Z - Analytes reported below the reporting limits and above the method detection limit
FD - Field duplicate relative percent difference outside of criteria
*# - Unusual problems found with the quality control data. See validation reports in Appendix C for detail
Minimum concentration values for dioxins may be EMPC values.

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 17 / 21 | 0.397 J Z | 215 | 0.0165 - 0.0993 | 5.01 - 5.58 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 11 / 21 | 0.304 J Z | 27.1 | 0.00688 - 0.0571 | 5.01 - 5.58 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 5 / 21 | 0.166 J Z | 1.64 J Z | 0.0101 - 0.0705 | 5.01 - 5.58 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 15 / 21 | 0.0312 J Z | 1.54 J Z | 0.0171 - 0.0601 | 5.01 - 5.58 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 3 / 21 | 0.235 J Z | 1.77 J Z | 0.00876 - 0.0604 | 5.01 - 5.58 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 13 / 21 | 0.0768 J Z | 7.59 | 0.017 - 0.062 | 5.01 - 5.58 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 6 / 21 | 0.114 J Z | 1.49 J Z | 0.00854 - 0.0594 | 5.01 - 5.58 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 10 / 21 | 0.108 J Z | 3.27 J Z | 0.0165 - 0.058 | 5.01 - 5.58 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 4 / 21 | 0.0426 J Z | 0.745 J Z | 0.0093 - 0.0617 | 5.01 - 5.58 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 8 / 21 | 0.203 J Z | 1.81 J Z | 0.00984 - 0.0669 | 5.01 - 5.58 | ng/kg | 7_DG-525 | LL | 1613B | 6.5 - 7.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 11 / 21 | 0.0562 J Z | 0.735 J Z | 0.0179 - 0.107 | 5.01 - 5.58 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 7 / 21 | 0.168 J Z | 1.52 J Z | 0.00843 - 0.0604 | 5.01 - 5.58 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 8 / 21 | 0.0855 J Z | 1.79 J Z | 0.00919 - 0.0634 | 5.01 - 5.58 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 6 / 21 | 0.029 J Z | 0.116 J Z | 0.0165 - 0.133 | 1 - 1.12 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 13 / 21 | 0.0189 J Z | 0.83 J Z | 0.0139 - 0.106 | 1 - 1.12 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | OCDD | 3268-87-9 | 21 / 21 | 1.4 J Z | 2660 | 0.0168 - 0.105 | 10 - 11.2 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Dioxins | OCDF | 39001-02-0 | 11 / 21 | 0.47 J Z | 47 | 0.0178 - 0.0817 | 10 - 11.2 | ng/kg | 7_DG-562 | LL | 1613B | 2 - 3 |
| Mercury | Mercury | 7439-97-6 | 12 / 21 | 0.0108 J Z | 0.0254 | 0.0098 - 0.0111 | 0.0163 - 0.0214 | mg/kg | 7_DG-519 | LL | 7471B | 2 - 3 |
| Metals | Aluminum | 7429-90-5 | 21 / 21 | 9070 | 30600 | 7.43 - 8.48 | 39.5 - 44 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Antimony | 7440-36-0 | 16 / 21 | 0.557 J Q, Z | 2.55 J Q, Z | 0.494 - 0.763 | 3.95 - 4.4 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Arsenic | 7440-38-2 | 21 / 21 | 2.06 J Z | 6.72 | 0.326 - 0.722 | 3.95 - 4.4 | mg/kg | 7_DG-526 | LL | 6010C | 9 - 10 |
| Metals | Barium | 7440-39-3 | 21 / 21 | 41.6 | 132 | 0.0326 - 0.0363 | 0.987 - 1.1 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Beryllium | 7440-41-7 | 20 / 21 | 0.415 J Z | 1.01 J Z | 0.0661 - 0.0737 | 0.987 - 1.1 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Boron | 7440-42-8 | 13 / 21 | 1.47 J Z | 7.47 J Z | 0.819 - 0.913 | 9.87 - 11 | mg/kg | 7_DG-532 | LL | 6010C | 3 - 4 |
| Metals | Cadmium | 7440-43-9 | 20 / 21 | 0.0757 J Z | 0.736 J Z | 0.0326 - 0.0784 | 0.987 - 1.1 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Calcium | 7440-70-2 | 21 / 21 | 1720 | 12600 | 3.44 - 4.42 | 19.7 - 22 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Chromium | 7440-47-3 | 21 / 21 | 14.7 | 38.8 | 0.0869 - 0.165 | 2.96 - 3.3 | mg/kg | 7_DG-532 | LL | 6010C | 3 - 4 |
| Metals | Cobalt | 7440-48-4 | 21 / 21 | 3.89 J E | 10.5 | 0.0888 - 0.102 | 0.987 - 1.1 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Copper | 7440-50-8 | 21 / 21 | 4.08 | 17 | 0.178 - 0.936 | 1.97 - 10.4 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Iron | 7439-89-6 | 21 / 21 | 15900 | 30900 | 3.73 - 20.9 | 39.5 - 220 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Lead | 7439-92-1 | 21 / 21 | 3.39 | 15.8 J E, Q | 0.464 - 0.517 | 2.96 - 3.3 | mg/kg | 7_DG-562 | LL | 6010C | 2 - 3 |
| Metals | Lithium | 7439-93-2 | 21 / 21 | 17.6 | 37.3 | 0.35 - 0.61 | 3.9 - 4.4 | mg/kg | 7_DG-532 | LL | 6010C | 3 - 4 |
| Metals | Magnesium | 7439-95-4 | 21 / 21 | 3220 | 8940 | 1.71 - 1.9 | 9.87 - 11 | mg/kg | 7_DG-532 | LL | 6010C | 3 - 4 |
| Metals | Manganese | 7439-96-5 | 21 / 21 | 171 | 493 | 0.0819 - 0.0913 | 0.987 - 1.1 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Molybdenum | 7439-98-7 | 0 / 21 | - | - | 0.168 - 0.187 | 1.97 - 2.2 | mg/kg | - | - | - | - |
| Metals | Nickel | 7440-02-0 | 21 / 21 | 5.91 | 22.7 | 0.109 - 0.134 | 1.97 - 2.2 | mg/kg | 7_DG-532 | LL | 6010C | 3 - 4 |
| Metals | Phosphorus | 7723-14-0 | 21 / 21 | 121 | 531 J Q | 0.503 - 2.98 | 9.87 - 11 | mg/kg | 7_DG-535 | LL | 6010C | 4 - 5 |
| Metals | Potassium | 9/7/7440 | 21 / 21 | 1140 J Q | 4110 J Q | 8.6 - 14.9 | 98.7 - 110 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Selenium | 7782-49-2 | 12 / 21 | 0.103 J Z | 0.414 | 0.0987 - 0.11 | 0.395 - 0.44 | mg/kg | 7_DG-533 | LL | 6020A | 2.5 - 3.5 |
| Metals | Silver | 7440-22-4 | 14 / 21 | 0.0224 J Z | 0.0854 J Z | 0.0197 - 0.0268 | 0.197 - 0.22 | mg/kg | 7_DG-558 | LL | 6020A | 3 - 4 |
| Metals | Sodium | 7440-23-5 | 16 / 21 | 61.3 J Z | 123 | 16.5 - 18.4 | 98.7 - 110 | mg/kg | 7_DG-524 | LL | 6010C | 1 - 2 |
| Metals | Strontium | 7440-24-6 | 21 / 21 | 11.3 J Q | 42.8 | 0.0336 - 0.0701 | 0.395 - 0.44 | mg/kg | 7_DG-560 | LL | 6020A | 3 - 4 |
| Metals | Thallium | 7440-28-0 | 21 / 21 | 0.176 J Z<br>0.176 J Z | 0.352 | 0.0296 - 0.033 | 0.197 - 0.22 | mg/kg | 7_DG-532 | LL | 6020A | 3 - 4 |
| Metals | Tin | 7440-31-5 | 0 / 21 | - | - | 0.217 - 0.242 | 9.87 - 11 | mg/kg | - | - | - | - |
| Metals | Titanium | 7440-32-6 | 21 / 21 | 833 | 1740 | 0.168 - 0.187 | 0.987 - 1.1 | mg/kg | 7_DG-532 | LL | 6010C | 3 - 4 |
| Metals | Vanadium | 7440-62-2 | 21 / 21 | 27.6 | 69 | 0.109 - 0.134 | 0.987 - 1.1 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Zinc | 7440-66-6 | 21 / 21 | 34.8 | 129 | 0.197 - 0.22 | 3.95 - 4.4 | mg/kg | 7_DG-562 | LL | 6010C | 2 - 3 |
| Metals | Zirconium | 7440-67-7 | 17 / 21 | 1.05 J Z | 4.08 J Z | 0.819 - 0.913 | 4.94 - 5.5 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Moisture Content | Moisture | MOIST | 21 / 21 | 2.6 | 10.9 | 0.1 - 0.1 | 0.1 - 0.1 | % | 7_DG-560 | LL | 160.3M | 3 - 4 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 2 / 21 | 0.73 J Z | 560 | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 3 / 21 | 0.96 J Z | 690 | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | Acenaphthene | 83-32-9 | 1 / 21 | 7.8 J Z | 7.8 J Z | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | Acenaphthylene | 208-96-8 | 1 / 21 | 9.2 J Z | 9.2 J Z | 0.34 - 3.5 | 1.7 - 17 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | Anthracene | 120-12-7 | 1 / 21 | 0.68 J Z | 0.68 J Z | 0.34 - 3.5 | 1.7 - 17 | µg/kg | 7_DG-519 | LL | 8270D SIM | 2 - 3 |
| PAHs | Benzo(a)anthracene | 56-55-3 | 4 / 21 | 0.98 J Z | 7.9 J Z | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 5 / 21 | 0.85 J Z | 28 | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |

Table 3-2
Summary of Analytical Results for Chemicals – Validated Data
Subsurface Soils – Subarea 7 – Phase 3

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 7 / 21 | 1 J Z | 39 | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 3 / 21 | 4.1 J Z | 100 J Z | 3.4 - 35 | 17 - 180 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 5 / 21 | 0.74 J Z | 40 | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 7 / 21 | 0.77 J Z | 46 | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 6 / 21 | 6.6 J Z | 150 J Z | 6.1 - 63 | 18 - 190 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Butylbenzylphthalate | 85-68-7 | 1 / 21 | 7.9 J Z | 7.9 J Z | 6.1 - 63 | 18 - 190 | µg/kg | 7_DG-525 | LL | 8270D SIM | 6.5 - 7.5 |
| PAHs | Chrysene | 218-01-9 | 13 / 21 | 0.42 J Z | 39 | 0.34 - 3.5 | 1.7 - 17 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 2 / 21 | 0.75 J FD, Z | 17 | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Diethylphthalate | 84-66-2 | 0 / 21 | - | - | 6.1 - 63 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Dimethylphthalate | 131-11-3 | 0 / 21 | - | - | 6.1 - 63 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Di-n-butylphthalate | 84-74-2 | 1 / 21 | 24 J Q | 24 J Q | 6.1 - 63 | 18 - 190 | µg/kg | 7_DG-558 | LL | 8270D SIM | 3 - 4 |
| PAHs | Di-n-octylphthalate | 117-84-0 | 0 / 21 | - | - | 6.1 - 63 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Fluoranthene | 206-44-0 | 8 / 21 | 0.72 J Z | 15 J Z | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Fluorene | 86-73-7 | 4 / 21 | 0.86 J Z | 28 | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 3 / 21 | 0.91 J Z | 15 J Z | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Naphthalene | 91-20-3 | 6 / 21 | 0.95 J Z | 200 | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 0 / 21 | - | - | 0.68 - 7 | 1.7 - 17 | µg/kg | - | - | - | - |
| PAHs | Phenanthrene | 85-01-8 | 5 / 21 | 0.84 J Z | 16 J Z | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | Pyrene | 129-00-0 | 7 / 21 | 0.74 J Z | 13 J Z | 0.68 - 7 | 1.7 - 17 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PCB/PCTs | Aroclor 1016 | 12674-11-2 | 0 / 21 | - | - | 3.3 - 3.6 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1221 | 11104-28-2 | 0 / 21 | - | - | 5.2 - 5.6 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1232 | 11141-16-5 | 0 / 21 | - | - | 4.1 - 4.5 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1242 | 53469-21-9 | 0 / 21 | - | - | 3.3 - 4.4 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1248 | 12672-29-6 | 0 / 21 | - | - | 3.3 - 3.6 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1254 | 11097-69-1 | 3 / 21 | 8.3 J S, Z | 14 J Z | 4.4 - 4.9 | 17 - 19 | µg/kg | 7_DG-525 | LL | 8082A | 6.5 - 7.5 |
| PCB/PCTs | Aroclor 1260 | 11096-82-5 | 1 / 21 | 9.5 J Z | 9.5 J Z | 3.9 - 4.3 | 17 - 19 | µg/kg | 7_DG-525 | LL | 8082A | 4 - 5 |
| PCB/PCTs | Aroclor 1262 | 37324-23-5 | 0 / 21 | - | - | 3.3 - 3.6 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1268 | 11100-14-4 | 0 / 21 | - | - | 3.3 - 3.6 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5432 | 63496-31-1 | 0 / 21 | - | - | 10 - 11 | 33 - 36 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5442 | 12642-23-8 | 0 / 21 | - | - | 10 - 11 | 33 - 36 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5460 | 11126-42-4 | 2 / 21 | 13 J S, Z | 15 J Z | 10 - 11 | 33 - 36 | µg/kg | 7_DG-559 | LL | 8082A | 2 - 3 |
| Pesticides | 4,4'-DDD | 72-54-8 | 0 / 1 | - | - | 0.35 - 0.35 | 1.8 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDE | 72-55-9 | 0 / 1 | - | - | 1.5 - 1.5 | 1.8 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDT | 50-29-3 | 1 / 1 | 4 | 4 | 0.37 - 0.37 | 1.8 - 1.8 | µg/kg | 7_DG-504 | LL | 8081B | 4 - 5 |
| Pesticides | Aldrin | 309-00-2 | 0 / 1 | - | - | 0.18 - 0.18 | 0.88 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Alpha-Bhc | 319-84-6 | 0 / 1 | - | - | 0.31 - 0.31 | 0.88 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Beta-Bhc | 319-85-7 | 0 / 1 | - | - | 1 - 1 | 2 - 2 | µg/kg | - | - | - | - |
| Pesticides | Chlordane | 57-74-9 | 0 / 1 | - | - | 4.2 - 4.2 | 18 - 18 | µg/kg | - | - | - | - |
| Pesticides | Delta-Bhc | 319-86-8 | 0 / 1 | - | - | 0.48 - 0.48 | 0.88 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Dieldrin | 60-57-1 | 0 / 1 | - | - | 0.72 - 0.72 | 1.8 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan I | 959-98-8 | 0 / 1 | - | - | 0.23 - 0.23 | 0.88 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan II | 33213-65-9 | 0 / 1 | - | - | 0.35 - 0.35 | 1.8 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 0 / 1 | - | - | 0.35 - 0.35 | 1.8 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endrin | 72-20-8 | 0 / 1 | - | - | 0.35 - 0.35 | 1.8 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 0 / 1 | - | - | 0.35 - 0.35 | 1.8 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endrin Ketone | 53494-70-5 | 0 / 1 | - | - | 0.63 - 0.63 | 1.9 - 1.9 | µg/kg | - | - | - | - |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 0 / 1 | - | - | 0.18 - 0.18 | 0.88 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Heptachlor | 76-44-8 | 0 / 1 | - | - | 0.18 - 0.18 | 0.88 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 0 / 1 | - | - | 0.65 - 0.65 | 0.88 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Methoxychlor | 72-43-5 | 0 / 1 | - | - | 1.8 - 1.8 | 7.1 - 7.1 | µg/kg | - | - | - | - |
| Pesticides | Mirex | 2385-85-5 | 0 / 1 | - | - | 0.37 - 0.37 | 1.8 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Technical Toxaphene | 8001-35-2 | 0 / 1 | - | - | 15 - 15 | 35 - 35 | µg/kg | - | - | - | - |
| pH | pH | pH | 21 / 21 | 6.4 | 8.27 | 0.01 - 0.01 | 0.01 - 0.01 | pH | 7_DG-541 | LL | 9045M | 2 - 3 |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 0 / 21 | - | - | 2.1 - 42 | 5.1 - 110 | mg/kg | - | - | - | - |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 5 / 21 | 2.3 J Z | 9.2 | 2.1 - 42 | 5.1 - 110 | mg/kg | 7_DG-519 | LL | 8015M | 2 - 3 |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 16 / 21 | 2.6 J Z | 84 J Z | 2.1 - 42 | 5.1 - 110 | mg/kg | 7_DG-559 | LL | 8015M | 2 - 3 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 17 / 21 | 5.6 J Z | 420 | 4.1 - 84 | 10 - 210 | mg/kg | 7_DG-559 | LL | 8015M | 2 - 3 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 0 / 21 | - | - | 2.1 - 42 | 5.1 - 110 | mg/kg | - | - | - | - |

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 2 / 21 | 0.3 J Z | 1.4 | 0.2 - 0.3 | 0.9 - 1.6 | mg/kg | 7_DG-519 | LL | 8015M | 2 - 3 |

**Notes**
LL - Eurofins Lancaster Laboratory
µg/kg- microgram per kilogram
mg/kg - milligram per kilogram
ng/kg - nanogram per kilogram
J - Result is an estimated value
% - percent
CAS = chemical abstract service
TPH = total petroleum hydrocarbon
GRO = gasoline range organic
EFH = extractable fuel hydrocarbon
EMPC = estimated maximum possible concentration
SIM = selective ion monitoring
E - Laboratory control sample and or matrix spike relative percent differences outside of criteria
S - Surrogates outside of criteria
Q - Matrix spike recoveries outside of criteria
Z - Analytes reported below the reporting limits and above the method detection limit
FD - Field duplicate relative percent difference outside of criteria
*# - Unusual problems found with the quality control data. See validation reports in Appendix C for detail
Minimum concentration values for dioxins may be EMPC values.

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 74 / 79 | 0.397 J Z | 2000 J *# | 0.0139 - 0.223 | 4.85 - 5.58 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 68 / 79 | 0.247 J Z | 101 | 0.00688 - 0.0684 | 4.85 - 5.58 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 47 / 79 | 0.0981 J Z | 12.2 | 0.0101 - 0.0792 | 4.85 - 5.58 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 66 / 79 | 0.0312 J Z | 3660 J *# | 0.017 - 0.114 | 4.85 - 5.58 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 45 / 79 | 0.117 J Z | 6.59 | 0.00876 - 0.0764 | 4.85 - 5.58 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 70 / 79 | 0.0704 J Z | 54.8 | 0.017 - 0.128 | 4.85 - 5.58 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 54 / 79 | 0.0854 J Z | 7.55 | 0.00854 - 0.0745 | 4.85 - 5.58 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 62 / 79 | 0.108 J Z | 18.1 | 0.0165 - 0.118 | 4.85 - 5.58 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 24 / 79 | 0.0426 J Z | 1.07 J Z | 0.0093 - 0.101 | 4.85 - 5.58 | ng/kg | 7_DG-561 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 47 / 79 | 0.203 J Z | 18 | 0.00936 - 0.0771 | 4.85 - 5.58 | ng/kg | 7_DG-517 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 50 / 79 | 0.039 J Z | 15.9 | 0.0158 - 0.107 | 4.85 - 5.58 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 52 / 79 | 0.0959 J Z | 9.07 | 0.00843 - 0.0853 | 4.85 - 5.58 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 51 / 79 | 0.0636 J Z | 3.48 J Z | 0.00892 - 0.0678 | 4.85 - 5.58 | ng/kg | 7_DG-514 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 40 / 79 | 0.0231 J Z | 4.35 | 0.0165 - 0.148 | 0.971 - 1.12 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 64 / 79 | 0.0189 J Z | 3.69 | 0.0139 - 0.122 | 0.971 - 1.12 | ng/kg | 7_DG-517 | LL | 1613B | 0 - 0.5 |
| Dioxins | OCDD | 3268-87-9 | 78 / 79 | 1.4 J Z | 23100 J *# | 0.0134 - 0.134 | 9.71 - 11.2 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | OCDF | 39001-02-0 | 67 / 79 | 0.47 J Z | 177 | 0.0157 - 0.151 | 9.71 - 11.2 | ng/kg | 7_DG-505 | LL | 1613B | 0 - 0.5 |
| Formaldehyde | Formaldehyde | 50-00-0 | 0 / 1 | - | - | 1200 - 1200 | 2100 - 2100 | µg/kg | - | - | - | - |
| Hexavalent Chromium | Chromium (Hexavalent Compounds) | 18540-29-9 | 1 / 1 | 0.37 J Z | 0.37 J Z | 0.15 - 0.15 | 0.42 - 0.42 | mg/kg | 7_DG-540 | LL | 7199 | 0 - 0.5 |
| Mercury | Mercury | 7439-97-6 | 59 / 78 | 0.0108 J Z<br>0.0108 J Z | 0.414 | 0.0095 - 0.0111 | 0.0158 - 0.0214 | mg/kg | 7_DG-508 | LL | 7471B | 0 - 0.5 |
| Metals | Aluminum | 7429-90-5 | 78 / 78 | 8670 | 30600 | 7.43 - 8.48 | 39.2 - 44 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Antimony | 7440-36-0 | 45 / 78 | 0.545 J Q, Z | 4.63 J FD, Q | 0.49 - 0.783 | 3.92 - 4.4 | mg/kg | 7_DG-519 | LL | 6010C | 0 - 0.5 |
| Metals | Arsenic | 7440-38-2 | 78 / 78 | 1.55 J Z | 9.73 | 0.323 - 0.741 | 3.92 - 4.4 | mg/kg | 7_DG-500 | LL | 6010C | 0 - 0.5 |
| Metals | Barium | 7440-39-3 | 78 / 78 | 41.6 | 132 | 0.0323 - 0.0363 | 0.979 - 1.1 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Beryllium | 7440-41-7 | 69 / 78 | 0.378 J Z | 1.01 J Z | 0.0656 - 0.0737 | 0.979 - 1.1 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Boron | 7440-42-8 | 34 / 78 | 1.47 J Z | 7.47 J Z | 0.813 - 0.913 | 9.79 - 11 | mg/kg | 7_DG-532 | LL | 6010C | 3 - 4 |
| Metals | Cadmium | 7440-43-9 | 68 / 78 | 0.0439 J Z | 1.19 J FD | 0.0323 - 0.0804 | 0.979 - 1.1 | mg/kg | 7_DG-519 | LL | 6010C | 0 - 0.5 |
| Metals | Calcium | 7440-70-2 | 78 / 78 | 1360 J E | 12600 | 3.44 - 4.42 | 19.6 - 22 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Chromium | 7440-47-3 | 78 / 78 | 9.62 | 38.8 | 0.0862 - 0.169 | 2.94 - 3.3 | mg/kg | 7_DG-532 | LL | 6010C | 3 - 4 |
| Metals | Cobalt | 7440-48-4 | 78 / 78 | 3.19 | 10.8 | 0.0881 - 0.105 | 0.979 - 1.1 | mg/kg | 7_DG-518 | LL | 6010C | 0 - 0.5 |
| Metals | Copper | 7440-50-8 | 78 / 78 | 3.54 | 20.8 | 0.176 - 0.936 | 1.96 - 10.4 | mg/kg | 7_DG-508 | LL | 6010C | 0 - 0.5 |
| Metals | Iron | 7439-89-6 | 78 / 78 | 14000 | 30900 | 3.72 - 20.9 | 39.2 - 220 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Lead | 7439-92-1 | 78 / 78 | 3.39 | 30.2 | 0.46 - 0.529 | 2.94 - 3.3 | mg/kg | 7_DG-560 | LL | 6010C | 0 - 0.5 |
| Metals | Lithium | 7439-93-2 | 78 / 78 | 12 | 37.3 | 0.35 - 0.61 | 3.9 - 4.4 | mg/kg | 7_DG-532 | LL | 6010C | 3 - 4 |
| Metals | Magnesium | 7439-95-4 | 78 / 78 | 2600 | 8940 | 1.69 - 1.9 | 9.79 - 11 | mg/kg | 7_DG-532 | LL | 6010C | 3 - 4 |
| Metals | Manganese | 7439-96-5 | 78 / 78 | 171 | 560 | 0.0813 - 0.0913 | 0.979 - 1.1 | mg/kg | 7_DG-561 | LL | 6010C | 0 - 0.5 |
| Metals | Molybdenum | 7439-98-7 | 2 / 78 | 0.403 J Z | 2.79 J FD | 0.166 - 0.187 | 1.96 - 2.2 | mg/kg | 7_DG-519 | LL | 6010C | 0 - 0.5 |
| Metals | Nickel | 7440-02-0 | 78 / 78 | 5.31 | 22.7 | 0.108 - 0.138 | 1.96 - 2.2 | mg/kg | 7_DG-532 | LL | 6010C | 3 - 4 |
| Metals | Phosphorus | 7723-14-0 | 78 / 78 | 121 | 679 J E, A | 0.499 - 3.06 | 9.79 - 11 | mg/kg | 7_DG-519 | LL | 6010C | 0 - 0.5 |
| Metals | Potassium | 9/7/7440 | 78 / 78 | 1140 J Q | 4520 J Q | 8.6 - 14.9 | 97.9 - 110 | mg/kg | 7_DG-518 | LL | 6010C | 0 - 0.5 |
| Metals | Selenium | 7782-49-2 | 45 / 78 | 0.102 J FD, Z | 0.572 | 0.0979 - 0.11 | 0.392 - 0.44 | mg/kg | 7_DG-541 | LL | 6020A | 0 - 0.5 |
| Metals | Silver | 7440-22-4 | 61 / 78 | 0.0205 J Z | 0.0918 J Z | 0.0196 - 0.0275 | 0.196 - 0.22 | mg/kg | 7_DG-518 | LL | 6020A | 0 - 0.5 |
| Metals | Sodium | 7440-23-5 | 57 / 78 | 53 J Z | 319 | 16.4 - 18.4 | 97.9 - 110 | mg/kg | 7_DG-516 | LL | 6010C | 0 - 0.5 |
| Metals | Strontium | 7440-24-6 | 78 / 78 | 7.03 J Q | 42.8 | 0.0333 - 0.18 | 0.392 - 1.06 | mg/kg | 7_DG-560 | LL | 6020A | 3 - 4 |
| Metals | Thallium | 7440-28-0 | 78 / 78 | 0.138 J Z | 0.398 | 0.0294 - 0.033 | 0.196 - 0.22 | mg/kg | 7_DG-529 | LL | 6020A | 0 - 0.5 |
| Metals | Tin | 7440-31-5 | 1 / 78 | 10.9 J FD | 10.9 J FD | 0.215 - 0.242 | 9.79 - 11 | mg/kg | 7_DG-519 | LL | 6010C | 0 - 0.5 |
| Metals | Titanium | 7440-32-6 | 78 / 78 | 713 | 1740 | 0.166 - 0.187 | 0.979 - 1.1 | mg/kg | 7_DG-532 | LL | 6010C | 3 - 4 |
| Metals | Vanadium | 7440-62-2 | 78 / 78 | 19 | 69 | 0.108 - 0.138 | 0.979 - 1.1 | mg/kg | 7_DG-560 | LL | 6010C | 3 - 4 |
| Metals | Zinc | 7440-66-6 | 78 / 78 | 34.8 | 129 | 0.196 - 0.22 | 3.92 - 4.4 | mg/kg | 7_DG-562 | LL | 6010C | 2 - 3 |
| Metals | Zirconium | 7440-67-7 | 56 / 78 | 0.902 J Z | 12.5 | 0.813 - 0.913 | 4.9 - 5.5 | mg/kg | 7_DG-517 | LL | 6010C | 0 - 0.5 |
| Moisture Content | Moisture | MOIST | 86 / 86 | 1.1 | 10.9 | 0.1 - 0.1 | 0.1 - 0.1 | % | 7_DG-560 | LL | 160.3M | 3 - 4 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 19 / 78 | 0.73 J Z | 560 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 29 / 78 | 0.72 J Z | 690 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | Acenaphthene | 83-32-9 | 1 / 78 | 7.8 J Z | 7.8 J Z | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | Acenaphthylene | 208-96-8 | 6 / 78 | 0.39 J FD, Z | 9.2 J Z | 0.33 - 36 | 1.7 - 180 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | Anthracene | 120-12-7 | 25 / 78 | 0.35 J Z | 6 J Z | 0.33 - 36 | 1.7 - 180 | µg/kg | 7_DG-539 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(a)anthracene | 56-55-3 | 34 / 78 | 0.71 J Z | 42 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-560 | LL | 8270D SIM | 0 - 0.5 |

Table 3-3
Summary of Analytical Results for Chemicals – Validated Data
Combined Soils – Subarea 7 – Phase 3

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PAHs | Benzo(a)pyrene | 50-32-8 | 42 / 78 | 0.71 J Z | 41 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-560 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 57 / 78 | 1 J Z | 68 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-554 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 17 / 78 | 3.5 J Z | 100 J Z | 3.3 - 360 | 17 - 1800 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 42 / 78 | 0.74 J Z | 40 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 46 / 78 | 0.75 J Z | 52 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-504 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 41 / 78 | 6.3 J Z | 610 | 6 - 640 | 18 - 1900 | µg/kg | 7_DG-509 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Butylbenzylphthalate | 85-68-7 | 11 / 78 | 6.4 J Z | 19 | 6 - 640 | 18 - 1900 | µg/kg | 7_DG-557<br>7_DG-527 | LL<br>LL | 8270D SIM<br>8270D SIM | 0 - 0.5<br>0 - 0.5 |
| PAHs | Chrysene | 218-01-9 | 65 / 78 | 0.34 J Z | 47 | 0.33 - 36 | 1.7 - 180 | µg/kg | 7_DG-560 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 14 / 78 | 0.75 J FD, Z | 17 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Diethylphthalate | 84-66-2 | 0 / 78 | - | - | 6 - 640 | 18 - 1900 | µg/kg | - | - | - | - |
| PAHs | Dimethylphthalate | 131-11-3 | 0 / 78 | - | - | 6 - 640 | 18 - 1900 | µg/kg | - | - | - | - |
| PAHs | Di-n-butylphthalate | 84-74-2 | 5 / 78 | 7.4 J Z | 870 | 6 - 640 | 18 - 1900 | µg/kg | 7_DG-558 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Di-n-octylphthalate | 117-84-0 | 0 / 78 | - | - | 6 - 640 | 18 - 1900 | µg/kg | - | - | - | - |
| PAHs | Fluoranthene | 206-44-0 | 59 / 78 | 0.72 J Z | 82 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-539 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Fluorene | 86-73-7 | 20 / 78 | 0.71 J Z | 28 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 36 / 78 | 0.77 J Z<br>0.77 J Z | 15 J Z | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-562 | LL | 8270D SIM | 2 - 3 |
| PAHs | Naphthalene | 91-20-3 | 34 / 78 | 0.88 J Z | 200 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-559 | LL | 8270D SIM | 2 - 3 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 3 / 78 | 0.81 J Z | 3.4 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-537 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Phenanthrene | 85-01-8 | 49 / 78 | 0.68 J Z | 63 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-539 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Pyrene | 129-00-0 | 58 / 78 | 0.74 J Z | 64 | 0.67 - 71 | 1.7 - 180 | µg/kg | 7_DG-539 | LL | 8270D SIM | 0 - 0.5 |
| PCB/PCTs | Aroclor 1016 | 12674-11-2 | 0 / 85 | - | - | 3.3 - 17 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1221 | 11104-28-2 | 0 / 85 | - | - | 5.1 - 26 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1232 | 11141-16-5 | 0 / 85 | - | - | 4.1 - 21 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1242 | 53469-21-9 | 0 / 85 | - | - | 3.3 - 17 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1248 | 12672-29-6 | 0 / 85 | - | - | 3.3 - 17 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1254 | 11097-69-1 | 19 / 85 | 6.7 J Z | 430 | 4.4 - 22 | 17 - 87 | µg/kg | 7_DG-518 | LL | 8082A | 0 - 0.5 |
| PCB/PCTs | Aroclor 1260 | 11096-82-5 | 5 / 85 | 5 J Z | 280 J S | 3.9 - 20 | 17 - 87 | µg/kg | 7_DG-517 | LL | 8082A | 0 - 0.5 |
| PCB/PCTs | Aroclor 1262 | 37324-23-5 | 0 / 85 | - | - | 3.3 - 17 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1268 | 11100-14-4 | 0 / 85 | - | - | 3.3 - 17 | 17 - 87 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5432 | 63496-31-1 | 0 / 85 | - | - | 9.9 - 51 | 33 - 170 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5442 | 12642-23-8 | 0 / 85 | - | - | 9.9 - 51 | 33 - 170 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5460 | 11126-42-4 | 16 / 85 | 13 J S, Z | 250 J S | 9.9 - 51 | 33 - 170 | µg/kg | 7_DG-517 | LL | 8082A | 0 - 0.5 |
| Pesticides | 4,4'-DDD | 72-54-8 | 0 / 9 | - | - | 0.33 - 0.35 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDE | 72-55-9 | 5 / 9 | 0.53 J FD, Z | 2.7 | 0.33 - 1.9 | 1.7 - 1.9 | µg/kg | 7_DG-511 | LL | 8081B | 0 - 0.5 |
| Pesticides | 4,4'-DDT | 50-29-3 | 7 / 9 | 0.62 J Z, *# | 7 J Q | 0.35 - 5.1 | 1.7 - 5.1 | µg/kg | 7_DG-513 | LL | 8081B | 0 - 0.5 |
| Pesticides | Aldrin | 309-00-2 | 0 / 9 | - | - | 0.17 - 0.18 | 0.84 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Alpha-Bhc | 319-84-6 | 0 / 9 | - | - | 0.17 - 0.31 | 0.84 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Beta-Bhc | 319-85-7 | 0 / 9 | - | - | 0.97 - 1 | 1.9 - 2 | µg/kg | - | - | - | - |
| Pesticides | Chlordane | 57-74-9 | 0 / 9 | - | - | 4.1 - 8.2 | 17 - 18 | µg/kg | - | - | - | - |
| Pesticides | Delta-Bhc | 319-86-8 | 0 / 9 | - | - | 0.46 - 0.48 | 0.84 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Dieldrin | 60-57-1 | 0 / 9 | - | - | 0.33 - 0.72 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan I | 959-98-8 | 0 / 8 | - | - | 0.22 - 0.23 | 0.84 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan II | 33213-65-9 | 0 / 9 | - | - | 0.33 - 0.35 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 0 / 9 | - | - | 0.33 - 0.35 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endrin | 72-20-8 | 0 / 9 | - | - | 0.33 - 0.4 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 0 / 9 | - | - | 0.33 - 0.35 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Pesticides | Endrin Ketone | 53494-70-5 | 0 / 9 | - | - | 0.61 - 0.63 | 1.8 - 1.9 | µg/kg | - | - | - | - |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 0 / 9 | - | - | 0.17 - 0.18 | 0.84 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Heptachlor | 76-44-8 | 1 / 9 | 0.18 J Z | 0.18 J Z | 0.17 - 0.3 | 0.84 - 0.88 | µg/kg | 7_DG-511 | LL | 8081B | 0 - 0.5 |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 0 / 9 | - | - | 0.17 - 0.65 | 0.84 - 0.88 | µg/kg | - | - | - | - |
| Pesticides | Methoxychlor | 72-43-5 | 0 / 9 | - | - | 1.7 - 1.8 | 6.8 - 7.1 | µg/kg | - | - | - | - |
| Pesticides | Mirex | 2385-85-5 | 1 / 9 | 0.63 J Z | 0.63 J Z | 0.35 - 0.37 | 1.7 - 1.8 | µg/kg | 7_DG-513 | LL | 8081B | 0 - 0.5 |
| Pesticides | Technical Toxaphene | 8001-35-2 | 0 / 9 | - | - | 12 - 15 | 33 - 35 | µg/kg | - | - | - | - |
| pH | pH | pH | 77 / 77 | 5.94 | 8.34 | 0.01 - 0.01 | 0.01 - 0.01 | pH | 7_DG-542 | LL | 9045M | 0 - 0.5 |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 1 / 78 | 2.5 J FD, Q, Z | 2.5 J FD, Q, Z | 2 - 430 | 5.1 - 1100 | mg/kg | 7_DG-519 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 23 / 78 | 2.1 J Z | 14 | 2 - 430 | 5.1 - 1100 | mg/kg | 7_DG-519 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 72 / 78 | 2.6 J Z | 2100 | 2 - 430 | 5.1 - 1100 | mg/kg | 7_DG-555 | LL | 8015M | 0 - 0.5 |

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 73 / 78 | 4.8 J Z | 5100 | 4 - 860 | 10 - 2100 | mg/kg | 7_DG-555 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 1 / 78 | 3 J FD, Q, Z | 3 J FD, Q, Z | 2 - 430 | 5.1 - 1100 | mg/kg | 7_DG-519 | LL | 8015M | 0 - 0.5 |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 2 / 21 | 0.3 J Z | 1.4 | 0.2 - 0.3 | 0.9 - 1.6 | mg/kg | 7_DG-519 | LL | 8015M | 2 - 3 |

**Notes**
LL - Eurofins Lancaster Laboratory
µg/kg- microgram per kilogram
mg/kg - milligram per kilogram
ng/kg - nanogram per kilogram
J - Result is an estimated value
% - percent
CAS = chemical abstract service
TPH = total petroleum hydrocarbon
GRO = gasoline range organic
EFH = extractable fuel hydrocarbon
EMPC = estimated maximum possible concentration
Q - Matrix spike recoveries outside of criteria
SIM = selective ion monitoring
S - Surrogates outside of criteria
A - Serial dilution results outside of criteria
E - Laboratory control sample and or matrix spike relative percent differences outside of criteria
Z - Analytes reported below the reporting limits and above the method detection limit
FD - Field duplicate relative percent difference outside of criteria
*# - Unusual problems found with the quality control data. See validation reports in Appendix C for detail
Minimum concentration values for dioxins may be EMPC values.

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide | Cyanide | 57-12-5 | 0 / 1 | - | - | 0.19 - 0.19 | 0.52 - 0.52 | mg/kg | - | - | - | - |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 18 / 24 | 0.913 J Z | 58.3 | 0.0203 - 0.0826 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 11 / 24 | 0.411 J Z | 14.5 | 0.0128 - 0.0511 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 3 / 24 | 0.654 J FD, Z | 1.22 J Z | 0.0182 - 0.0795 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 5 / 24 | 0.133 J Z | 0.404 J Z | 0.0254 - 0.0895 | 4.86 - 5.9 | ng/kg | NBZ_DG-542 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 5 / 24 | 0.156 J Z | 0.831 J Z | 0.0182 - 0.0644 | 4.86 - 5.9 | ng/kg | NBZ_DG-509 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 9 / 24 | 0.144 J Z | 2.78 J Z | 0.0257 - 0.0902 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 5 / 24 | 0.169 J Z | 0.49 J Z | 0.0179 - 0.0586 | 4.86 - 5.9 | ng/kg | NBZ_DG-540 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 11 / 24 | 0.14 J Z | 0.878 J Z | 0.0251 - 0.09 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 1 / 24 | 0.207 J Z | 0.207 J Z | 0.0195 - 0.0751 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 6 / 24 | 0.231 J Z | 0.785 J Z | 0.0199 - 0.0517 | 4.86 - 5.9 | ng/kg | NBZ_DG-540 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 5 / 24 | 0.0784 J Z | 0.304 J Z | 0.0294 - 0.0976 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 5 / 24 | 0.153 J Z | 0.626 J Z | 0.0176 - 0.0624 | 4.86 - 5.9 | ng/kg | NBZ_DG-542 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 8 / 24 | 0.3 J Z | 0.608 J Z | 0.0179 - 0.0511 | 4.86 - 5.9 | ng/kg | NBZ_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 2 / 24 | 0.0807 J Z | 0.0989 J Z | 0.0386 - 0.0988 | 0.972 - 1.18 | ng/kg | NBZ_DG-517 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 14 / 24 | 0.0786 J Z | 0.622 J Z | 0.0393 - 0.0922 | 0.972 - 1.18 | ng/kg | NBZ_DG-545 | LL | 1613B | 0 - 0.5 |
| Dioxins | OCDD | 3268-87-9 | 20 / 24 | 6.05 J Z | 468 | 0.0157 - 0.0691 | 9.72 - 11.8 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | OCDF | 39001-02-0 | 12 / 24 | 0.775 J Z | 38.3 | 0.0222 - 0.079 | 9.72 - 11.8 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Herbicides | 2,2-Dichlor-Propionic Acid | 75-99-0 | 0 / 7 | - | - | 45 - 110 | 91 - 110 | µg/kg | - | - | - | - |
| Herbicides | 2,4,5-T | 93-76-5 | 3 / 7 | 1.7 | 2.1 | 0.83 - 0.97 | 1.7 - 2 | µg/kg | NBZ_DG-541 | LL | 8151A | 0 - 0.5 |
| Herbicides | 2,4-D | 94-75-7 | 0 / 7 | - | - | 12 - 14 | 37 - 42 | µg/kg | - | - | - | - |
| Herbicides | 2,4-DB | 94-82-6 | 1 / 7 | 24 J L | 24 J L | 6.3 - 30 | 17 - 30 | µg/kg | NBZ_DG-526 | LL | 8151A | 0 - 0.5 |
| Herbicides | Dicamba | 1918-00-9 | 0 / 7 | - | - | 4.1 - 4.7 | 12 - 14 | µg/kg | - | - | - | - |
| Herbicides | Dichlorprop | 120-36-5 | 0 / 7 | - | - | 9.1 - 11 | 17 - 20 | µg/kg | - | - | - | - |
| Herbicides | Dinitrobutyl Phenol | 88-85-7 | 0 / 7 | - | - | 9.1 - 11 | 24 - 28 | µg/kg | - | - | - | - |
| Herbicides | MCPA | 94-74-6 | 0 / 7 | - | - | 770 - 900 | 2500 - 2900 | µg/kg | - | - | - | - |
| Herbicides | MCPP | 93-65-2 | 2 / 7 | 1200 J Z | 1300 J Z | 760 - 880 | 2500 - 2900 | µg/kg | NBZ_DG-542 | LL | 8151A | 0 - 0.5 |
| Herbicides | Silvex (2,4,5-TP) | 93-72-1 | 3 / 7 | 0.97 J Z | 1.4 J Z | 0.76 - 0.88 | 1.7 - 2 | µg/kg | NBZ_DG-525 | LL | 8151A | 0 - 0.5 |
| Mercury | Mercury | 7439-97-6 | 9 / 12 | 0.0109 J Z | 0.182 | 0.0099 - 0.0105 | 0.0165 - 0.0176 | mg/kg | NBZ_DG-545 | LL | 7471B | 0 - 0.5 |
| Metals | Aluminum | 7429-90-5 | 12 / 12 | 8940 | 26000 | 7.06 - 7.64 | 39.2 - 42.4 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Antimony | 7440-36-0 | 6 / 12 | 1.15 J Q, Z | 2.22 J Q, Z | 0.725 - 0.784 | 3.92 - 4.24 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Arsenic | 7440-38-2 | 12 / 12 | 2.84 J Z | 19.7 | 0.686 - 0.742 | 3.92 - 4.24 | mg/kg | NBZ_DG-512 | LL | 6010C | 0 - 0.5 |
| Metals | Barium | 7440-39-3 | 12 / 12 | 48 | 129 | 0.0323 - 0.035 | 0.98 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Beryllium | 7440-41-7 | 12 / 12 | 0.359 J Z | 1.18 | 0.0656 - 0.071 | 0.98 - 1.06 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Boron | 7440-42-8 | 9 / 12 | 2 J Z | 9.81 J Z | 0.823 - 0.89 | 9.8 - 10.6 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Cadmium | 7440-43-9 | 6 / 12 | 0.372 J Z | 0.489 J Z | 0.0745 - 0.0806 | 0.98 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Calcium | 7440-70-2 | 12 / 12 | 1980 | 6130 | 3.27 - 3.54 | 19.6 - 21.2 | mg/kg | NBZ_DG-521 | LL | 6010C | 0 - 0.5 |
| Metals | Chromium | 7440-47-3 | 12 / 12 | 10.9 | 32.6 | 0.157 - 0.17 | 2.94 - 3.18 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Cobalt | 7440-48-4 | 12 / 12 | 4.46 | 9.94 | 0.097 - 0.105 | 0.98 - 1.06 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Copper | 7440-50-8 | 12 / 12 | 1.74 J Z | 25.2 | 0.284 - 0.307 | 1.96 - 2.12 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Iron | 7439-89-6 | 12 / 12 | 14800 | 38300 | 3.55 - 7.56 | 39.2 - 83.5 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Lead | 7439-92-1 | 12 / 12 | 6.86 | 19.7 | 0.49 - 0.53 | 2.94 - 3.18 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Lithium | 7439-93-2 | 12 / 12 | 10.5 | 43.2 | 0.33 - 0.36 | 3.9 - 4.2 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Magnesium | 7439-95-4 | 12 / 12 | 3920 | 8270 | 1.64 - 1.77 | 9.8 - 10.6 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Manganese | 7439-96-5 | 12 / 12 | 185 | 496 | 0.0813 - 0.088 | 0.98 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Molybdenum | 7439-98-7 | 0 / 12 | - | - | 0.167 - 0.18 | 1.96 - 2.12 | mg/kg | - | - | - | - |
| Metals | Nickel | 7440-02-0 | 12 / 12 | 6.88 | 21.4 | 0.127 - 0.138 | 1.96 - 2.12 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Phosphorus | 7723-14-0 | 12 / 12 | 332 J Q | 595 J Q | 2.83 - 3.06 | 9.8 - 10.6 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Potassium | 7440-09-7 | 12 / 12 | 2750 | 5660 | 8.17 - 8.84 | 98 - 106 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Selenium | 7782-49-2 | 11 / 12 | 0.104 J Z | 0.427 | 0.098 - 0.106 | 0.392 - 0.424 | mg/kg | NBZ_DG-505 | LL | 6020A | 0 - 0.5 |
| Metals | Silver | 7440-22-4 | 10 / 12 | 0.0322 J Z | 0.201 J Z | 0.0255 - 0.0276 | 0.196 - 0.212 | mg/kg | NBZ_DG-545 | LL | 6020A | 0 - 0.5 |
| Metals | Sodium | 7440-23-5 | 12 / 12 | 53.9 J Z | 99.6 J Z | 16.4 - 17.7 | 98 - 106 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Strontium | 7440-24-6 | 12 / 12 | 8.81 | 31 J Q | 0.0671 - 0.176 | 0.395 - 1.04 | mg/kg | NBZ_DG-511 | LL | 6020A | 0 - 0.5 |
| Metals | Thallium | 7440-28-0 | 12 / 12 | 0.213 | 0.44 | 0.0294 - 0.0318 | 0.196 - 0.212 | mg/kg | NBZ_DG-517 | LL | 6020A | 0 - 0.5 |
| Metals | Tin | 7440-31-5 | 0 / 12 | - | - | 0.216 - 0.233 | 9.8 - 10.6 | mg/kg | - | - | - | - |
| Metals | Titanium | 7440-32-6 | 12 / 12 | 647 | 1340 | 0.167 - 0.18 | 0.98 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Vanadium | 7440-62-2 | 12 / 12 | 27.3 | 64.9 | 0.127 - 0.138 | 0.98 - 1.06 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Zinc | 7440-66-6 | 12 / 12 | 39.9 | 108 | 0.196 - 0.212 | 3.92 - 4.24 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |

Table 3-4
Summary of Analytical Results for Chemicals – Validated Data
Surface Soils NBZ – Phase 3

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals | Zirconium | 7440-67-7 | 12 / 12 | 0.877 J FD, Z | 4.64 J Z | 0.823 - 0.89 | 4.9 - 5.3 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Moisture Content | Moisture | MOIST | 55 / 55 | 1.2 | 16 | 0.1 - 0.1 | 0.1 - 0.1 | % | NBZ_DG-535 | LL | 160.3M | 0 - 0.5 |
| Nitrates | Nitrate | 14797-55-8 | 3 / 3 | 0.7 J FD, Q, Z | 8.6 J Q | 0.42 - 0.42 | 0.78 - 0.78 | mg/kg | NBZ_DG-523 | LL | 300.0 | 0 - 0.5 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 11 / 28 | 0.72 J FD, Z | 5.6 | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-505 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 15 / 28 | 0.85 J FD, Z | 7.9 | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-505 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Acenaphthene | 83-32-9 | 0 / 28 | - | - | 0.67 - 7.2 | 1.7 - 18 | µg/kg | - | - | - | - |
| PAHs | Acenaphthylene | 208-96-8 | 0 / 28 | - | - | 0.33 - 3.6 | 1.7 - 18 | µg/kg | - | - | - | - |
| PAHs | Anthracene | 120-12-7 | 3 / 28 | 0.38 J Z | 0.84 J Z | 0.33 - 3.6 | 1.7 - 18 | µg/kg | NBZ_DG-505 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(a)anthracene | 56-55-3 | 9 / 28 | 0.75 J Z | 1.4 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-505 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 10 / 28 | 0.68 J Z | 1.7 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-542 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 22 / 28 | 0.78 J Z | 15 J FD, Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-545 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 0 / 28 | - | - | 3.3 - 36 | 17 - 180 | µg/kg | - | - | - | - |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 8 / 28 | 0.85 J Z | 1.3 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-505 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 9 / 28 | 0.71 J Z | 1.4 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-542 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 11 / 28 | 7.6 J Z | 74 J Z | 6 - 65 | 18 - 190 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Butylbenzylphthalate | 85-68-7 | 4 / 28 | 7.6 J Z | 28 | 6 - 65 | 18 - 190 | µg/kg | NBZ_DG-521 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Chrysene | 218-01-9 | 25 / 28 | 0.68 J Z | 20 J FD | 0.33 - 3.6 | 1.7 - 18 | µg/kg | NBZ_DG-545 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 0 / 28 | - | - | 0.67 - 7.2 | 1.7 - 18 | µg/kg | - | - | - | - |
| PAHs | Diethylphthalate | 84-66-2 | 0 / 28 | - | - | 6 - 65 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Dimethylphthalate | 131-11-3 | 0 / 28 | - | - | 6 - 65 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Di-n-butylphthalate | 84-74-2 | 0 / 28 | - | - | 6 - 65 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Di-n-octylphthalate | 117-84-0 | 0 / 28 | - | - | 6 - 65 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Fluoranthene | 206-44-0 | 21 / 28 | 0.7 J Z | 6.9 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-527 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Fluorene | 86-73-7 | 1 / 28 | 16 | 16 | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-542 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 5 / 28 | 0.7 J Z | 0.93 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-505 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Naphthalene | 91-20-3 | 21 / 28 | 0.71 J Z | 21 | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 0 / 28 | - | - | 0.67 - 7.2 | 1.7 - 18 | µg/kg | - | - | - | - |
| PAHs | Phenanthrene | 85-01-8 | 20 / 28 | 0.86 J Z | 9.6 | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-527 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Pyrene | 129-00-0 | 21 / 28 | 0.68 J Z | 6 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-527 | LL | 8270D SIM | 0 - 0.5 |
| PCB/PCTs | Aroclor 1016 | 12674-11-2 | 0 / 12 | - | - | 3.3 - 3.7 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1221 | 11104-28-2 | 0 / 12 | - | - | 5.2 - 5.7 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1232 | 11141-16-5 | 0 / 12 | - | - | 4.1 - 4.6 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1242 | 53469-21-9 | 0 / 12 | - | - | 4.1 - 4.6 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1248 | 12672-29-6 | 0 / 12 | - | - | 3.3 - 3.7 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1254 | 11097-69-1 | 0 / 12 | - | - | 4.5 - 4.9 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1260 | 11096-82-5 | 0 / 12 | - | - | 3.9 - 4.3 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1262 | 37324-23-5 | 0 / 12 | - | - | 3.3 - 3.7 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1268 | 11100-14-4 | 0 / 12 | - | - | 3.3 - 3.7 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5432 | 63496-31-1 | 0 / 12 | - | - | 10 - 11 | 33 - 37 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5442 | 12642-23-8 | 0 / 12 | - | - | 10 - 11 | 33 - 37 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5460 | 11126-42-4 | 0 / 12 | - | - | 10 - 11 | 33 - 37 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDD | 72-54-8 | 0 / 25 | - | - | 0.33 - 2 | 1.7 - 2 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDE | 72-55-9 | 12 / 25 | 0.63 J Z | 2.7 | 0.33 - 1.9 | 1.7 - 2 | µg/kg | NBZ_DG-556 | LL | 8081B | 0 - 0.5 |
| Pesticides | 4,4'-DDT | 50-29-3 | 15 / 25 | 0.37 J Z | 2.6 | 0.35 - 0.41 | 1.7 - 2 | µg/kg | NBZ_DG-556 | LL | 8081B | 0 - 0.5 |
| Pesticides | Aldrin | 309-00-2 | 0 / 25 | - | - | 0.17 - 0.2 | 0.84 - 0.97 | µg/kg | - | - | - | - |
| Pesticides | Alpha-Bhc | 319-84-6 | 0 / 25 | - | - | 0.17 - 0.2 | 0.84 - 0.97 | µg/kg | - | - | - | - |
| Pesticides | Beta-Bhc | 319-85-7 | 0 / 25 | - | - | 0.97 - 1.1 | 1.9 - 2.2 | µg/kg | - | - | - | - |
| Pesticides | Chlordane | 57-74-9 | 0 / 25 | - | - | 4 - 4.7 | 17 - 20 | µg/kg | - | - | - | - |
| Pesticides | Delta-Bhc | 319-86-8 | 1 / 25 | 0.74 J Z | 0.74 J Z | 0.46 - 0.53 | 0.84 - 0.97 | µg/kg | NBZ_DG-542 | LL | 8081B | 0 - 0.5 |
| Pesticides | Dieldrin | 60-57-1 | 3 / 25 | 0.43 J Z | 0.56 J FD, Z | 0.33 - 1.9 | 1.7 - 2 | µg/kg | NBZ_DG-540 | LL | 8081B | 0 - 0.5 |
| Pesticides | Endosulfan I | 959-98-8 | 2 / 25 | 0.42 J Z | 0.92 J Z | 0.22 - 0.26 | 0.84 - 0.97 | µg/kg | NBZ_DG-527 | LL | 8081B | 0 - 0.5 |
| Pesticides | Endosulfan II | 33213-65-9 | 0 / 25 | - | - | 0.33 - 0.39 | 1.7 - 2 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 0 / 25 | - | - | 0.33 - 0.56 | 1.7 - 2 | µg/kg | - | - | - | - |
| Pesticides | Endrin | 72-20-8 | 3 / 25 | 0.39 J Z | 0.46 J FD, Z | 0.33 - 1.1 | 1.7 - 2 | µg/kg | NBZ_DG-540 | LL | 8081B | 0 - 0.5 |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 6 / 25 | 0.36 J Z | 0.98 J Z | 0.33 - 0.68 | 1.7 - 2 | µg/kg | NBZ_DG-527 | LL | 8081B | 0 - 0.5 |
| Pesticides | Endrin Ketone | 53494-70-5 | 0 / 25 | - | - | 0.61 - 0.7 | 1.8 - 2.1 | µg/kg | - | - | - | - |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 1 / 25 | 0.32 J Z | 0.32 J Z | 0.17 - 0.46 | 0.84 - 0.97 | µg/kg | NBZ_DG-528 | LL | 8081B | 0 - 0.5 |
| Pesticides | Heptachlor | 76-44-8 | 1 / 25 | 0.54 J FD, Z | 0.54 J FD, Z | 0.17 - 0.2 | 0.84 - 0.97 | µg/kg | NBZ_DG-540 | LL | 8081B | 0 - 0.5 |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 0 / 25 | - | - | 0.17 - 0.93 | 0.84 - 0.97 | µg/kg | - | - | - | - |

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pesticides | Methoxychlor | 72-43-5 | 0 / 25 | - | - | 1.7 - 2 | 6.8 - 7.8 | µg/kg | - | - | - | - |
| Pesticides | Mirex | 2385-85-5 | 1 / 25 | 0.62 J Z | 0.62 J Z | 0.35 - 0.41 | 1.7 - 2 | µg/kg | NBZ_DG-541 | LL | 8081B | 0 - 0.5 |
| Pesticides | Technical Toxaphene | 8001-35-2 | 0 / 25 | - | - | 14 - 39 | 33 - 39 | µg/kg | - | - | - | - |
| pH | pH | pH | 14 / 14 | 6.32 | 7.93 | 0.01 - 0.01 | 0.01 - 0.01 | pH | NBZ_DG-510 | LL | 9045M | 0 - 0.5 |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 0 / 40 | - | - | 2 - 11 | 5 - 27 | mg/kg | - | - | - | - |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 22 / 40 | 2.1 J Z<br>2.1 J Z | 35 | 2 - 11 | 5 - 27 | mg/kg | NBZ_DG-545 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 32 / 40 | 2.8 J Z | 180 | 2 - 11 | 5 - 27 | mg/kg | NBZ_DG-556 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 34 / 40 | 4.2 J Z | 490 | 4 - 22 | 10 - 54 | mg/kg | NBZ_DG-556 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 1 / 40 | 14 J Z | 14 J Z | 2 - 11 | 5 - 27 | mg/kg | NBZ_DG-518 | LL | 8015M | 0 - 0.5 |

**Notes**
LL - Eurofins Lancaster Laboratory
µg/kg- microgram per kilogram
mg/kg - milligram per kilogram
ng/kg - nanogram per kilogram
J - Result is an estimated value
% - percent
CAS = chemical abstract service
TPH = total petroleum hydrocarbon
EFH = extractable fuel hydrocarbon
EMPC = estimated maximum possible concentration
SIM = selective ion monitoring
Q - Matrix spike recoveries outside of criteria
Z - Analytes reported below the reporting limits and above the method detection limi
FD - Field duplicate relative percent difference outside of criteria
Minimum concentration values for dioxins may be EMPC values.

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 0 / 6 | - | - | 0.0178 - 0.0719 | 5.07 - 5.5 | ng/kg | - | - | - | - |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 0 / 6 | - | - | 0.00971 - 0.0466 | 5.07 - 5.5 | ng/kg | - | - | - | - |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 0 / 6 | - | - | 0.0111 - 0.0702 | 5.07 - 5.5 | ng/kg | - | - | - | - |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 0 / 6 | - | - | 0.0207 - 0.0468 | 5.07 - 5.5 | ng/kg | - | - | - | - |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 0 / 6 | - | - | 0.0129 - 0.0383 | 5.07 - 5.5 | ng/kg | - | - | - | - |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 0 / 6 | - | - | 0.0217 - 0.0503 | 5.07 - 5.5 | ng/kg | - | - | - | - |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 0 / 6 | - | - | 0.0128 - 0.0359 | 5.07 - 5.5 | ng/kg | - | - | - | - |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 1 / 6 | 0.0337 J Z | 0.0337 J Z | 0.0199 - 0.0452 | 5.07 - 5.5 | ng/kg | NBZ_DG-516 | LL | 1613B | 4 - 5 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 0 / 6 | - | - | 0.0126 - 0.04 | 5.07 - 5.5 | ng/kg | - | - | - | - |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 0 / 6 | - | - | 0.0145 - 0.0333 | 5.07 - 5.5 | ng/kg | - | - | - | - |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 0 / 6 | - | - | 0.0257 - 0.0513 | 5.07 - 5.5 | ng/kg | - | - | - | - |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 0 / 6 | - | - | 0.0118 - 0.0342 | 5.07 - 5.5 | ng/kg | - | - | - | - |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 0 / 6 | - | - | 0.0136 - 0.0307 | 5.07 - 5.5 | ng/kg | - | - | - | - |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 1 / 6 | 0.0455 J Z | 0.0455 J Z | 0.0415 - 0.0819 | 1.01 - 1.1 | ng/kg | NBZ_DG-517 | LL | 1613B | 2 - 3 |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 1 / 6 | 0.0363 J Z | 0.0363 J Z | 0.0289 - 0.0753 | 1.01 - 1.1 | ng/kg | NBZ_DG-517 | LL | 1613B | 2 - 3 |
| Dioxins | OCDD | 3268-87-9 | 0 / 6 | - | - | 0.0185 - 0.0442 | 10.1 - 11 | ng/kg | - | - | - | - |
| Dioxins | OCDF | 39001-02-0 | 0 / 6 | - | - | 0.0236 - 0.0749 | 10.1 - 11 | ng/kg | - | - | - | - |
| Herbicides | 2,2-Dichlor-Propionic Acid | 75-99-0 | 0 / 3 | - | - | 45 - 200 | 92 - 200 | µg/kg | - | - | - | - |
| Herbicides | 2,4,5-T | 93-76-5 | 0 / 3 | - | - | 0.84 - 0.84 | 1.7 - 1.7 | µg/kg | - | - | - | - |
| Herbicides | 2,4-D | 94-75-7 | 0 / 3 | - | - | 12 - 12 | 37 - 37 | µg/kg | - | - | - | - |
| Herbicides | 2,4-DB | 94-82-6 | 1 / 3 | 22 J L | 22 J L | 6.3 - 12 | 17 - 17 | µg/kg | NBZ_DG-526 | LL | 8151A | 2.5 - 3.5 |
| Herbicides | Dicamba | 1918-00-9 | 0 / 3 | - | - | 4.1 - 4.1 | 12 - 12 | µg/kg | - | - | - | - |
| Herbicides | Dichlorprop | 120-36-5 | 0 / 3 | - | - | 9.2 - 9.2 | 17 - 17 | µg/kg | - | - | - | - |
| Herbicides | Dinitrobutyl Phenol | 88-85-7 | 0 / 3 | - | - | 9.2 - 9.2 | 24 - 25 | µg/kg | - | - | - | - |
| Herbicides | MCPA | 94-74-6 | 0 / 3 | - | - | 780 - 780 | 2500 - 2600 | µg/kg | - | - | - | - |
| Herbicides | MCPP | 93-65-2 | 0 / 3 | - | - | 760 - 770 | 2500 - 2600 | µg/kg | - | - | - | - |
| Herbicides | Silvex (2,4,5-TP) | 93-72-1 | 0 / 3 | - | - | 0.76 - 0.77 | 1.7 - 1.7 | µg/kg | - | - | - | - |
| Mercury | Mercury | 7439-97-6 | 2 / 3 | 0.014 J Z | 0.0144 J Z | 0.01 - 0.0103 | 0.0166 - 0.0171 | mg/kg | NBZ_DG-517 | LL | 7471B | 2 - 3 |
| Metals | Aluminum | 7429-90-5 | 3 / 3 | 13400 | 23500 | 7.38 - 7.62 | 40.9 - 42.3 | mg/kg | NBZ_DG-511 | LL | 6010C | 2.5 - 3.5 |
| Metals | Antimony | 7440-36-0 | 1 / 3 | 2.25 J Q, Z | 2.25 J Q, Z | 0.757 - 0.782 | 4.09 - 4.23 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Arsenic | 7440-38-2 | 3 / 3 | 2.81 J Z | 28 | 0.716 - 0.74 | 4.09 - 4.23 | mg/kg | NBZ_DG-511 | LL | 6010C | 2.5 - 3.5 |
| Metals | Barium | 7440-39-3 | 3 / 3 | 56.3 | 112 | 0.0338 - 0.0349 | 1.02 - 1.06 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Beryllium | 7440-41-7 | 3 / 3 | 0.577 J Z | 1.18 | 0.0685 - 0.0708 | 1.02 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6010C | 2.5 - 3.5 |
| Metals | Boron | 7440-42-8 | 2 / 3 | 1.24 J Z | 7.71 J Z | 0.859 - 0.888 | 10.2 - 10.6 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Cadmium | 7440-43-9 | 2 / 3 | 0.303 J Z | 0.354 J Z | 0.0778 - 0.0803 | 1.02 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6010C | 2.5 - 3.5 |
| Metals | Calcium | 7440-70-2 | 3 / 3 | 2200 | 4070 | 3.42 - 3.53 | 20.5 - 21.1 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Chromium | 7440-47-3 | 3 / 3 | 13.6 | 30 | 0.164 - 0.169 | 3.07 - 3.17 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Cobalt | 7440-48-4 | 3 / 3 | 4.53 | 11.3 | 0.101 - 0.105 | 1.02 - 1.06 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Copper | 7440-50-8 | 3 / 3 | 1.31 J Z | 24.2 | 0.297 - 0.306 | 2.05 - 2.11 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Iron | 7439-89-6 | 3 / 3 | 17900 | 36700 | 3.74 - 7.65 | 41.3 - 84.5 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Lead | 7439-92-1 | 3 / 3 | 5.65 | 18.1 | 0.512 - 0.528 | 3.07 - 3.17 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Lithium | 7439-93-2 | 3 / 3 | 27.4 | 45.9 | 0.35 - 0.36 | 4.1 - 4.2 | mg/kg | NBZ_DG-511 | LL | 6010C | 2.5 - 3.5 |
| Metals | Magnesium | 7439-95-4 | 3 / 3 | 4480 | 7910 | 1.71 - 1.76 | 10.2 - 10.6 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Manganese | 7439-96-5 | 3 / 3 | 237 | 372 | 0.0849 - 0.0877 | 1.02 - 1.06 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Molybdenum | 7439-98-7 | 0 / 3 | - | - | 0.174 - 0.18 | 2.05 - 2.11 | mg/kg | - | - | - | - |
| Metals | Nickel | 7440-02-0 | 3 / 3 | 7.91 | 21.5 | 0.133 - 0.137 | 2.05 - 2.11 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Phosphorus | 7723-14-0 | 3 / 3 | 280 | 500 J Q | 2.96 - 3.05 | 10.2 - 10.6 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Potassium | 7440-09-7 | 3 / 3 | 2490 | 4010 | 8.53 - 8.81 | 102 - 106 | mg/kg | NBZ_DG-511 | LL | 6010C | 2.5 - 3.5 |
| Metals | Selenium | 7782-49-2 | 2 / 3 | 0.305 J Z | 0.402 J Z | 0.102 - 0.106 | 0.409 - 0.423 | mg/kg | NBZ_DG-511 | LL | 6020A | 2.5 - 3.5 |
| Metals | Silver | 7440-22-4 | 2 / 3 | 0.0769 J Z | 0.0914 J Z | 0.0266 - 0.0275 | 0.205 - 0.211 | mg/kg | NBZ_DG-517 | LL | 6020A | 2 - 3 |
| Metals | Sodium | 7440-23-5 | 3 / 3 | 58.9 J Z | 131 | 17.1 - 17.6 | 102 - 106 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Strontium | 7440-24-6 | 3 / 3 | 10.7 J Q | 23.3 J Q | 0.0696 - 0.18 | 0.409 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6020A | 2.5 - 3.5 |
| Metals | Thallium | 7440-28-0 | 3 / 3 | 0.218 | 0.429 | 0.0307 - 0.0317 | 0.205 - 0.211 | mg/kg | NBZ_DG-517 | LL | 6020A | 2 - 3 |
| Metals | Tin | 7440-31-5 | 0 / 3 | - | - | 0.225 - 0.232 | 10.2 - 10.6 | mg/kg | - | - | - | - |
| Metals | Titanium | 7440-32-6 | 3 / 3 | 994 | 1330 | 0.174 - 0.18 | 1.02 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6010C | 2.5 - 3.5 |
| Metals | Vanadium | 7440-62-2 | 3 / 3 | 28.2 | 56.3 | 0.133 - 0.137 | 1.02 - 1.06 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Zinc | 7440-66-6 | 3 / 3 | 44.2 | 103 | 0.205 - 0.211 | 4.09 - 4.23 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Zirconium | 7440-67-7 | 3 / 3 | 1.34 J Z | 4.14 J Z | 0.859 - 0.888 | 5.12 - 5.28 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |

Table 3-5
Summary of Analytical Results for Chemicals – Validated Data
Subsurface Soils NBZ – Phase 3

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Moisture Content | Moisture | MOIST | 14 / 14 | 2 | 10 | 0.1 - 0.1 | 0.1 - 0.1 | % | NBZ_DG-508 | LL | 160.3M | 4 - 5 |
| Nitrates | Nitrate | 14797-55-8 | 1 / 1 | 0.61 J Q, Z | 0.61 J Q, Z | 0.42 - 0.42 | 0.79 - 0.79 | mg/kg | NBZ_DG-522 | LL | 300.0 | 2.5 - 3.5 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 0 / 8 | - | - | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 1 / 8 | 0.88 J Z | 0.88 J Z | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 2 - 3 |
| PAHs | Acenaphthene | 83-32-9 | 0 / 8 | - | - | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| PAHs | Acenaphthylene | 208-96-8 | 0 / 8 | - | - | 0.34 - 0.37 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| PAHs | Anthracene | 120-12-7 | 0 / 8 | - | - | 0.34 - 0.37 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| PAHs | Benzo(a)anthracene | 56-55-3 | 1 / 8 | 0.76 J Z | 0.76 J Z | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 2 - 3 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 0 / 8 | - | - | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 1 / 8 | 0.96 J Z | 0.96 J Z | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 2 - 3 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 0 / 8 | - | - | 3.4 - 3.7 | 17 - 19 | µg/kg | - | - | - | - |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 0 / 8 | - | - | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 0 / 8 | - | - | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 1 / 8 | 16 J Z | 16 J Z | 6.1 - 6.7 | 18 - 20 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 2 - 3 |
| PAHs | Butylbenzylphthalate | 85-68-7 | 1 / 8 | 58 | 58 | 6.1 - 6.7 | 18 - 20 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 2 - 3 |
| PAHs | Chrysene | 218-01-9 | 3 / 8 | 0.44 J Z | 1.3 J Z | 0.34 - 0.37 | 1.7 - 1.9 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 2 - 3 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 0 / 8 | - | - | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| PAHs | Diethylphthalate | 84-66-2 | 0 / 8 | - | - | 6.1 - 6.7 | 18 - 20 | µg/kg | - | - | - | - |
| PAHs | Dimethylphthalate | 131-11-3 | 0 / 8 | - | - | 6.1 - 6.7 | 18 - 20 | µg/kg | - | - | - | - |
| PAHs | Di-n-butylphthalate | 84-74-2 | 0 / 8 | - | - | 6.1 - 6.7 | 18 - 20 | µg/kg | - | - | - | - |
| PAHs | Di-n-octylphthalate | 117-84-0 | 0 / 8 | - | - | 6.1 - 6.7 | 18 - 20 | µg/kg | - | - | - | - |
| PAHs | Fluoranthene | 206-44-0 | 1 / 8 | 0.75 J Z | 0.75 J Z | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 2 - 3 |
| PAHs | Fluorene | 86-73-7 | 0 / 8 | - | - | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0 / 8 | - | - | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| PAHs | Naphthalene | 91-20-3 | 2 / 8 | 1.4 J Z | 2.6 | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 2 - 3 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 0 / 8 | - | - | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| PAHs | Phenanthrene | 85-01-8 | 1 / 8 | 0.75 J Z | 0.75 J Z | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 2 - 3 |
| PAHs | Pyrene | 129-00-0 | 1 / 8 | 0.73 J Z | 0.73 J Z | 0.68 - 0.74 | 1.7 - 1.9 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 2 - 3 |
| PCB/PCTs | Aroclor 1016 | 12674-11-2 | 0 / 3 | - | - | 3.5 - 3.7 | 18 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1221 | 11104-28-2 | 0 / 3 | - | - | 5.3 - 5.7 | 18 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1232 | 11141-16-5 | 0 / 3 | - | - | 4.3 - 4.6 | 18 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1242 | 53469-21-9 | 0 / 3 | - | - | 4.3 - 4.6 | 18 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1248 | 12672-29-6 | 0 / 3 | - | - | 3.5 - 3.7 | 18 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1254 | 11097-69-1 | 0 / 3 | - | - | 4.6 - 4.9 | 18 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1260 | 11096-82-5 | 0 / 3 | - | - | 4.1 - 4.3 | 18 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1262 | 37324-23-5 | 0 / 3 | - | - | 3.5 - 3.7 | 18 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1268 | 11100-14-4 | 0 / 3 | - | - | 3.5 - 3.7 | 18 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5432 | 63496-31-1 | 0 / 3 | - | - | 10 - 11 | 35 - 37 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5442 | 12642-23-8 | 0 / 3 | - | - | 10 - 11 | 35 - 37 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5460 | 11126-42-4 | 0 / 3 | - | - | 10 - 11 | 35 - 37 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDD | 72-54-8 | 0 / 8 | - | - | 0.34 - 0.36 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDE | 72-55-9 | 0 / 8 | - | - | 0.34 - 0.36 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDT | 50-29-3 | 0 / 8 | - | - | 0.36 - 0.39 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| Pesticides | Aldrin | 309-00-2 | 0 / 8 | - | - | 0.17 - 0.19 | 0.85 - 0.92 | µg/kg | - | - | - | - |
| Pesticides | Alpha-Bhc | 319-84-6 | 0 / 8 | - | - | 0.17 - 0.19 | 0.85 - 0.92 | µg/kg | - | - | - | - |
| Pesticides | Beta-Bhc | 319-85-7 | 0 / 8 | - | - | 0.98 - 1.1 | 1.9 - 2.1 | µg/kg | - | - | - | - |
| Pesticides | Chlordane | 57-74-9 | 0 / 8 | - | - | 4.1 - 4.4 | 17 - 19 | µg/kg | - | - | - | - |
| Pesticides | Delta-Bhc | 319-86-8 | 0 / 8 | - | - | 0.46 - 0.5 | 0.85 - 0.92 | µg/kg | - | - | - | - |
| Pesticides | Dieldrin | 60-57-1 | 0 / 8 | - | - | 0.34 - 0.36 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan I | 959-98-8 | 0 / 8 | - | - | 0.22 - 0.24 | 0.85 - 0.92 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan II | 33213-65-9 | 0 / 8 | - | - | 0.34 - 0.36 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 0 / 8 | - | - | 0.34 - 0.36 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| Pesticides | Endrin | 72-20-8 | 0 / 8 | - | - | 0.34 - 0.36 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 0 / 8 | - | - | 0.34 - 0.36 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| Pesticides | Endrin Ketone | 53494-70-5 | 0 / 8 | - | - | 0.61 - 0.66 | 1.8 - 2 | µg/kg | - | - | - | - |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 0 / 8 | - | - | 0.17 - 0.19 | 0.85 - 0.92 | µg/kg | - | - | - | - |
| Pesticides | Heptachlor | 76-44-8 | 0 / 8 | - | - | 0.17 - 0.19 | 0.85 - 0.92 | µg/kg | - | - | - | - |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 0 / 8 | - | - | 0.17 - 0.19 | 0.85 - 0.92 | µg/kg | - | - | - | - |
| Pesticides | Methoxychlor | 72-43-5 | 0 / 8 | - | - | 1.7 - 1.9 | 6.8 - 7.4 | µg/kg | - | - | - | - |

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pesticides | Mirex | 2385-85-5 | 0 / 8 | - | - | 0.36 - 0.39 | 1.7 - 1.9 | µg/kg | - | - | - | - |
| Pesticides | Technical Toxaphene | 8001-35-2 | 0 / 8 | - | - | 14 - 15 | 34 - 36 | µg/kg | - | - | - | - |
| pH | pH | pH | 6 / 6 | 6.72 | 8.04 | 0.01 - 0.01 | 0.01 - 0.01 | pH | NBZ_DG-510 | LL | 9045M | 4 - 5 |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 0 / 13 | - | - | 2 - 2.2 | 5.1 - 5.5 | mg/kg | - | - | - | - |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 1 / 13 | 5.2 | 5.2 | 2 - 2.2 | 5.1 - 5.5 | mg/kg | NBZ_DG-556 | LL | 8015M | 4 - 5 |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 6 / 13 | 3.2 J Z | 30 | 2 - 2.2 | 5.1 - 5.5 | mg/kg | NBZ_DG-556 | LL | 8015M | 4 - 5 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 6 / 13 | 8.2 J Z | 74 | 4.1 - 4.4 | 10 - 11 | mg/kg | NBZ_DG-556 | LL | 8015M | 4 - 5 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 0 / 13 | - | - | 2 - 2.2 | 5.1 - 5.5 | mg/kg | - | - | - | - |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 2 / 11 | 0.3 J Z | 0.6 J Z | 0.2 - 0.2 | 1 - 1.1 | mg/kg | NBZ_DG-507 | LL | 8015M | 3.5 - 4.5 |

**Notes**
LL - Eurofins Lancaster Laboratory
µg/kg- microgram per kilogram
mg/kg - milligram per kilogram
ng/kg - nanogram per kilogram
J - Result is an estimated value
% - percent
CAS = chemical abstract service
TPH = total petroleum hydrocarbon
GRO = gasoline range organic
EFH = extractable fuel hydrocarbon
EMPC = estimated maximum possible concentration
SIM = selective ion monitoring
Q - Matrix spike recoveries outside of criteria
L - Laboratory control sample recoveries outside of criteria
Z - Analytes reported below the reporting limits and above the method detection limi
Minimum concentration values for dioxins may be EMPC values.

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide | Cyanide | 57-12-5 | 0 / 1 | - | - | 0.19 - 0.19 | 0.52 - 0.52 | mg/kg | - | - | - | - |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 18 / 30 | 0.913 J Z | 58.3 | 0.0178 - 0.0826 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 11 / 30 | 0.411 J Z | 14.5 | 0.00971 - 0.0511 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 3 / 30 | 0.654 J FD, Z | 1.22 J Z | 0.0111 - 0.0795 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 5 / 30 | 0.133 J Z | 0.404 J Z | 0.0207 - 0.0895 | 4.86 - 5.9 | ng/kg | NBZ_DG-542 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 5 / 30 | 0.156 J Z | 0.831 J Z | 0.0129 - 0.0644 | 4.86 - 5.9 | ng/kg | NBZ_DG-509 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 9 / 30 | 0.144 J Z | 2.78 J Z | 0.0217 - 0.0902 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 5 / 30 | 0.169 J Z | 0.49 J Z | 0.0128 - 0.0586 | 4.86 - 5.9 | ng/kg | NBZ_DG-540 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 12 / 30 | 0.0337 J Z | 0.878 J Z | 0.0199 - 0.09 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 1 / 30 | 0.207 J Z | 0.207 J Z | 0.0126 - 0.0751 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 6 / 30 | 0.231 J Z | 0.785 J Z | 0.0145 - 0.0517 | 4.86 - 5.9 | ng/kg | NBZ_DG-540 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 5 / 30 | 0.0784 J Z | 0.304 J Z | 0.0257 - 0.0976 | 4.86 - 5.9 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 5 / 30 | 0.153 J Z | 0.626 J Z | 0.0118 - 0.0624 | 4.86 - 5.9 | ng/kg | NBZ_DG-542 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 8 / 30 | 0.3 J Z | 0.608 J Z | 0.0136 - 0.0511 | 4.86 - 5.9 | ng/kg | NBZ_DG-505 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 3 / 30 | 0.0455 J Z | 0.0989 J Z | 0.0386 - 0.0988 | 0.972 - 1.18 | ng/kg | NBZ_DG-517 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 15 / 30 | 0.0363 J Z | 0.622 J Z | 0.0289 - 0.0922 | 0.972 - 1.18 | ng/kg | NBZ_DG-545 | LL | 1613B | 0 - 0.5 |
| Dioxins | OCDD | 3268-87-9 | 20 / 30 | 6.05 J Z | 468 | 0.0157 - 0.0691 | 9.72 - 11.8 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Dioxins | OCDF | 39001-02-0 | 12 / 30 | 0.775 J Z | 38.3 | 0.0222 - 0.079 | 9.72 - 11.8 | ng/kg | NBZ_DG-541 | LL | 1613B | 0 - 0.5 |
| Herbicides | 2,2-Dichlor-Propionic Acid | 75-99-0 | 0 / 10 | - | - | 45 - 200 | 91 - 200 | µg/kg | - | - | - | - |
| Herbicides | 2,4,5-T | 93-76-5 | 3 / 10 | 1.7 | 2.1 | 0.83 - 0.97 | 1.7 - 2 | µg/kg | NBZ_DG-541 | LL | 8151A | 0 - 0.5 |
| Herbicides | 2,4-D | 94-75-7 | 0 / 10 | - | - | 12 - 14 | 37 - 42 | µg/kg | - | - | - | - |
| Herbicides | 2,4-DB | 94-82-6 | 2 / 10 | 22 J L | 24 J L | 6.3 - 30 | 17 - 30 | µg/kg | NBZ_DG-526 | LL | 8151A | 0 - 0.5 |
| Herbicides | Dicamba | 1918-00-9 | 0 / 10 | - | - | 4.1 - 4.7 | 12 - 14 | µg/kg | - | - | - | - |
| Herbicides | Dichlorprop | 120-36-5 | 0 / 10 | - | - | 9.1 - 11 | 17 - 20 | µg/kg | - | - | - | - |
| Herbicides | Dinitrobutyl Phenol | 88-85-7 | 0 / 10 | - | - | 9.1 - 11 | 24 - 28 | µg/kg | - | - | - | - |
| Herbicides | MCPA | 94-74-6 | 0 / 10 | - | - | 770 - 900 | 2500 - 2900 | µg/kg | - | - | - | - |
| Herbicides | MCPP | 93-65-2 | 2 / 10 | 1200 J Z | 1300 J Z | 760 - 880 | 2500 - 2900 | µg/kg | NBZ_DG-542 | LL | 8151A | 0 - 0.5 |
| Herbicides | Silvex (2,4,5-TP) | 93-72-1 | 3 / 10 | 0.97 J Z | 1.4 J Z | 0.76 - 0.88 | 1.7 - 2 | µg/kg | NBZ_DG-525 | LL | 8151A | 0 - 0.5 |
| Mercury | Mercury | 7439-97-6 | 11 / 15 | 0.0109 J Z | 0.182 | 0.0099 - 0.0105 | 0.0165 - 0.0176 | mg/kg | NBZ_DG-545 | LL | 7471B | 0 - 0.5 |
| Metals | Aluminum | 7429-90-5 | 15 / 15 | 8940 | 26000 | 7.06 - 7.64 | 39.2 - 42.4 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Antimony | 7440-36-0 | 7 / 15 | 1.15 J Q, Z | 2.25 J Q, Z | 0.725 - 0.784 | 3.92 - 4.24 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Arsenic | 7440-38-2 | 15 / 15 | 2.81 J Z | 28 | 0.686 - 0.742 | 3.92 - 4.24 | mg/kg | NBZ_DG-511 | LL | 6010C | 2.5 - 3.5 |
| Metals | Barium | 7440-39-3 | 15 / 15 | 48 | 129 | 0.0323 - 0.035 | 0.98 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Beryllium | 7440-41-7 | 15 / 15 | 0.359 J Z | 1.18 | 0.0656 - 0.071 | 0.98 - 1.06 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| | | | | | 1.18 | | | | NBZ_DG-511 | LL | 6010C | 2.5 - 3.5 |
| Metals | Boron | 7440-42-8 | 11 / 15 | 1.24 J Z | 9.81 J Z | 0.823 - 0.89 | 9.8 - 10.6 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Cadmium | 7440-43-9 | 8 / 15 | 0.303 J Z | 0.489 J Z | 0.0745 - 0.0806 | 0.98 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Calcium | 7440-70-2 | 15 / 15 | 1980 | 6130 | 3.27 - 3.54 | 19.6 - 21.2 | mg/kg | NBZ_DG-521 | LL | 6010C | 0 - 0.5 |
| Metals | Chromium | 7440-47-3 | 15 / 15 | 10.9 | 32.6 | 0.157 - 0.17 | 2.94 - 3.18 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Cobalt | 7440-48-4 | 15 / 15 | 4.46 | 11.3 | 0.097 - 0.105 | 0.98 - 1.06 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Copper | 7440-50-8 | 15 / 15 | 1.31 J Z | 25.2 | 0.284 - 0.307 | 1.96 - 2.12 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Iron | 7439-89-6 | 15 / 15 | 14800 | 38300 | 3.55 - 7.65 | 39.2 - 84.5 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Lead | 7439-92-1 | 15 / 15 | 5.65 | 19.7 | 0.49 - 0.53 | 2.94 - 3.18 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Lithium | 7439-93-2 | 15 / 15 | 10.5 | 45.9 | 0.33 - 0.36 | 3.9 - 4.2 | mg/kg | NBZ_DG-511 | LL | 6010C | 2.5 - 3.5 |
| Metals | Magnesium | 7439-95-4 | 15 / 15 | 3920 | 8270 | 1.64 - 1.77 | 9.8 - 10.6 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Manganese | 7439-96-5 | 15 / 15 | 185 | 496 | 0.0813 - 0.088 | 0.98 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Molybdenum | 7439-98-7 | 0 / 15 | - | - | 0.167 - 0.18 | 1.96 - 2.12 | mg/kg | - | - | - | - |
| Metals | Nickel | 7440-02-0 | 15 / 15 | 6.88 | 21.5 | 0.127 - 0.138 | 1.96 - 2.12 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Phosphorus | 7723-14-0 | 15 / 15 | 280 | 595 J Q | 2.83 - 3.06 | 9.8 - 10.6 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Potassium | 7440-09-7 | 15 / 15 | 2490 | 5660 | 8.17 - 8.84 | 98 - 106 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Selenium | 7782-49-2 | 13 / 15 | 0.104 J Z | 0.427 | 0.098 - 0.106 | 0.392 - 0.424 | mg/kg | NBZ_DG-505 | LL | 6020A | 0 - 0.5 |
| Metals | Silver | 7440-22-4 | 12 / 15 | 0.0322 J Z | 0.201 J Z | 0.0255 - 0.0276 | 0.196 - 0.212 | mg/kg | NBZ_DG-545 | LL | 6020A | 0 - 0.5 |
| Metals | Sodium | 7440-23-5 | 15 / 15 | 53.9 J Z | 131 | 16.4 - 17.7 | 98 - 106 | mg/kg | NBZ_DG-517 | LL | 6010C | 2 - 3 |
| Metals | Strontium | 7440-24-6 | 15 / 15 | 8.81 | 31 J Q | 0.0671 - 0.18 | 0.395 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6020A | 0 - 0.5 |
| Metals | Thallium | 7440-28-0 | 15 / 15 | 0.213 | 0.44 | 0.0294 - 0.0318 | 0.196 - 0.212 | mg/kg | NBZ_DG-517 | LL | 6020A | 0 - 0.5 |
| Metals | Tin | 7440-31-5 | 0 / 15 | - | - | 0.216 - 0.233 | 9.8 - 10.6 | mg/kg | - | - | - | - |
| Metals | Titanium | 7440-32-6 | 15 / 15 | 647 | 1340 | 0.167 - 0.18 | 0.98 - 1.06 | mg/kg | NBZ_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Vanadium | 7440-62-2 | 15 / 15 | 27.3 | 64.9 | 0.127 - 0.138 | 0.98 - 1.06 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |

Table 3-6
Summary of Analytical Results for Chemicals – Validated Data
Combined Soils NBZ – Phase 3

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals | Zinc | 7440-66-6 | 15 / 15 | 39.9 | 108 | 0.196 - 0.212 | 3.92 - 4.24 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Metals | Zirconium | 7440-67-7 | 15 / 15 | 0.877 J FD, Z | 4.64 J Z | 0.823 - 0.89 | 4.9 - 5.3 | mg/kg | NBZ_DG-517 | LL | 6010C | 0 - 0.5 |
| Moisture Content | Moisture | MOIST | 69 / 69 | 1.2 | 16 | 0.1 - 0.1 | 0.1 - 0.1 | % | NBZ_DG-535 | LL | 160.3M | 0 - 0.5 |
| Nitrates | Nitrate | 14797-55-8 | 4 / 4 | 0.61 J Q, Z | 8.6 J Q | 0.42 - 0.42 | 0.78 - 0.79 | mg/kg | NBZ_DG-523 | LL | 300.0 | 0 - 0.5 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 11 / 36 | 0.72 J FD, Z | 5.6 | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-505 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 16 / 36 | 0.85 J FD, Z | 7.9 | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-505 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Acenaphthene | 83-32-9 | 0 / 36 | - | - | 0.67 - 7.2 | 1.7 - 18 | µg/kg | - | - | - | - |
| PAHs | Acenaphthylene | 208-96-8 | 0 / 36 | - | - | 0.33 - 3.6 | 1.7 - 18 | µg/kg | - | - | - | - |
| PAHs | Anthracene | 120-12-7 | 3 / 36 | 0.38 J Z | 0.84 J Z | 0.33 - 3.6 | 1.7 - 18 | µg/kg | NBZ_DG-505 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(a)anthracene | 56-55-3 | 10 / 36 | 0.75 J Z | 1.4 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-505 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 10 / 36 | 0.68 J Z | 1.7 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-542 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 23 / 36 | 0.78 J Z | 15 J FD, Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-545 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 0 / 36 | - | - | 3.3 - 36 | 17 - 180 | µg/kg | - | - | - | - |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 8 / 36 | 0.85 J Z | 1.3 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-505 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 9 / 36 | 0.71 J Z | 1.4 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-542 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 12 / 36 | 7.6 J Z | 74 J Z | 6 - 65 | 18 - 190 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Butylbenzylphthalate | 85-68-7 | 5 / 36 | 7.6 J Z | 58 | 6 - 65 | 18 - 190 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 2 - 3 |
| PAHs | Chrysene | 218-01-9 | 28 / 36 | 0.44 J Z | 20 J FD | 0.33 - 3.6 | 1.7 - 18 | µg/kg | NBZ_DG-545 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 0 / 36 | - | - | 0.67 - 7.2 | 1.7 - 18 | µg/kg | - | - | - | - |
| PAHs | Diethylphthalate | 84-66-2 | 0 / 36 | - | - | 6 - 65 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Dimethylphthalate | 131-11-3 | 0 / 36 | - | - | 6 - 65 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Di-n-butylphthalate | 84-74-2 | 0 / 36 | - | - | 6 - 65 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Di-n-octylphthalate | 117-84-0 | 0 / 36 | - | - | 6 - 65 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Fluoranthene | 206-44-0 | 22 / 36 | 0.7 J Z | 6.9 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-527 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Fluorene | 86-73-7 | 1 / 36 | 16 | 16 | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-542 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 5 / 36 | 0.7 J Z | 0.93 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-505 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Naphthalene | 91-20-3 | 23 / 36 | 0.71 J Z | 21 | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-552 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 0 / 36 | - | - | 0.67 - 7.2 | 1.7 - 18 | µg/kg | - | - | - | - |
| PAHs | Phenanthrene | 85-01-8 | 21 / 36 | 0.75 J Z | 9.6 | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-527 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Pyrene | 129-00-0 | 22 / 36 | 0.68 J Z | 6 J Z | 0.67 - 7.2 | 1.7 - 18 | µg/kg | NBZ_DG-527 | LL | 8270D SIM | 0 - 0.5 |
| PCB/PCTs | Aroclor 1016 | 12674-11-2 | 0 / 15 | - | - | 3.3 - 3.7 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1221 | 11104-28-2 | 0 / 15 | - | - | 5.2 - 5.7 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1232 | 11141-16-5 | 0 / 15 | - | - | 4.1 - 4.6 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1242 | 53469-21-9 | 0 / 15 | - | - | 4.1 - 4.6 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1248 | 12672-29-6 | 0 / 15 | - | - | 3.3 - 3.7 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1254 | 11097-69-1 | 0 / 15 | - | - | 4.5 - 4.9 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1260 | 11096-82-5 | 0 / 15 | - | - | 3.9 - 4.3 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1262 | 37324-23-5 | 0 / 15 | - | - | 3.3 - 3.7 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1268 | 11100-14-4 | 0 / 15 | - | - | 3.3 - 3.7 | 17 - 19 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5432 | 63496-31-1 | 0 / 15 | - | - | 10 - 11 | 33 - 37 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5442 | 12642-23-8 | 0 / 15 | - | - | 10 - 11 | 33 - 37 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5460 | 11126-42-4 | 0 / 15 | - | - | 10 - 11 | 33 - 37 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDD | 72-54-8 | 0 / 33 | - | - | 0.33 - 2 | 1.7 - 2 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDE | 72-55-9 | 12 / 33 | 0.63 J Z | 2.7 | 0.33 - 1.9 | 1.7 - 2 | µg/kg | NBZ_DG-556 | LL | 8081B | 0 - 0.5 |
| Pesticides | 4,4'-DDT | 50-29-3 | 15 / 33 | 0.37 J Z | 2.6 | 0.35 - 0.41 | 1.7 - 2 | µg/kg | NBZ_DG-556 | LL | 8081B | 0 - 0.5 |
| Pesticides | Aldrin | 309-00-2 | 0 / 33 | - | - | 0.17 - 0.2 | 0.84 - 0.97 | µg/kg | - | - | - | - |
| Pesticides | Alpha-Bhc | 319-84-6 | 0 / 33 | - | - | 0.17 - 0.2 | 0.84 - 0.97 | µg/kg | - | - | - | - |
| Pesticides | Beta-Bhc | 319-85-7 | 0 / 33 | - | - | 0.97 - 1.1 | 1.9 - 2.2 | µg/kg | - | - | - | - |
| Pesticides | Chlordane | 57-74-9 | 0 / 33 | - | - | 4 - 4.7 | 17 - 20 | µg/kg | - | - | - | - |
| Pesticides | Delta-Bhc | 319-86-8 | 1 / 33 | 0.74 J Z | 0.74 J Z | 0.46 - 0.53 | 0.84 - 0.97 | µg/kg | NBZ_DG-542 | LL | 8081B | 0 - 0.5 |
| Pesticides | Dieldrin | 60-57-1 | 3 / 33 | 0.43 J Z | 0.56 J FD, Z | 0.33 - 1.9 | 1.7 - 2 | µg/kg | NBZ_DG-540 | LL | 8081B | 0 - 0.5 |
| Pesticides | Endosulfan I | 959-98-8 | 2 / 33 | 0.42 J Z | 0.92 J Z | 0.22 - 0.26 | 0.84 - 0.97 | µg/kg | NBZ_DG-527 | LL | 8081B | 0 - 0.5 |
| Pesticides | Endosulfan II | 33213-65-9 | 0 / 33 | - | - | 0.33 - 0.39 | 1.7 - 2 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 0 / 33 | - | - | 0.33 - 0.56 | 1.7 - 2 | µg/kg | - | - | - | - |
| Pesticides | Endrin | 72-20-8 | 3 / 33 | 0.39 J Z | 0.46 J FD, Z | 0.33 - 1.1 | 1.7 - 2 | µg/kg | NBZ_DG-540 | LL | 8081B | 0 - 0.5 |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 6 / 33 | 0.36 J Z | 0.98 J Z | 0.33 - 0.68 | 1.7 - 2 | µg/kg | NBZ_DG-527 | LL | 8081B | 0 - 0.5 |
| Pesticides | Endrin Ketone | 53494-70-5 | 0 / 33 | - | - | 0.61 - 0.7 | 1.8 - 2.1 | µg/kg | - | - | - | - |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 1 / 33 | 0.32 J Z | 0.32 J Z | 0.17 - 0.46 | 0.84 - 0.97 | µg/kg | NBZ_DG-528 | LL | 8081B | 0 - 0.5 |
| Pesticides | Heptachlor | 76-44-8 | 1 / 33 | 0.54 J FD, Z | 0.54 J FD, Z | 0.17 - 0.2 | 0.84 - 0.97 | µg/kg | NBZ_DG-540 | LL | 8081B | 0 - 0.5 |

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Laboratory of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 0 / 33 | - | - | 0.17 - 0.93 | 0.84 - 0.97 | µg/kg | - | - | - | - |
| Pesticides | Methoxychlor | 72-43-5 | 0 / 33 | - | - | 1.7 - 2 | 6.8 - 7.8 | µg/kg | - | - | - | - |
| Pesticides | Mirex | 2385-85-5 | 1 / 33 | 0.62 J Z | 0.62 J Z | 0.35 - 0.41 | 1.7 - 2 | µg/kg | NBZ_DG-541 | LL | 8081B | 0 - 0.5 |
| Pesticides | Technical Toxaphene | 8001-35-2 | 0 / 33 | - | - | 14 - 39 | 33 - 39 | µg/kg | - | - | - | - |
| pH | pH | pH | 20 / 20 | 6.32 | 8.04 | 0.01 - 0.01 | 0.01 - 0.01 | pH | NBZ_DG-510 | LL | 9045M | 4 - 5 |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 0 / 53 | - | - | 2 - 11 | 5 - 27 | mg/kg | - | - | - | - |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 23 / 53 | 2.1 J Z<br>2.1 J Z | 35 | 2 - 11 | 5 - 27 | mg/kg | NBZ_DG-545 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 38 / 53 | 2.8 J Z | 180 | 2 - 11 | 5 - 27 | mg/kg | NBZ_DG-556 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 40 / 53 | 4.2 J Z | 490 | 4 - 22 | 10 - 54 | mg/kg | NBZ_DG-556 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 1 / 53 | 14 J Z | 14 J Z | 2 - 11 | 5 - 27 | mg/kg | NBZ_DG-518 | LL | 8015M | 0 - 0.5 |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 2 / 11 | 0.3 J Z | 0.6 J Z | 0.2 - 0.2 | 1 - 1.1 | mg/kg | NBZ_DG-507 | LL | 8015M | 3.5 - 4.5 |

**Notes**
LL - Eurofins Lancaster Laboratory
µg/kg- microgram per kilogram
mg/kg - milligram per kilogram
ng/kg - nanogram per kilogram
J - Result is an estimated value
% - percent
CAS = chemical abstract service
TPH = total petroleum hydrocarbon
GRO = gasoline range organic
EFH = extractable fuel hydrocarbon
EMPC = estimated maximum possible concentration
SIM = selective ion monitoring
Q - Matrix spike recoveries outside of criteria
L - Laboratory control sample recoveries outside of criteria
Z - Analytes reported below the reporting limits and above the method detection limit
FD - Field duplicate relative percent difference outside of criteria
Minimum concentration values for dioxins may be EMPC values.

# Section 4

# Data Usability Assessment

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

## 4.1 Usability Summary

For the Subarea 7 data usability assessment, 18 data sets, or SDGs were reviewed and 11 SDGs were reviewed for NBZ. An SDG consists of 20 or fewer samples grouped together by analytical method for analyses depending on the time and date the samples were received by the laboratory. The analyses performed are discussed in Section 2.5.1.

Samples were collected and analyzed in accordance with the Master FSP (CDM Smith 2012a), and Addendum to the Master FSP for Subarea 7 and NBZ with the exception of the field investigation deviations as stated in Section 2.7.

The validated data for Subarea 7 samples are usable as reported with the exception of one pesticide rejected result (Endosulfan I): this rejection equates to 0.013 percent of the results. For NBZ no data were rejected.

The validated data for Phase 3 Subarea 7 and NBZ samples are usable as reported with the exception of the rejected data. This rejected result does not impact project objectives and goals. Specific details are provided in the validation reports in Appendix C and Section 4.7 of this report.

## 4.2 Data Validation Procedures

Data were validated by the independent data validation firm Laboratory Data Consultants, Inc. All data validation was conducted in accordance with *EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA 2004), *EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA 2008), and *EPA Contract Laboratory Program National Functional Guidelines for Chlorinated Dioxin/Furan Data Review* (EPA 2005).

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

Table 4-1 presents all SDGs that include Subarea 7 and NBZ soil samples and those SDGs that were validated as Level III or Level IV. Some SDGs may contain samples from other subareas, but all samples in an SDG were validated together. An index of samples associated with each SDG is presented at the beginning of Appendix C.

**Table 4-1 Sample Delivery Groups and Validation Levels for Subarea 7 and NBZ**

| Subarea 7 SDGs | | |
|---|---|---|
| Sample Delivery Group | Level of Validation Performed | CDM Smith Review |
| PH027 | Level IV | |
| PH028 | Level II | |
| PH029 | Level III | |
| PH030 | Level III | |
| PH031 | Level IV | Yes |
| PH032 | Level III | |
| PH033 | Level III | |
| PH034 | Level III | |
| PH035 | Level III | |
| PH036 | Level III | |
| PH037 | Level III | |
| PH038 | Level III | |
| PH039 | Level IV | |
| PH040 | Level III | Yes |
| PH045 | Level III | |
| PH046 | Level IV | |
| PH049 | Level IV | |
| PH121 | Level III | |
| **NBZ SDGs** | | |
| Sample Delivery Group | Level of Validation Performed | CDM Smith Review |
| PH138 | Level III | |
| PH139 | Level IV | |
| PH140 | Level III | |
| PH141 | Level III | |
| PH142 | Level IV | Yes |
| PH143 | Level III | |
| PH146 | Level III | |
| PH148 | Level III | |
| PH151 | Level III | |
| PH155 | Level III | Yes |
| PH157 | Level III | |

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

To evaluate the quality of the laboratory data and the validation process, CDM Smith's chemists reviewed over 10 percent of the Subarea 7 and NBZ soil sample SDGs. The SDGs reviewed are chosen based on methods and level of validation performed by the validation firm. The purpose of the review was to identify any laboratory QC issues not identified by the validation firm or any discrepancies in validation procedures by the validation firm. No additional qualifiers were applied to the data based on CDM Smith's review. The results of this review are provided in Section 4.8.

## 4.3 Quality Assurance Objectives

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

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

- Specification and adherence to analytical method and reporting limit requirements
- Identification of the appropriate laboratory analytical QC requirements and verification that QC requirements were met
- Verification that measurement performance criteria (representativeness and completeness) for the data were met
- Verification that field procedures were followed, deviations were documented, and a determination of impact on data quality as a result of these deviations

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

## 4.4 Summary of Field and Laboratory QA Activities

CDM Smith completed sampling activities in Subarea 7 and NBZ in accordance with the approved Master FSP (CDM Smith 2012a) and Addendum to the Master FSP (CDM Smith 2012b) except for the surface samples that were collected using the subsurface procedure as discussed in Section 2.2. A total of 92 soil samples were collected in Subarea 7 and analyzed from the locations described in Table 2-1 and a total of 76 samples were collected in NBZ and analyzed as described in Table 2-2. Tables 2-1 and 2-2 also provide a summary of the samples collected and the laboratory analyses requested. Associated QA activities are described below.

## 4.5 Field Quality QA/QC

The MS/MSDs and field duplicates field QC samples were collected at a frequency of approximately 1 per 20 samples (five percent). During sampling in Subarea 7, a total of six field duplicate/MS/MSD samples were collected equating to approximately 15 percent.

In NBZ, a total of seven duplicate/MS/MSD samples were collected equating to approximately ten percent. On an individual method basis, the five percent goal was approximately met or exceeded for all analyses. Field duplicate and MS/MSD samples met the frequency requirements detailed in the Master FSP (CDM Smith 2012a).

Sections 2.4.2 through 2.4.4 discuss the equipment blanks, field blanks and performance evaluation samples collected in association with the Phase 3 Subarea 7 and NBZ soil samples.

***Equipment Rinsate and Field Blanks***

The 14 equipment rinsate blank results collected are presented in Appendix C and a summary of the detected results is presented in Table 4-2 for Subarea 7 and Table 4-3 for NBZ. Equipment blanks were collected in conjunction with samples sent to different laboratories. Hence, two equipment blanks could have the same name but are actually two different samples as one was sent to each laboratory analyzing the associated samples. Field blank samples were collected from each lot number of ASTM International Type II water used for decontamination. Two field blanks were collected during sampling in Subarea 7 and NBZ. Some of the equipment blanks and field blanks applied to samples in both Subarea 7 and NBZ. Some of the field blanks were also collected during prior sampling events but are associated with samples collected in Subarea 7 and NBZ. They are listed in each Subarea specific table below for clarification (listed in both tables if applicable). The detected results are presented below in Table 4-4 (Subarea 7) and Table 4-5 (NBZ) and all results are reported in Appendix C.

**Table 4-2 Equipment Blank Results for Subarea 7 Soil Samples – Detected Results Only**

| EB-041113<br>7_DG_EB<br>04/11/2013 | | | |
|---|---|---|---|
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | pg/L | 0.322/9.74 | J |
| 1-Methylnaphthalene | µg/L | 0.02/0.055 | J |
| 2-Methylnaphthalene | µg/L | 0.027/0.055 | J |
| Calcium | mg/L | 0.131/0.4 | J |
| Diethylphthalate | µg/L | 0.24/1.1 | J |
| Di-n-butylphthalate | µg/L | 0.16/1.1 | J |
| Manganese | mg/L | 0.0012/0.01 | J |
| Naphthalene | µg/L | 0.13/0.055 | |
| Tin | mg/L | 0.0024/0.04 | J |
| Zinc | mg/L | 0.0041/0.04 | J |
| **EB-041813<br>7_DG_EB<br>04/18/2013** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,4,7,8-HxCDF | pg/L | 0.235/9.71 | J |
| 1-Methylnaphthalene | µg/L | 0.014/0.051 | J |
| 2-Methylnapthalene | µg/L | 0.018/0.051 | J |
| Diethylphthalate | µg/L | 0.071/1 | J |
| Di-n-butylphthalate | µg/L | 0.11/1 | J |
| Naphthalene | µg/L | 0.086/0.051 | |
| Strontium | mg/L | 0.00028/0.002 | J |
| **EB-042413<br>7_DG_EB<br>4/24/2013** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 2-Methylnaphthalene | µg/L | 0.011/0.054 | J |
| Boron | mg/L | 0.0319/0.1 | J |
| Diethylphthalate | µg/L | 0.089/1.1 | J |
| Di-n-butylphthalate | µg/L | 0.15/1.1 | J |
| Naphthalene | µg/L | 0.053/0.054 | J |
| Sodium | mg/L | 0.228/2 | J |
| Tin | mg/L | 0.0035/0.04 | J |

**Table 4-2 Equipment Blank Results for Subarea 7 Soil Samples – Detected Results Only**

| EB1-060313<br>7_DG_EB<br>6/03/2013 | | | |
|---|---|---|---|
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/L | 0.112/2.04 | J |
| **EB2-100213<br>7_DG_EB<br>10/02/2013** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| Bis(2-ethylhexyl)phthalate | µg/L | 0.41/1.1 | J |
| Diethylphthalate | µg/L | 0.29/1.1 | J |
| Di-n-butylphthalate | µg/L | 0.25/1.1 | J |

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

**Table 4-3 Equipment Blank Results for NBZ Soil Samples – Detected Results Only**

| EB1-120513<br>NBZ_DG_EB<br>12/05/2013 | | | |
|---|---|---|---|
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/L | 0.646/9.9 | J |
| Diethylphthalate | µg/L | 0.5/1.1 | J |
| **EB1-121113<br>NBZ_DG_EB<br>12/11/2013** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | pg/L | 0.289/9.65 | J |
| 1,2,3,7,8,9-HxCDF | pg/L | 0.258/9.65 | J |
| 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | pg/L | 0.46/9.65 | J |
| 2,3,4,7,8-PeCDF | pg/L | 0.658/9.65 | J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/L | 0.622/1.93 | J |
| Bis(2-ethylhexyl)phthalate | µg/L | 2.2/1 | |
| Diethylphthalate | µg/L | 0.15/1 | J |
| Di-n-butylphthalate | µg/L | 0.13/1 | |
| **EB-120513<br>NBZ_DG_EB<br>12/05/2013** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| Diethylphthalate | µg/L | 0.5/1 | J |
| **EB2-121113<br>NBZ_DG_EB<br>12/11/2013** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,6,7,8-Hexachlorodibenzo-Dioxin | pg/L | 0.285/9.54 | J |
| 2,3,4,7,8-PeCDF | pg/L | 0.258/9.54 | J |
| Diethylphthalate | µg/L | 0.16/1 | J |
| Di-n-butylphthalate | µg/L | 0.13/1 | J |
| Fluoranthene | µg/L | 0.012/0.051 | J |
| Pyrene | µg/L | 0.049/0.051 | J |
| Zinc | mg/L | 0.003/0.04 | J |

**Table 4-3 Equipment Blank Results for NBZ Soil Samples – Detected Results Only**

| EB2-121613 NBZ_DG_EB 12/16/2013 | | | |
|---|---|---|---|
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| Di-n-octylphthalate | µg/L | 0.06/1.1 | J |
| **EB3-120513 NBZ_DG_EB 12/06/2012** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | pg/L | 0.436/9.8 | J |
| 1,2,3,4,7,8-HxCDF | pg/L | 0.225/9.8 | J |
| 1,2,3,7,8,9-HxCDF | pg/L | 0.39/9.8 | J |
| 1,2,3,7,8-Pentachloridibenzofuran | pg/L | 0.499/9.8 | J |
| 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | pg/L | 0.635/9.8 | J |
| Diethylphthalate | µg/L | 0.51/1 | J |

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

**Table 4-4 Field Blank Results for Subarea 7 Soil Samples – Detected Results Only**

| FB-041113 Field Blank 04/11/2013 | | | |
|---|---|---|---|
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | pg/L | 0.125/9.76 | J |
| 1-Methylnaphthalene | µg/L | 0.019/0.051 | J |
| 2-Methylnapthalene | µg/L | 0.024/0.051 | J |
| Diethylphthalate | µg/L | 0.18/1 | J |
| Di-n-butylphthalate | µg/L | 0.17/1 | J |
| Methylene Chloride | µg/L | 2/5 | J |
| Naphthalene | µg/L | 0.17/0.051 | |
| **FB-041613 Field Blank 04/16/2013** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,7,8-HxCDF | pg/L | 0.257/9.71 | J |
| 2-Methylnaphthalene | µg/L | 0.012/0.052 | J |
| Chloroform | µg/L | 3/5 | J |
| Di-n-butylphthalate | µg/L | 0.11/1 | J |
| Methylene Chloride | µg/L | 18/5 | |
| Tin | mg/L | 0.0029/0.04 | J |

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

**Table 4-5 Field Blank Results for NBZ Soil Samples – Detected Results Only**

| FB-041613<br>Field Blank<br>04/16/2013 | | | |
|---|---|---|---|
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,7,8-HxCDF | pg/L | 0.257/9.71 | J |
| 2-Methylnaphthalene | µg/L | 0.012/0.052 | J |
| Chloroform | µg/L | 3/5 | J |
| Di-n-butylphthalate | µg/L | 0.11/1 | J |
| Methylene Chloride | µg/L | 18/5 | |
| Tin | mg/L | 0.0029/0.04 | J |

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

***Trip Blanks***

Twelve trip blank samples were shipped with the Subarea 7 samples and five trip blanks were shipped with the NBZ soil samples. The analytical results for the trip blanks collected in association with Subarea 7 and NBZ soil samples are presented in Appendix C. All trip blank results were nondetect.

***Temperature Blanks***

Temperature blanks were included with each shipment of samples. Based on validation results all temperature blanks submitted with the Subarea 7 and NBZ samples met criteria.

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

***Field QC Summary***

As stated previously, on an individual method basis, the five percent goal was approximately met or exceeded for all analyses. Field duplicate and MS/MSD samples met the frequency requirements detailed in the Master FSP (CDM Smith 2012a) for the Phase 3 Subarea 7 and NBZ sampling program. Further, field QA/QC objectives were attained through the use of appropriate sampling techniques and collection of the required number and frequency of QC samples.

## 4.6 Laboratory Quality QA/QC

Analytical QA/QC was assessed by laboratory QC checks, method blanks, sample custody tracking, sample preservation, adherence to holding times, laboratory control samples (LCSs), MSs, calibration recoveries, surrogates, tuning criteria, second column confirmations, internal standards, serial dilutions, laboratory duplicates, and interference check standards. The majority of the laboratory QC sample criteria met project requirements as indicated in the data validation reports in Appendix C with the appropriate qualifiers applied. For Subarea 7 one Endosulfan I result was rejected. No data was rejected for NBZ. Specific details are provided in the validation reports in Appendix C and Section 4.7.

## 4.7 Data Quality Indicators

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

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

### 4.7.1 Precision

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

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

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

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

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

For the Phase 3 Subarea 7 and NBZ data sets, precision was evaluated by reviewing RPD results for MS/MSDs, LCS/LCSDs, laboratory duplicates, and field duplicates.

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

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

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

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

No sample results for Subarea 7 and NBZ required qualification based on precision criteria.

Field duplicate precision criteria for Phase 3 Subarea 7 samples required the qualification of some analytes for dioxins, metals, mercury, TPH EFH, TPH GRO, pesticides, PCB/PCTs and SVOC SIM. For Phase 3 NBZ samples, dioxins, nitrate, metals, TPH EFH, TPH GRO, pesticides, herbicides, and SVOC SIM results were also qualified due to field duplicate precision criteria. No results were rejected based on field duplicate precision criteria. All field duplicate RPD results are presented in Appendix C. In summary, sample results that have been qualified as estimated "J/UJ" due to precision criteria are usable for project decisions with a degree of caution.

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

### 4.7.2 Accuracy

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

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

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

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

- Sampling procedure
- Field contamination
- Sample preservation and handling
- Sample matrix

- Sample preparation
- Analytical techniques

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

The following QC samples are used to assess laboratory accuracy:

Matrix Spikes: MSs are samples with a known amount of a target analyte added to them. Analysis of the sample that has been spiked and comparison with the results from the unspiked sample (background) gives information about the ability of the test procedure to generate a correct result from the sample.

Post Digestion Spikes: Post digestion spikes are performed after the sample has been prepared and is ready for analysis. These are also termed "analytical spikes." The technique is used in conjunction with a MS to provide data that can separate interferences produced as part of the sample preparation from interferences that are innate qualities of the sample.

Laboratory Control Samples: LCSs consist of a portion of analyte-free water or solid phase sample that is spiked with target analytes at a known concentration.

Surrogates: Surrogate recovery is a QC measure limited to use in organics analysis. Surrogates are compounds added to every sample at the beginning of the sample preparation to monitor the success of the sample preparation and analytical procedures on an individual sample basis. Individual compounds used as surrogates are selected based on their ability to mimic the behavior of specific target analytes held to be particularly sensitive to the sample preparation manipulations.

Interference Check Samples: Interference check sample analysis is a QC measure unique to metals analysis using inductively coupled plasma atomic emission spectrometry. This QC sample verifies the analytical instrument's ability to overcome interferences typical of those found in samples.

Calibrations: Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for metals. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing calibrations demonstrate that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

Internal Standards: Internal standards measure the gas chromatograph/ mass spectrometer sensitivity and response stability during each analysis.

Serial Dilution: Serial dilutions are performed on at least one sample from every batch of analyses for metals to determine if physical or chemical interferences exist in the analyte determinations.

For the Phase 3 Subarea 7 and NBZ soil data sets, accuracy was evaluated by reviewing the %R values and relative response factors of initial and continuing calibration (percent difference or percent drift [%D] for organic analyses), internal standards, surrogate spikes (organic analyses only), MS/MSD, LCS/LCSD, inductively coupled plasma (ICP) interferences, and by performing serial dilution checks

during metals analyses, in conjunction with method blank, calibration blank, equipment rinsate blank, and trip blank results. These QC results assist in identifying the type and magnitude of effects that may have contributed to system error introduced from field and/or laboratory procedures.

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

The following Subarea 7 individual analyte results were qualified as estimated "J/UJ" based on accuracy criteria:

- Some of the dioxins due to exceeded calibration range
- One pesticide result due to confirmation column results
- Some of the metal analyte results due to serial dilutions
- Some of the TPH EFH, TPH GRO and pesticide results due to LCSs
- Some of the dioxins, metals, TPH EFH, TPH GRO, pesticides and SVOC SIM results due to MSs
- Some of the PCB/PCTs due to surrogates

The following NBZ individual analyte results were qualified as estimated "J/UJ" based on accuracy criteria:

- Some of the nitrates, metals, TPH EFH and TPH GRO results due to MSs
- Some of the herbicide and SVOC SIM results due to LCSs
- Some of the dioxins and pesticide results due to confirmation column results
- Some of the pesticide results based on calibration criteria

The following individual Subarea 7 analyte result was rejected "R" based on accuracy criteria:

- One pesticide result (Endosulfan I) based on MSs

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

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

### 4.7.3 Blank Contamination

Blanks are used to determine the level of laboratory and field contamination introduced into the samples, independent of the level of target analytes found in the sample source. Sources of sample contamination can include the containers and equipment used to collect the sample, preservatives

added to the sample, other samples in transport coolers and laboratory sample storage refrigerators, standards and solutions used to calibrate instruments, glassware and reagents used to process samples, airborne contamination in the laboratory preparation area and the analytical instrument sample introduction equipment. Each analyte group has its own particular suite of common laboratory contaminants. Active measures must be performed to continually measure the ambient contamination level and steps taken to discover the source of the contamination to eliminate or minimize the levels. Random spot contamination can also occur from analytes that are not common laboratory problems but that can arise as a problem for a specific project or over a short period of time. Sample equipment decontamination practices are discussed in Section 2.4.5. Field blanks, equipment blanks, trip blanks and laboratory method blanks are analyzed to identify possible sources of contamination. The DUAR and laboratory validation reports in Appendix C discuss the results that were qualified based on field and laboratory blank contamination.

In summary, for Phase 3 Subarea 7 samples, some dioxins and metals were qualified as non-detect due to laboratory blank contamination criteria. For Phase 3 NBZ samples, some dioxins and metal results were also qualified based on laboratory blank contamination criteria. The percentage of results qualified as non-detect based on laboratory blank contamination was less than 5 percent, as discussed in Appendix C, for all analyses except dioxins for Subarea 7 and NBZ (20 percent and 59 percent respectively). These results were qualified as non-detect "U" due to laboratory blank contamination.

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

Tables 4-2 through 4-5 provide a summary of analytes observed in equipment blanks and field blanks. No analytes were detected in the trip blank samples. Most of the detected compounds in the equipment and field blanks were below the RLs but above the MDLs. Compounds detected above the RL are highlighted yellow in the associated tables. The ASTM International Type II water used to generate the equipment and field blanks. The field blanks (source water) had detections of various analytes for SVOC SIM, (above the RL) indicating inherent low level contamination in the source water used.

ASTM International Type II water is not typically certified “clean” to the low RLs established for the low level methods used for Phase 3 Subarea 7 and NBZ sampling. CDM Smith will continue to monitor ASTM International Type II water field blanks for detected concentrations of analytes throughout the sampling program.

A review of the Phase 3 equipment blanks for Subarea 7 and NBZ was also performed. In general, minimal analytes were detected above their respective RLs. All Phase 3 equipment blanks will continue to be monitored to determine if these low level detections are consistent, thus indicating a possible deficiency in decontamination procedures and/or source water impacts that need to be addressed and corrected.

For Subarea 7, some metals and SVOC SIM results were qualified based on field/equipment blanks results. For NBZ, some metal results were qualified based on field/equipment blank criteria. To date, chemical detections in equipment blank samples appear to be random occurrences.

### 4.7.4 Representativeness, Comparability, and Sensitivity

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

#### 4.7.4.1 Representativeness

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

Representativeness also can be monitored by reviewing field documentation and/or performing field audits. For this report, a detailed review was performed on the CoC forms, laboratory sample confirmation logs, and data validation packages. Laboratory QA/QC requirements were included in the Master FSP (CDM Smith 2012a) and laboratory statements of work (SOWs) to ensure that the laboratory analytical results were representative of true field conditions.

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

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

#### 4.7.4.2 Comparability

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

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

#### 4.7.4.3 Sensitivity

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

*Detection Limits*

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

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

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

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

In summary, for all methods analyzed for Subarea 7, results for some of the analytes were qualified as estimated due to RL criteria for dioxins, metals, hexavalent chromium, mercury, TPH EFH, TPH GRO pesticides, PCB/PCTs, and SVOC SIM. For NBZ, results for some of the analytes were qualified as estimated due to RL criteria for dioxins, nitrates, metals, mercury, TPH-EFH, TPH-GRO, pesticides, herbicides and SVOC SIM results. For the data validated in this TM, RLs for a majority of the sample results were low enough to compare to the RLs stated in the Master FSP (CDM Smith 2012a). RLs above those stated in the Master FSP (CDM Smith 2012a) will be evaluated on a case by case basis to see if resampling is required.

## 4.8 Dioxin Data Quality and Usability

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

In layman's terms an EMPC result indicates that there is the detected presence of a compound above detection level but it does not meet the appropriate quality assurance/quality control reporting level criteria to absolutely confirm whether that detected concentration is a dioxin compound identified by the analytical system. What it does indicate is that a possible low level dioxin peak has been identified by the analytical instrument but its concentration level is marginally above detection level.

For the Subarea 7 and NBZ dioxin analyses, Eurofins Lancaster Laboratory was directed to qualify any EMPC values with a "Q" qualifier in order to identify EMPC values for future evaluation. In the Appendix A tables, the "Q" qualified data identified by the laboratory indicating an EMPC value, has had the qualifier "J-EMPC" added to the final qualifier column to replace the laboratory "Q" qualifier. This is to aid the data user in identifying values that are EMPCs.

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

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

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

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

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

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

## 4.9 Review of Selected Validation Reports

CDM Smith performed a review of the validation reports identified in Table 4-1. This review involved comparing the validation report results against the laboratory data packages as well as the validation

guidance documents. All validation report results were verified against the laboratory data packages and validation guidance documents were followed as required.

## 4.10 Data Completeness

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

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

***Equation A.***

$$\%\text{Completeness} = C_x \frac{100}{n}$$

Where:

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

***Equation B.***

$$\%\text{Completeness} = V_x \frac{100}{n'}$$

Where:

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

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

A total of 168 soil samples including the field duplicates were collected and analyzed. Some locations required only a subsurface sample while other locations required both a surface and a subsurface sample. The number of subsurface samples to be collected at each location was not pre-determined because the total depth of each boring varies depending on the local geology. One sample was not collected in NBZ as it was inaccessible and unsafe to sample. The completeness goal for the actual number of samples collected compared to the number of samples planned is considered acceptable as a sample was collected from each location (depending on shallow refusal).

The completeness goal achieved for acceptable data was 99.98 percent for Subarea 7 and 100 percent for NBZ for the number of measurements judged to be valid versus the total number of measurements made for all samples analyzed. Tables 4-6 and 4-7 summarize all results that were estimated or rejected for Phase 3 Subarea 7 NBZ respectively.

No sample results were rejected for NBZ. The following Phase 3 Subarea 7 individual analyte result was rejected per analyses:

- Method 8081B
  - One out of 189 individual pesticide analyte results (0.529 percent)

**Table 4-6 Summary of Data Completeness Following Data Validation – Subarea 7**

| | Number of Analyte Detections Without Qualifiers | Number of Estimated Results | Number of Rejected Results | Number of Nondetect Results | Number of Estimated Nondetect Results | Total Analytes Detect and Nondetect | Percent of Analyte Results Judged Valid Versus Total Analyte Results Collected |
|---|---|---|---|---|---|---|---|
| Dioxins – 1613B | 273 | 782 | -- | 370 | 15 | 1,440 | 100 |
| Metals - 6010C | 1,165 | 593 | -- | 260 | 36 | 2,054 | 100 |
| Metals – 6020A | 118 | 148 | -- | 48 | 2 | 316 | 100 |
| Hexavalent Chromium – 7199 | -- | 1 | -- | -- | -- | 1 | 100 |
| Mercury – 7471B | 28 | 32 | -- | 19 | 1 | 79 | 100 |
| TPH-EFH/GRO – 8015M | 98 | 77 | -- | 239 | 2 | 416 | 100 |
| Pesticides – 8081B | 3 | 11 | 1 | 173 | 1 | 189 | 99.47 |
| PCB/PCTs – 8082A | 11 | 30 | -- | 953 | 38 | 1,032 | 100 |
| SVOC SIM – 8270D SIM | 326 | 403 | -- | 1,317 | 8 | 2,054 | 100 |
| **Completeness Total for Phase 3 Subarea 3 Samples Collected and Judged Valid** | | | | | | | **99.47** |

**Table 4-7 Summary of Data Completeness Following Data Validation – NBZ**

| | Number of Analyte Detections Without Qualifiers | Number of Estimated Results | Number of Rejected Results | Number of Nondetect Results | Number of Estimated Nondetect Results | Total Analytes Detect and Nondetect | Percent of Analyte Results Judged Valid Versus Total Analyte Results Collected |
|---|---|---|---|---|---|---|---|
| Dioxins – 1613B | 54 | 119 | -- | 351 | 16 | 540 | 100 |
| Nitrate - 300 | -- | 4 | -- | -- | -- | 4 | 100 |
| Metals – 6010C | 260 | 81 | -- | 42 | 7 | 390 | 100 |
| Metals – 6020A | 26 | 29 | -- | 5 | -- | 60 | 100 |
| Mercury – 7471B | 4 | 7 | -- | 4 | -- | 15 | 100 |
| Cyanide – 9012B | -- | -- | -- | -- | -- | 20 | 100 |
| TPH-EFH/GRO – 8015M | 65 | 39 | -- | 172 | -- | 276 | 100 |
| Pesticides – 8081B | 5 | 40 | -- | 647 | 1 | 693 | 100 |
| PCB/PCTs – 8082A | -- | -- | -- | 180 | -- | 180 | 100 |
| Herbicides – 8151A | 3 | 7 | -- | 89 | 1 | 100 | 100 |
| SVOC SIM – 8270D SIM | 73 | 156 | -- | 695 | 12 | 936 | 100 |
| **Completeness Total for Phase 3 Subarea 6 Samples Collected and Judged Valid** | | | | | | | **100** |

The completeness goals for both the locations sampled and the number of measurements judged to be valid were met for both Phase 3 Subarea 7 and NBZ.

Sampling deviations from procedures described in the Master FSP (CDM Smith 2012a) are discussed in Section 2.7 of this TM. Deviations did not impact DQOs for this sampling event. The data reported and not rejected are suitable for their intended use for characterization of Area IV of SSFL. The DQIs identified in the Master FSP (CDM Smith 2012a) met appropriate criteria. The achievement of the completeness goals for the data indicates a sufficient amount of usable data has been generated for project decisions.

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

Over 99 percent of the data validated for Subarea 7 and NBZ, and reported in this TM, are suitable for their intended use for site characterization. Rejected sample results are not suitable for project use. The rejected analyte results do not impact achievement of the overall project objectives. The RLs reported generally met the expected limits proposed by the analytical laboratories in their subcontract agreements with CDM Smith.

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

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

# Section 5
# References


CDM Smith. 2012a. *Master Field Sampling Plan for Chemical Data Gap Investigation Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California.*

CDM Smith. 2012b. *Addendum No. 6 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California, Subarea 7*.

CDM Smith. 2012c. *Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California.* April 11.

CDM Smith. 2013. *Addendum No. 9 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Northern Buffer Zone, Santa Susana Field Laboratory, Ventura County, California.*

CH2M Hill. 2008. *Group 5 – Central Portion of Areas III and IV RCRA Facility Investigation Report, Santa Susana Field Laboratory, Ventura County, California*. November.

Department of Toxic Substance and Control. 2010. Administrative Order on Consent for RA, Docket Number HAS-CO 10/11-037. December 6.

EPA. 2008. EPA *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*.

EPA. 2005. *EPA Contract Laboratory Program National Functional Guidelines for Chlorinated Dioxin/Furan Data Review*.

EPA. 2004. *EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review.*


NE Buffer Zone
NW Buffer Zone
Subarea 6
Subarea 7
AREA IV
Subarea 5A
Subarea 5B
Subarea 5C
Subarea 8 North
7-500
7-501
7-502
7-503
7-504
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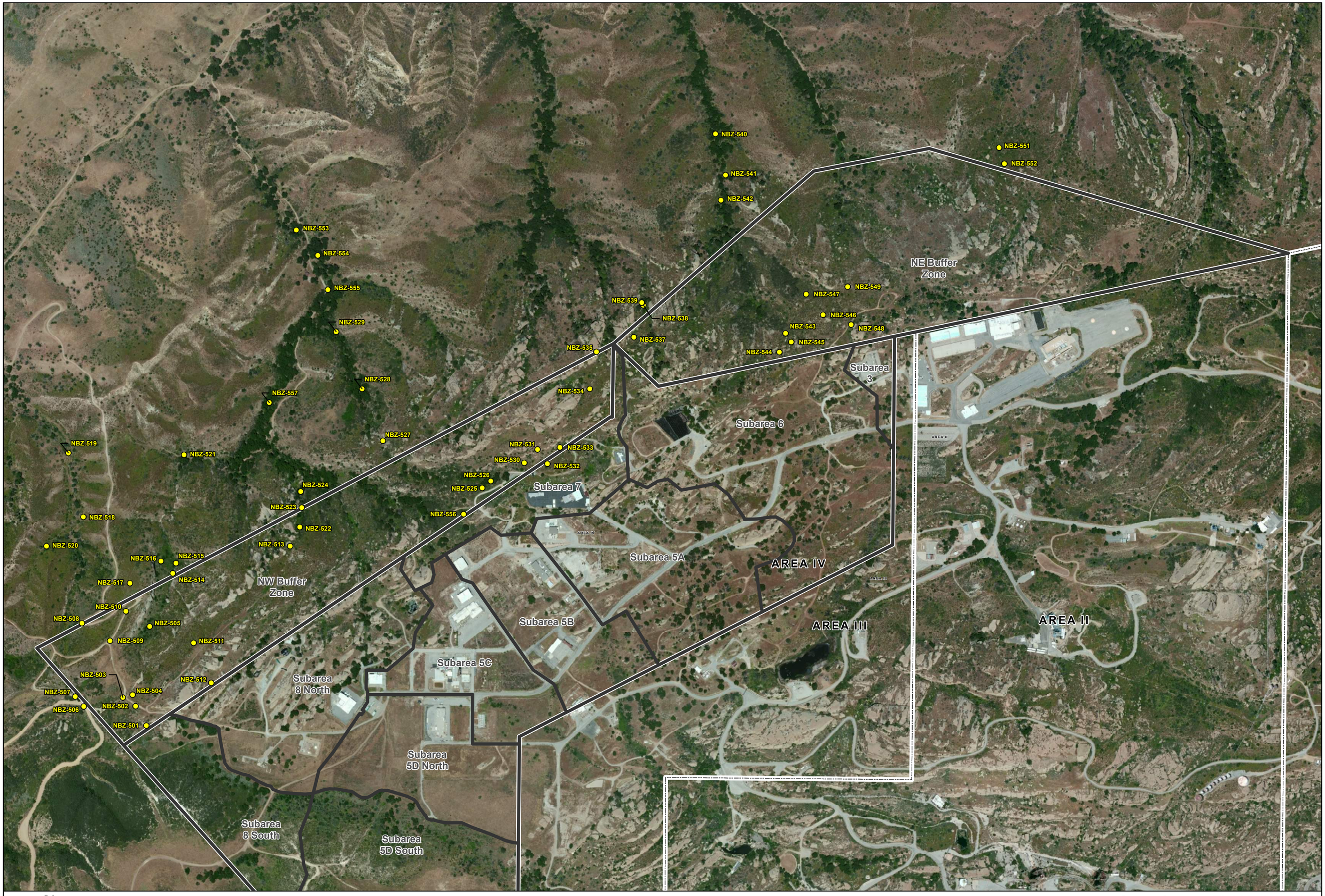
7-562
SS
N
Legend
Sample Location
Area IV Subarea
Site Area
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo and the GIS User Community.
Subarea 7 Phase 3 Sample Locations
0 62.5 125 250 375
Feet
Santa Susana Field Laboratory
Ventura County, California
Exhibit 1
CDM Smith
C:_projects\SantaSusana\GIS\MXD\SSFL_Phase3_7_DG_Sampling_Locations_18x24_20140625.mxd 7/8/2014




N

**Legend**

- Sample Location
- Area IV Subarea
- Site Area

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo and the GIS User Community.

# Northern Buffer Zone Phase 3 Sample Locations

0 220 440 880 1,320 Feet

Santa Susana Field Laboratory
Ventura County, California
**Exhibit 2**

CDM Smith

C:_projects\SantaSusana\GIS\MXD\SSFL_Phase3_NBZ_DG_Sampling_Locations_18x24_20140708.mxd 9/12/2014

# Appendix A
# Analytical Results Tables

## SSFL Main Qualification Definitions and Notes

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

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

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

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

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

## SSFL Specific Qualification Definitions

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

Appendix A1
General Analytical Methods, CAS Number and Chemical Name
Subareas 7 and NBZ

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

Appendix A1
General Analytical Methods, CAS Number and Chemical Name
Subareas 7 and NBZ

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

Appendix A1
General Analytical Methods, CAS Number and Chemical Name
Subareas 7 and NBZ

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

Appendix A1
General Analytical Methods, CAS Number and Chemical Name
Subareas 7 and NBZ

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

Appendix A1
General Analytical Methods, CAS Number and Chemical Name
Subareas 7 and NBZ

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-500-SA7-SB-0.0-0.5 | | SL-501-SA7-SB-0.0-0.5 | | SL-502-SA7-SB-0.0-0.5 | | SL-503-SA7-SB-0.0-0.5 | | SL-504-SA7-SB-0.0-0.5 | | SL-504-SA7-SB-4.0-5.0 | | SL-505-SA7-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 04/17/2013 | | 04/17/2013 | | 04/17/2013 | | 04/22/2013 | | 04/22/2013 | | 04/22/2013 | | 04/17/2013 | |
| | | | SDG | PH033 | | PH033 | | PH033 | | PH036 | | PH036 | | PH036 | | PH033 | |
| | | | Start Depth | 0 | | 0 | | 0 | | 0 | | 0 | | 4 | | 0 | |
| | | | End Depth | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.0274 | J-EMPC J (Z) | 0.981 | U | 0.0442 | J-EMPC J (Z) | 0.0642 | J-EMPC J (Z) | 0.0782 | J (Z) | 1.04 | U | 4.35 | |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.437 | J (Z) | 0.42 | J (Z) | 0.746 | J (Z) | 1 | J (Z) | 5.53 | | 0.755 | J (Z) | 18.1 | |
| 1613B | 3268-87-9 | OCDD | ng/kg | 154 | | 38.6 | | 248 | | 192 | | 1470 | | 153 | | 23100 | J (*#) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 14.8 | | 4.02 | J (Z) | 25.7 | | 25 | | 214 | | 21.2 | | 2000 | J (*#) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 4.86 | J (Z) | 1.49 | J (Z) | 7.16 | J (Z) | 4.3 | J (Z) | 108 | | 11.1 | | 177 | |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.421 | J (Z) | 0.241 | J-EMPC J (Z) | 0.926 | J (Z) | 0.442 | J (Z) | 3.1 | J (Z) | 0.329 | J-EMPC J (Z) | 3660 | J (*#) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5 | J-EMPC U (B) | 4.9 | J-EMPC U (B) | 0.277 | J (Z) | 0.335 | J (Z) | 1.13 | J (Z) | 0.163 | J (Z) | 15.9 | |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.271 | J (Z) | 0.0772 | J-EMPC J (Z) | 0.653 | J (Z) | 0.815 | J (Z) | 1.04 | | 0.133 | J (Z) | 1.33 | |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 0.343 | J (Z) | 0.161 | J (Z) | 0.448 | J (Z) | 0.247 | J (Z) | 2.32 | J (Z) | 0.313 | J-EMPC J (Z) | 12.2 | |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 0.472 | J-EMPC J (Z) | 0.373 | J-EMPC J (Z) | 0.984 | J (Z) | 0.547 | J (Z) | 0.95 | J (Z) | 0.187 | J (Z) | 2.54 | J (Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.52 | J (Z) | 0.36 | J (Z) | 2.25 | J (Z) | 0.856 | J (Z) | 1.35 | J (Z) | 0.203 | J-EMPC J (Z) | 6.58 | |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.307 | J (Z) | 0.195 | J (Z) | 0.525 | J (Z) | 0.402 | J (Z) | 1.22 | J (Z) | 0.206 | J-EMPC J (Z) | 7.55 | |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.688 | J (Z) | 0.324 | J (Z) | 1 | J (Z) | 1.09 | J-EMPC J (Z) | 7.06 | | 0.835 | J (Z) | 54.8 | |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 0.392 | J-EMPC J (Z) | 0.242 | J (Z) | 0.497 | J (Z) | 0.309 | J (Z) | 1.7 | J (Z) | 0.255 | J-EMPC J (Z) | 9.07 | |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 2.82 | J (Z) | 0.929 | J (Z) | 3.89 | J (Z) | 2.35 | J (Z) | 36.6 | | 3.96 | J (Z) | 101 | |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 0.949 | J (Z) | 0.234 | J-EMPC J (Z) | 0.788 | J-EMPC J (Z) | 0.42 | J (Z) | 1.49 | J (Z) | 0.235 | J-EMPC J (Z) | 6.59 | |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5 | U | 0.277 | J (Z) | 0.232 | J (Z) | 0.141 | J (Z) | 5.13 | U | 0.181 | J (Z) | 4.93 | U |

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-506-SA7-SB-0.0-0.5 | | SL-507-SA7-SB-0.0-0.5 | | SL-508-SA7-SB-0.0-0.5 | | SL-509-SA7-SB-0.0-0.5 | | SL-510-SA7-SB-0.0-0.5 | | SL-810-SA7-SB-0.0-0.5 | | SL-511-SA7-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | FD | | N | |
| | | | Sample Date | 04/25/2013 | | 04/24/2013 | | 04/25/2013 | | 04/25/2013 | | 04/22/2013 | | 04/22/2013 | | 04/19/2013 | |
| | | | SDG | PH039 | | PH039 | | PH039 | | PH039 | | PH036 | | PH036 | | PH035 | |
| | | | Start Depth | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| | | | End Depth | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.0231 | J-EMPC J (Z) | 1.01 | U | 0.0607 | J (Z) | 0.0597 | J-EMPC J (Z) | 0.999 | U | 0.994 | U | 0.279 | J (Z) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.29 | J-EMPC J (Z) | 0.374 | J-EMPC J (Z) | 0.505 | J-EMPC J (Z) | 3.43 | J (Z) | 0.703 | J (Z) | 0.622 | J (Z) | 9.77 | |
| 1613B | 3268-87-9 | OCDD | ng/kg | 59.9 | | 123 | | 200 | | 1090 | | 177 | J (Q) | 171 | | 5740 | J (*#) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 5.55 | | 12.9 | | 22.6 | | 154 | | 23.2 | | 22.3 | | 508 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 1.96 | J (Z) | 4.63 | J (Z) | 12.6 | | 87.8 | | 10.9 | | 11.8 | | 96.4 | |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.01 | J-EMPC U (B) | 0.144 | J-EMPC J (Z) | 0.257 | J (Z) | 1.8 | J (Z) | 0.317 | J (Z) | 0.357 | J-EMPC J (Z) | 4.09 | J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.01 | J-EMPC U (B) | 5.05 | J-EMPC U (B) | 0.265 | J-EMPC J (Z) | 5.08 | U | 0.203 | J (Z) | 0.135 | J-EMPC J (Z) | 1.94 | J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.154 | J (Z) | 0.224 | J-EMPC J (Z) | 0.628 | J (Z) | 0.88 | J (Z) | 0.258 | J (Z) | 0.249 | J-EMPC J (Z) | 0.972 | J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.01 | J-EMPC U (B) | 5.05 | J-EMPC U (B) | 0.386 | J-EMPC J (Z) | 2.03 | J (Z) | 0.416 | J (Z) | 0.396 | J (Z) | 3.99 | J (Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.01 | J-EMPC U (B) | 0.288 | J-EMPC J (Z) | 0.773 | J (Z) | 1.04 | J (Z) | 0.824 | J (FD, Z) | 0.375 | J (FD, Z) | 1.77 | J (Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.217 | J (Z) | 0.304 | J (Z) | 2.61 | J (Z) | 2.32 | J (Z) | 0.591 | J (Z) | 0.591 | J (Z) | 1.52 | J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.171 | J (Z) | 0.169 | J-EMPC J (Z) | 0.595 | J (Z) | 1.26 | J (Z) | 0.497 | J (FD, Z) | 0.267 | J (FD, Z) | 1.89 | J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.257 | J (Z) | 0.488 | J-EMPC J (Z) | 0.772 | J (Z) | 5.6 | | 0.925 | J (Z) | 0.79 | J (Z) | 16.3 | |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.01 | J-EMPC U (B) | 0.167 | J-EMPC J (Z) | 0.481 | J (Z) | 1.34 | J (Z) | 0.478 | J (Z) | 0.315 | J (Z) | 2.35 | J (Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 0.952 | J (Z) | 1.8 | J (Z) | 5.26 | | 30.7 | | 4.7 | J (Z) | 4.4 | J (Z) | 37.2 | |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 0.209 | J-EMPC J (Z) | 0.248 | J-EMPC J (Z) | 1.64 | J (Z) | 2.67 | J (Z) | 1.97 | J (FD, Z) | 0.435 | J (FD, Z) | 2.86 | J (Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 0.11 | J (Z) | 5.05 | U | 0.19 | J-EMPC J (Z) | 5.08 | U | 0.175 | J-EMPC J (Z) | 0.111 | J (Z) | 5.18 | U |

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

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-512-SA7-SB-0.0-0.5 | | SL-513-SA7-SB-0.0-0.5 | | SL-913-SA7-SB-0.0-0.5 | | SL-514-SA7-SB-0.0-0.5 | | SL-515-SA7-SB-0.0-0.5 | | SL-516-SA7-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | FD | | N | | N | | N | |
| | | | Sample Date | 04/23/2013 | | 06/04/2013 | | 06/04/2013 | | 06/06/2013 | | 06/06/2013 | | 06/04/2013 | |
| | | | SDG | PH037 | | PH046 | | PH046 | | PH049 | | PH049 | | PH046 | |
| | | | Start Depth | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| | | | End Depth | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.999 | U | 0.11 | J (FD, Z) | 0.0389 | J (FD, Z) | 0.0421 | J-EMPC J (Z) | 0.0419 | J-EMPC J (Z) | 0.0468 | J (Z) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.187 | J (Z) | 1.87 | J (FD, Z) | 0.998 | J (FD, Z) | 2.02 | J (Z) | 5.04 | U (B) | 4.96 | J-EMPC U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 39.4 | | 906 | J (FD) | 396 | J (FD) | 1320 | | 13.5 | | 9.93 | U (B) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 3.84 | J (Z) | 95.8 | J (FD) | 40.7 | J (FD) | 138 | | 1.47 | J (Z) | 4.96 | J-EMPC U (B) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 1.66 | J (Z) | 82.8 | J (FD) | 28.3 | J (FD) | 109 | | 0.979 | J (Z) | 9.93 | U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.0741 | J (Z) | 1.06 | J-EMPC J (FD, Z) | 0.527 | J (FD, Z) | 1.29 | J (Z) | 0.0344 | J-EMPC J (Z) | 4.96 | U (B) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.0631 | J-EMPC J (Z) | 0.451 | J (Z) | 4.96 | J-EMPC U (B) | 0.458 | J (Z) | 5.04 | U | 4.96 | U |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.0662 | J-EMPC J (Z) | 0.763 | J (FD, Z) | 0.457 | J (FD, Z) | 2.63 | | 0.0312 | J-EMPC J (Z) | 0.993 | J-EMPC U (B) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 4.99 | J-EMPC U (B) | 1.28 | J (Z) | 0.775 | J (Z) | 4.01 | J (Z) | 5.04 | U (B) | 4.96 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 0.0832 | J-EMPC J (Z) | 0.839 | J (Z) | 0.691 | J (Z) | 3.48 | J (Z) | 5.04 | J-EMPC U (B) | 4.96 | U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 4.99 | U (B) | 0.702 | J (Z) | 0.646 | J (Z) | 3.12 | J (Z) | 5.04 | J-EMPC U (B) | 4.96 | U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 4.99 | J-EMPC U (B) | 0.913 | J (Z) | 0.706 | J (Z) | 2.73 | J (Z) | 5.04 | U | 0.0854 | J-EMPC J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.196 | J-EMPC J (Z) | 3.18 | J (FD, Z) | 1.49 | J (FD, Z) | 3.93 | J (Z) | 5.04 | U (B) | 0.0848 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 4.99 | U (B) | 0.894 | J (Z) | 0.624 | J (Z) | 3.13 | J (Z) | 5.04 | U | 4.96 | U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 0.796 | J (Z) | 19.2 | J (FD) | 8.72 | J (FD) | 39.3 | | 0.366 | J (Z) | 4.96 | J-EMPC U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 4.99 | J-EMPC U (B) | 0.876 | J (Z) | 0.864 | J (Z) | 6.25 | | 5.04 | J-EMPC U (B) | 4.96 | U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 4.99 | J-EMPC U (B) | 5.09 | U (B) | 4.96 | U (B) | 4.96 | U | 5.04 | J-EMPC U (B) | 4.96 | J-EMPC U (B) |

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

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-517-SA7-SB-0.0-0.5 | | SL-518-SA7-SB-0.0-0.5 | | SL-519-SA7-SB-0.0-0.5 | | SL-819-SA7-SB-0.0-0.5 | | SL-519-SA7-SB-2.0-3.0 | | SL-520-SA7-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | N | | FD | | N | | N | |
| | | | Sample Date | 04/22/2013 | | 04/19/2013 | | 04/25/2013 | | 04/25/2013 | | 04/25/2013 | | 04/19/2013 | |
| | | | SDG | PH036 | | PH035 | | PH039 | | PH039 | | PH039 | | PH035 | |
| | | | Start Depth | 0 | | 0 | | 0 | | 0 | | 2 | | 0 | |
| | | | End Depth | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 3 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.126 | J (Z) | 0.139 | J (Z) | 0.0651 | J-EMPC J (FD, Z) | 0.0291 | J-EMPC J (FD, Z) | 1.01 | U | 0.0444 | J-EMPC J (Z) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 3.72 | J (Z) | 2.53 | J (Z) | 0.691 | J (Z) | 0.654 | J (Z) | 0.183 | J (Z) | 0.479 | J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 1350 | | 948 | | 270 | J (Q) | 174 | | 35.1 | | 150 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 187 | | 128 | | 25.2 | | 17.1 | | 4.07 | J (Z) | 18.9 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 99.7 | | 70 | | 7.75 | J (FD, Z) | 13.7 | J (FD) | 1.54 | J (Z) | 5.85 | J (Z) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 1.84 | J (Z) | 1.39 | J (Z) | 0.276 | J-EMPC J (Z) | 0.317 | J (Z) | 0.119 | J-EMPC J (Z) | 0.209 | J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.758 | J-EMPC J (Z) | 0.6 | J-EMPC J (Z) | 5.1 | J-EMPC U (B) | 5.08 | J-EMPC U (B) | 5.06 | J-EMPC U (B) | 0.174 | J-EMPC J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 3.69 | | 1.91 | | 0.365 | J-EMPC J (FD, Z) | 0.184 | J-EMPC J (FD, Z) | 0.142 | J (Z) | 0.244 | J-EMPC J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 1.86 | J (Z) | 1.36 | J (Z) | 0.344 | J (Z) | 0.298 | J-EMPC J (Z) | 5.06 | J-EMPC U (B) | 0.219 | J (Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 2.93 | J (Z) | 1.73 | J (Z) | 0.495 | J-EMPC J (Z) | 0.484 | J-EMPC J (Z) | 0.16 | J-EMPC J (Z) | 0.497 | J (Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 18 | | 5.05 | J (Z) | 0.711 | J (Z) | 0.577 | J-EMPC J (Z) | 0.25 | J-EMPC J (Z) | 0.693 | J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 4.56 | J (Z) | 1.23 | J (Z) | 0.299 | J-EMPC J (Z) | 0.307 | J-EMPC J (Z) | 5.06 | J-EMPC U (B) | 0.27 | J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.96 | | 4.08 | J (Z) | 1.02 | J (Z) | 0.728 | J (Z) | 0.209 | J (Z) | 0.77 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 2.02 | J (Z) | 1.12 | J (Z) | 0.303 | J (Z) | 0.284 | J (Z) | 5.06 | J-EMPC U (B) | 0.234 | J (Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 30.9 | | 21.1 | | 2.91 | J (Z) | 3.38 | J (Z) | 0.565 | J (Z) | 2.42 | J (Z) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 2.9 | J (Z) | 2.24 | J (Z) | 0.486 | J (Z) | 0.435 | J (Z) | 5.06 | U (B) | 0.327 | J (Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.08 | U | 5.1 | U | 0.114 | J-EMPC J (Z) | 0.108 | J-EMPC J (Z) | 5.06 | J-EMPC U (B) | 5.04 | U |

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

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-521-SA7-SB-0.0-0.5 | | SL-522-SA7-SB-0.0-0.5 | | SL-524-SA7-SB-0.0-0.5 | | SL-524-SA7-SB-1.0-2.0 | | SL-924-SA7-SB-1.0-2.0 | | SL-525-SA7-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | FD | | N | |
| | | | Sample Date | 04/15/2013 | | 04/15/2013 | | 06/04/2013 | | 06/04/2013 | | 06/04/2013 | | 04/23/2013 | |
| | | | SDG | PH031 | | PH031 | | PH046 | | PH046 | | PH046 | | PH037 | |
| | | | Start Depth | 0 | | 0 | | 0 | | 1 | | 1 | | 0 | |
| | | | End Depth | 0.5 | | 0.5 | | 0.5 | | 2 | | 2 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.0697 | J-EMPC J (Z) | 0.0534 | J (Z) | 1.04 | J-EMPC U (B) | 1.07 | J-EMPC UJ (B, FD) | 1.07 | UJ (FD) | 1.02 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 1.89 | J (Z) | 0.961 | J (Z) | 5.22 | U (B) | 5.34 | U (B) | 5.37 | J-EMPC U (B) | 0.719 | J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 909 | | 274 | | 41 | | 10.5 | J (FD, Z) | 2.71 | J (FD, Z) | 174 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 84.5 | | 32 | | 2.69 | J (Z) | 0.859 | J (FD, Z) | 5.37 | UJ (B, FD) | 17.8 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 11.5 | | 4.2 | J (Z) | 1.19 | J (Z) | 10.7 | J-EMPC UJ (B, FD) | 10.7 | UJ (B, FD) | 7.98 | J (Z) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 1.12 | J (Z) | 0.474 | J-EMPC J (Z) | 5.22 | U (B) | 5.34 | J-EMPC UJ (B, FD) | 5.37 | J-EMPC UJ (B, FD) | 0.29 | J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.367 | J-EMPC J (Z) | 0.263 | J-EMPC J (Z) | 5.22 | U (B) | 5.34 | J-EMPC U (B) | 5.37 | U (B) | 0.235 | J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.142 | J (Z) | 0.339 | J (Z) | 0.0282 | J (Z) | 0.0189 | J-EMPC J (Z) | 0.0139 | J (Z) | 0.35 | J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 0.317 | J (Z) | 5.17 | J-EMPC U (B) | 5.22 | U (B) | 5.34 | UJ (B, FD) | 5.37 | J-EMPC UJ (B, FD) | 0.351 | J (Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 0.246 | J (Z) | 0.457 | J (Z) | 5.22 | J-EMPC U (B) | 5.34 | J-EMPC U (B) | 5.37 | U (B) | 0.726 | J-EMPC J (Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.588 | J (Z) | 0.359 | J-EMPC J (Z) | 0.646 | J (Z) | 5.34 | UJ (B, FD) | 5.37 | J-EMPC UJ (B, FD) | 4.47 | J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.305 | J (Z) | 0.244 | J (Z) | 0.129 | J-EMPC J (Z) | 5.34 | J-EMPC UJ (B, FD) | 5.37 | J-EMPC UJ (B, FD) | 0.544 | J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 2.92 | J (Z) | 1.31 | J (Z) | 0.171 | J (Z) | 0.0966 | J-EMPC J (FD, Z) | 5.37 | UJ (B, FD) | 1.23 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 0.338 | J (Z) | 0.259 | J-EMPC J (Z) | 0.177 | J (Z) | 5.34 | U (B) | 5.37 | U (B) | 0.571 | J (Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.24 | | 2.24 | J (Z) | 0.644 | J (Z) | 5.34 | UJ (B, FD) | 5.37 | UJ (B, FD) | 6.02 | |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 0.429 | J (Z) | 0.295 | J (Z) | 5.22 | J-EMPC U (B) | 5.34 | J-EMPC U (B) | 5.37 | J-EMPC U (B) | 0.393 | J (Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.09 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 5.22 | U (B) | 5.34 | J-EMPC U (B) | 5.37 | J-EMPC U (B) | 0.129 | J (Z) |

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

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-525-SA7-SB-4.0-5.0 | | SL-525-SA7-SB-6.5-7.5 | | SL-525-SA7-SB-9.5-10.5 | | SL-526-SA7-SB-0.0-0.5 | | SL-526-SA7-SB-3.5-4.5 | | SL-526-SA7-SB-9.0-10.0 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 06/03/2013 | | 04/24/2013 | | 06/03/2013 | | 04/23/2013 | | 04/23/2013 | | 06/03/2013 | |
| | | | SDG | PH045 | | PH038 | | PH045 | | PH037 | | PH037 | | PH045 | |
| | | | Start Depth | 4 | | 6.5 | | 9.5 | | 0 | | 3.5 | | 9 | |
| | | | End Depth | 5 | | 7.5 | | 10.5 | | 0.5 | | 4.5 | | 10 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.02 | U | 1.05 | U | 1.03 | U | 0.0301 | J-EMPC J (Z) | 1.03 | U | 0.0454 | J-EMPC J (Z) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.11 | J-EMPC U (B) | 0.248 | J (Z) | 5.13 | U | 0.401 | J (Z) | 5.16 | U (B) | 5.38 | J-EMPC U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 17 | | 72.5 | | 2.3 | J (Z) | 92.6 | | 72 | | 279 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 1.75 | J (Z) | 7.37 | | 5.13 | U (B) | 8.17 | | 1.41 | J (Z) | 1.52 | J (Z) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 0.912 | J (Z) | 3.3 | J (Z) | 10.3 | U (B) | 2.71 | J (Z) | 0.578 | J (Z) | 10.8 | J-EMPC U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.0574 | J-EMPC J (Z) | 0.138 | J (Z) | 5.13 | U | 0.212 | J-EMPC J (Z) | 0.0344 | J-EMPC J (Z) | 0.0742 | J-EMPC J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.11 | U | 0.0676 | J-EMPC J (Z) | 5.13 | U | 0.231 | J-EMPC J (Z) | 0.0848 | J-EMPC J (Z) | 5.38 | U (B) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.02 | U | 0.098 | J (Z) | 1.03 | U | 0.0866 | J-EMPC J (Z) | 0.0316 | J (Z) | 0.0708 | J-EMPC J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.11 | J-EMPC U (B) | 0.166 | J (Z) | 5.13 | J-EMPC U (B) | 0.149 | J (Z) | 5.16 | J-EMPC U (B) | 5.38 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.11 | J-EMPC U (B) | 0.368 | J (Z) | 5.13 | J-EMPC U (B) | 0.258 | J-EMPC J (Z) | 0.0855 | J (Z) | 5.38 | J-EMPC U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.747 | J (Z) | 1.81 | J (Z) | 5.13 | J-EMPC U (B) | 1.7 | J (Z) | 0.316 | J (Z) | 5.38 | J-EMPC U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.11 | J-EMPC U (B) | 0.237 | J (Z) | 5.13 | U (B) | 0.226 | J (Z) | 5.16 | J-EMPC U (B) | 0.114 | J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.11 | J-EMPC U (B) | 0.432 | J (Z) | 5.13 | U (B) | 0.518 | J (Z) | 0.0768 | J-EMPC J (Z) | 5.38 | U (B) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.11 | J-EMPC U (B) | 0.232 | J (Z) | 5.13 | U | 0.184 | J (Z) | 5.16 | J-EMPC U (B) | 5.38 | U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 0.572 | J (Z) | 2.28 | J (Z) | 5.13 | J-EMPC U (B) | 1.65 | J (Z) | 0.358 | J (Z) | 5.38 | J-EMPC U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.11 | U (B) | 5.25 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | 0.206 | J (Z) | 5.16 | U (B) | 5.38 | U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.11 | U (B) | 5.25 | J-EMPC U (B) | 5.13 | U | 0.129 | J-EMPC J (Z) | 5.16 | U | 5.38 | J-EMPC U (B) |

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

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-527-SA7-SB-0.0-0.5 | | SL-527-SA7-SB-2.5-3.5 | | SL-528-SA7-SB-0.0-0.5 | | SL-529-SA7-SB-0.0-0.5 | | SL-530-SA7-SB-0.0-0.5 | | SL-531-SA7-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 04/24/2013 | | 04/24/2013 | | 04/24/2013 | | 04/24/2013 | | 04/18/2013 | | 04/18/2013 | |
| | | | SDG | PH038 | | PH038 | | PH038 | | PH038 | | PH034 | | PH034 | |
| | | | Start Depth | 0 | | 2.5 | | 0 | | 0 | | 0 | | 0 | |
| | | | End Depth | 0.5 | | 3.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.0353 | J-EMPC J (Z) | 0.0364 | J-EMPC J (Z) | 0.996 | U | 1.01 | U | 1.02 | U | 1 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.373 | J (Z) | 5.07 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 1.43 | J (Z) | 0.364 | J (Z) | 0.482 | J-EMPC J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 89.5 | | 1.67 | J (Z) | 7.79 | J (Z) | 32.6 | | 91.8 | | 78.8 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 8.96 | | 5.07 | U (B) | 0.988 | J (Z) | 4.89 | J (Z) | 8.58 | | 7.64 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 3.64 | J (Z) | 10.1 | U (B) | 9.96 | U (B) | 1.07 | J (Z) | 2.99 | J (Z) | 1.92 | J (Z) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.215 | J (Z) | 0.0312 | J-EMPC J (Z) | 0.0758 | J-EMPC J (Z) | 0.182 | J-EMPC J (Z) | 0.266 | J (Z) | 0.183 | J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.14 | J (Z) | 0.0809 | J-EMPC J (Z) | 0.039 | J-EMPC J (Z) | 0.117 | J (Z) | 0.208 | J (Z) | 0.173 | J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.214 | J-EMPC J (Z) | 0.0271 | J (Z) | 0.0416 | J-EMPC J (Z) | 0.0747 | J-EMPC J (Z) | 0.131 | J-EMPC J (Z) | 0.136 | J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 0.143 | J (Z) | 5.07 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 5.04 | J-EMPC U (B) | 0.132 | J (Z) | 0.0981 | J-EMPC J (Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 0.433 | J (Z) | 0.109 | J (Z) | 0.0636 | J-EMPC J (Z) | 0.141 | J (Z) | 0.432 | J (Z) | 0.272 | J (Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.254 | J (Z) | 5.07 | J-EMPC U (B) | 4.98 | U (B) | 5.04 | U (B) | 0.327 | J-EMPC J (Z) | 5.01 | U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.197 | J (Z) | 5.07 | U (B) | 4.98 | J-EMPC U (B) | 0.544 | J (Z) | 0.167 | J-EMPC J (Z) | 0.117 | J-EMPC J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.46 | J (Z) | 0.0901 | J (Z) | 0.0704 | J-EMPC J (Z) | 1.05 | J (Z) | 0.462 | J (Z) | 0.391 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 0.206 | J (Z) | 5.07 | U (B) | 4.98 | U (B) | 5.04 | U (B) | 0.167 | J-EMPC J (Z) | 5.01 | U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 1.69 | J (Z) | 5.07 | U (B) | 0.247 | J (Z) | 0.599 | J (Z) | 1.37 | J (Z) | 0.909 | J (Z) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 0.209 | J (Z) | 5.07 | J-EMPC U (B) | 4.98 | U (B) | 5.04 | U (B) | 5.09 | U (B) | 5.01 | J-EMPC U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.17 | U (B) | 5.07 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 0.0871 | J (Z) | 5.09 | U (B) | 5.01 | J-EMPC U (B) |

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

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-532-SA7-SB-0.0-0.5 | | SL-532-SA7-SB-3.0-4.0 | | SL-533-SA7-SB-0.0-0.5 | | SL-533-SA7-SB-2.5-3.5 | | SL-534-SA7-SB-0.0-0.5 | | SL-534-SA7-SB-5.5-6.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 04/18/2013 | | 06/03/2013 | | 04/18/2013 | | 06/03/2013 | | 04/12/2013 | | 04/15/2013 | |
| | | | SDG | PH034 | | PH045 | | PH034 | | PH045 | | PH030 | | PH031 | |
| | | | Start Depth | 0 | | 3 | | 0 | | 2.5 | | 0 | | 5.5 | |
| | | | End Depth | 0.5 | | 4 | | 0.5 | | 3.5 | | 0.5 | | 6.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.991 | U | 0.0439 | J-EMPC J (Z) | 0.0326 | J-EMPC J (Z) | 1.03 | U | 1.03 | J-EMPC U (B) | 0.029 | J (Z) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.123 | J (Z) | 5.17 | J-EMPC U (B) | 0.298 | J (Z) | 5.16 | J-EMPC U (B) | 0.976 | J (Z) | 5.19 | J-EMPC U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 21.3 | | 17.5 | | 66.2 | | 1.4 | J (Z) | 198 | | 7.49 | J (Z) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 2.58 | J (Z) | 1.98 | J (Z) | 5.92 | | 5.16 | U (B) | 15 | | 0.643 | J-EMPC J (Z) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 0.858 | J (Z) | 10.3 | U (B) | 2.02 | J (Z) | 10.3 | U (B) | 5.52 | J (Z) | 10.4 | J-EMPC U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.0857 | J-EMPC J (Z) | 0.0946 | J-EMPC J (Z) | 0.128 | J (Z) | 0.0529 | J (Z) | 0.336 | J (Z) | 5.19 | J-EMPC U (B) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 4.95 | J-EMPC U (B) | 5.17 | U (B) | 5.19 | U (B) | 5.16 | J-EMPC U (B) | 0.344 | J (Z) | 5.19 | J-EMPC U (B) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.0663 | J-EMPC J (Z) | 0.0561 | J-EMPC J (Z) | 0.0789 | J-EMPC J (Z) | 1.03 | U | 0.0508 | J-EMPC J (Z) | 1.04 | U |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 4.95 | U (B) | 5.17 | J-EMPC U (B) | 0.122 | J-EMPC J (Z) | 5.16 | J-EMPC U (B) | 0.289 | J (Z) | 5.19 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 0.172 | J (Z) | 0.208 | J (Z) | 0.224 | J (Z) | 5.16 | J-EMPC U (B) | 0.156 | J-EMPC J (Z) | 5.19 | J-EMPC U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 4.95 | U (B) | 5.17 | U (B) | 5.19 | J-EMPC U (B) | 5.16 | U (B) | 5.15 | J-EMPC U (B) | 5.19 | J-EMPC U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 4.95 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 5.19 | J-EMPC U (B) | 5.16 | J-EMPC U (B) | 0.204 | J-EMPC J (Z) | 5.19 | J-EMPC U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.134 | J (Z) | 5.17 | U (B) | 0.344 | J (Z) | 5.16 | J-EMPC U (B) | 0.701 | J (Z) | 5.19 | J-EMPC U (B) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 4.95 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 5.19 | U (B) | 5.16 | J-EMPC U (B) | 0.349 | J-EMPC J (Z) | 5.19 | J-EMPC U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 0.513 | J (Z) | 0.304 | J (Z) | 0.909 | J (Z) | 5.16 | U (B) | 2.74 | J (Z) | 5.19 | U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 4.95 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 5.19 | U (B) | 5.16 | U | 0.253 | J (Z) | 5.19 | J-EMPC U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 4.95 | J-EMPC U (B) | 5.17 | U | 5.19 | J-EMPC U (B) | 5.16 | J-EMPC U (B) | 5.15 | J-EMPC U (B) | 5.19 | J-EMPC U (B) |

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

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-535-SA7-SB-0.0-0.5 | | SL-535-SA7-SB-4.0-5.0 | | SL-535-SA7-SB-9.0-10.0 | | SL-536-SA7-SB-0.0-0.5 | | SL-536-SA7-SB-3.0-4.0 | | SL-836-SA7-SB-3.0-4.0 | |
| | | | Sample Type | N | | N | | N | | N | | N | | FD | |
| | | | Sample Date | 04/12/2013 | | 04/12/2013 | | 04/12/2013 | | 04/11/2013 | | 04/12/2013 | | 04/12/2013 | |
| | | | SDG | PH030 | | PH030 | | PH030 | | PH029 | | PH030 | | PH030 | |
| | | | Start Depth | 0 | | 4 | | 9 | | 0 | | 3 | | 3 | |
| | | | End Depth | 0.5 | | 5 | | 10 | | 0.5 | | 4 | | 4 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.02 | U (B) | 1.04 | U | 1.04 | J-EMPC U (B) | 0.994 | U (B) | 1 | UJ (FD) | 1.03 | J-EMPC UJ (B, FD) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 1.51 | J (Z) | 0.108 | J (Z) | 5.18 | U | 2.74 | J (Z) | 0.575 | J (FD, Z) | 1.41 | J (FD, Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 299 | | 14.6 | | 1.74 | J (Z) | 722 | | 150 | J (FD, Q) | 358 | J (FD) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 33.4 | | 1.55 | J (Z) | 5.18 | U (B) | 78.1 | | 18.2 | J (FD, Q) | 38.9 | J (FD) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 7.05 | J (Z) | 0.47 | J (Z) | 10.4 | J-EMPC U (B) | 19.2 | | 3.87 | J (FD, Z) | 9.39 | J (FD, Z) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.853 | J (Z) | 5.19 | U (B) | 5.18 | J-EMPC U (B) | 1.3 | J (Z) | 0.287 | J (FD, Z) | 0.724 | J (FD, Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.576 | J-EMPC J (Z) | 0.075 | J-EMPC J (Z) | 0.0562 | J-EMPC J (Z) | 0.799 | J (Z) | 0.238 | J-EMPC J (Z) | 0.38 | J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.197 | J-EMPC J (Z) | 0.0363 | J-EMPC J (Z) | 1.04 | U | 0.0619 | J (Z) | 1 | UJ (FD) | 0.0308 | J-EMPC J (FD, Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 0.319 | J (Z) | 5.19 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 0.861 | J (Z) | 5.02 | J-EMPC UJ (B, FD) | 0.529 | J (FD, Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 0.38 | J (Z) | 5.19 | U (B) | 5.18 | U (B) | 0.195 | J (Z) | 5.02 | J-EMPC UJ (B, FD) | 0.231 | J (FD, Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.421 | J (Z) | 5.19 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 4.97 | J-EMPC U (B) | 5.02 | UJ (B, FD) | 5.13 | J-EMPC UJ (B, FD) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.323 | J-EMPC J (Z) | 5.19 | U (B) | 5.18 | J-EMPC U (B) | 0.489 | J (Z) | 5.02 | UJ (B, FD) | 0.396 | J (FD, Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 1.87 | J (Z) | 0.11 | J (Z) | 5.18 | J-EMPC U (B) | 3.42 | J (Z) | 0.778 | J (FD, Z) | 1.87 | J (FD, Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 0.359 | J (Z) | 5.19 | U (B) | 5.18 | J-EMPC U (B) | 0.695 | J (Z) | 0.189 | J-EMPC J (FD, Z) | 0.439 | J (FD, Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 3.82 | J (Z) | 5.19 | U (B) | 5.18 | J-EMPC U (B) | 9.84 | | 2.14 | J (FD, Z) | 5.29 | J (FD) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 0.329 | J (Z) | 5.19 | U (B) | 5.18 | J-EMPC U (B) | 0.465 | J (Z) | 5.02 | UJ (B, FD) | 0.302 | J (FD, Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.1 | J-EMPC U (B) | 5.19 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 4.97 | U (B) | 5.02 | J-EMPC UJ (B, FD) | 5.13 | UJ (B, FD) |

U – Compound not detected above reporting limit
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J-EMPC – Estimated Maximum Possible Concentration
(Z, etc.) – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-537-SA7-SB-0.0-0.5 | | SL-538-SA7-SB-0.0-0.5 | | SL-539-SA7-SB-0.0-0.5 | | SL-540-SA7-SB-0.0-0.5 | | SL-840-SA7-SB-0.0-0.5 | | SL-541-SA7-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | FD | | N | |
| | | | Sample Date | 04/15/2013 | | 04/15/2013 | | 04/08/2013 | | 04/09/2013 | | 04/09/2013 | | 10/02/2013 | |
| | | | SDG | PH031 | | PH031 | | PH027 | | PH027 | | PH027 | | PH121 | |
| | | | Start Depth | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| | | | End Depth | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.0372 | J-EMPC J (Z) | 0.0426 | J (Z) | 0.0932 | J (Z) | 1.02 | U | 0.98 | U | 1.06 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.814 | J (Z) | 1.2 | J (Z) | 2.77 | J (Z) | 0.339 | J (Z) | 0.443 | J (Z) | 0.121 | J-EMPC J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 193 | | 490 | | 1740 | | 86.5 | J (FD) | 161 | J (FD) | 56.2 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 22.5 | | 42.8 | | 158 | | 8.49 | | 12.7 | | 5.48 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 7.37 | J (Z) | 13.2 | | 50.9 | | 3.16 | J (Z) | 4.4 | J (Z) | 1.3 | J-EMPC J (Z) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.34 | J-EMPC J (Z) | 0.533 | J (Z) | 1.72 | J (Z) | 0.15 | J (Z) | 0.197 | J (Z) | 5.29 | U |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.288 | J (Z) | 0.319 | J-EMPC J (Z) | 0.615 | J-EMPC J (Z) | 5.12 | J-EMPC U (B) | 4.9 | U (B) | 5.29 | U |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.0992 | J (Z) | 0.116 | J (Z) | 0.73 | J (Z) | 1.02 | U | 0.98 | U | 1.06 | U |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.09 | J-EMPC U (B) | 0.416 | J (Z) | 2.65 | J (Z) | 5.12 | J-EMPC U (B) | 0.239 | J (Z) | 0.115 | J-EMPC J (Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.09 | J-EMPC U (B) | 4.85 | U (B) | 0.783 | J (Z) | 5.12 | J-EMPC U (B) | 4.9 | U (B) | 5.29 | U |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.09 | U (B) | 0.281 | J (Z) | 3.51 | J (Z) | 5.12 | U (B) | 4.9 | J-EMPC U (B) | 5.29 | U |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.167 | J (Z) | 0.254 | J (Z) | 1.24 | J (Z) | 5.12 | J-EMPC U (B) | 4.9 | J-EMPC U (B) | 5.29 | J-EMPC U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.969 | J (Z) | 1.59 | J (Z) | 4.86 | J (Z) | 0.361 | J-EMPC J (FD, Z) | 0.661 | J (FD, Z) | 0.15 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.09 | U (B) | 0.302 | J (Z) | 1.28 | J (Z) | 5.12 | U (B) | 0.187 | J (Z) | 0.103 | J-EMPC J (Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 2.91 | J (Z) | 5.37 | | 26.5 | | 1.52 | J (Z) | 2.35 | J (Z) | 0.747 | J (Z) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.09 | U (B) | 0.27 | J-EMPC J (Z) | 2 | J (Z) | 0.15 | J-EMPC J (Z) | 0.196 | J (Z) | 0.117 | J-EMPC J (Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.09 | J-EMPC U (B) | 4.85 | J-EMPC U (B) | 0.745 | J (Z) | 0.0774 | J-EMPC J (FD, Z) | 0.204 | J (FD, Z) | 5.29 | U |

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

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-541-SA7-SB-2.0-3.0 | | SL-542-SA7-SB-0.0-0.5 | | SL-544-SA7-SB-0.0-0.5 | | SL-546-SA7-SB-0.0-0.5 | | SL-547-SA7-SB-0.0-0.5 | | SL-548-SA7-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 10/02/2013 | | 04/09/2013 | | 04/09/2013 | | 04/09/2013 | | 04/09/2013 | | 04/10/2013 | |
| | | | SDG | PH121 | | PH027 | | PH027 | | PH027 | | PH028 | | PH028 | |
| | | | Start Depth | 2 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| | | | End Depth | 3 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.02 | U | 0.0325 | J-EMPC J (Z) | 0.0275 | J-EMPC J (Z) | 0.149 | J (Z) | 0.105 | J-EMPC J (Z) | 0.0614 | J-EMPC J (Z) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.12 | U | 0.602 | J (Z) | 5.09 | J-EMPC U (B) | 3.26 | J (Z) | 0.687 | J (Z) | 2.1 | J-EMPC J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 4.27 | J (Z) | 349 | | 30.1 | | 1700 | | 128 | | 716 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 0.397 | J (Z) | 35.7 | | 3.09 | J (Z) | 161 | | 13 | | 76.3 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 10.2 | J-EMPC U (B) | 13 | | 0.856 | J (Z) | 37.7 | | 3.66 | J (Z) | 20.5 | |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.12 | U | 0.365 | J (Z) | 5.09 | J-EMPC U (B) | 1.8 | J (Z) | 0.315 | J (Z) | 1.02 | J-EMPC J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.115 | J-EMPC J (Z) | 4.92 | J-EMPC U (B) | 5.09 | U (B) | 0.952 | J-EMPC J (Z) | 0.263 | J-EMPC J (Z) | 0.596 | J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.02 | U | 0.984 | U | 1.02 | U | 0.801 | J (Z) | 0.183 | J (Z) | 0.994 | U |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.12 | U | 0.401 | J (Z) | 5.09 | U (B) | 1.68 | J (Z) | 0.435 | J (Z) | 1.05 | J (Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.12 | U | 0.18 | J-EMPC J (Z) | 5.09 | J-EMPC U (B) | 1.56 | J (Z) | 0.485 | J (Z) | 4.97 | J-EMPC U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.12 | J-EMPC U (B) | 4.92 | J-EMPC U (B) | 5.09 | J-EMPC U (B) | 0.704 | J (Z) | 0.365 | J-EMPC J (Z) | 0.235 | J-EMPC J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.12 | U | 0.347 | J (Z) | 5.09 | U (B) | 1.03 | J (Z) | 0.512 | J (Z) | 0.595 | J-EMPC J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.12 | U | 0.986 | J (Z) | 0.164 | J (Z) | 5.44 | | 1.35 | J (Z) | 3.24 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.12 | U | 0.388 | J (Z) | 5.09 | J-EMPC U (B) | 1.27 | J (Z) | 0.445 | J (Z) | 0.909 | J-EMPC J (Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.12 | J-EMPC U (B) | 6.37 | | 0.518 | J (Z) | 19.2 | | 1.81 | J (Z) | 10.2 | |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.12 | U | 0.27 | J (Z) | 5.09 | U (B) | 1.62 | J (Z) | 0.321 | J (Z) | 0.516 | J (Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 0.0426 | J-EMPC J (Z) | 0.0737 | J-EMPC J (Z) | 0.0801 | J-EMPC J (Z) | 0.605 | J (Z) | 5.11 | U (B) | 4.97 | U |

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

| | | Sample Name | SL-549-SA7-SB-0.0-0.5 | | SL-551-SA7-SB-0.0-0.5 | | SL-551-SA7-SB-2.0-3.0 | | SL-552-SA7-SB-0.0-0.5 | | SL-553-SA7-SB-0.0-0.5 | | SL-554-SA7-SB-0.0-0.5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | Sample Date | 04/10/2013 | | 04/10/2013 | | 04/10/2013 | | 04/10/2013 | | 04/11/2013 | | 04/11/2013 | |
| | | SDG | PH028 | | PH028 | | PH028 | | PH028 | | PH029 | | PH029 | |
| | | Start Depth | 0 | | 0 | | 2 | | 0 | | 0 | | 0 | |
| | | End Depth | 0.5 | | 0.5 | | 3 | | 0.5 | | 0.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.984 | U | 0.0747 | J-EMPC J (Z) | 1.01 | U | 0.991 | U | 1 | J-EMPC U (B) | 1.03 | U (B) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.492 | J (Z) | 0.704 | J (Z) | 0.36 | J (Z) | 0.787 | J (Z) | 0.368 | J (Z) | 1.41 | J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 70.7 | | 327 | | 169 | | 228 | | 73.4 | | 455 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 11.1 | | 30.9 | | 13 | | 21.7 | | 6.94 | | 36.8 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 2.07 | J (Z) | 8.5 | J (Z) | 5.49 | J (Z) | 6.59 | J (Z) | 2.38 | J (Z) | 12.8 | |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.231 | J (Z) | 0.417 | J (Z) | 0.161 | J-EMPC J (Z) | 0.372 | J-EMPC J (Z) | 5.02 | U (B) | 0.627 | J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 4.92 | U (B) | 5.14 | J-EMPC U (B) | 5.03 | J-EMPC U (B) | 4.96 | J-EMPC U (B) | 0.0481 | J-EMPC J (Z) | 0.441 | J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.109 | J (Z) | 0.153 | J-EMPC J (Z) | 0.0596 | J-EMPC J (Z) | 0.991 | U | 0.0333 | J-EMPC J (Z) | 0.389 | J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 4.92 | J-EMPC U (B) | 0.574 | J (Z) | 5.03 | U (B) | 0.405 | J (Z) | 5.02 | U (B) | 0.599 | J (Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 4.92 | J-EMPC U (B) | 5.14 | U (B) | 5.03 | J-EMPC U (B) | 4.96 | U (B) | 5.02 | U (B) | 0.865 | J (Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.355 | J (Z) | 5.14 | U (B) | 5.03 | J-EMPC U (B) | 4.96 | U (B) | 5.02 | U (B) | 0.294 | J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.168 | J (Z) | 0.276 | J (Z) | 0.182 | J (Z) | 0.262 | J (Z) | 5.02 | U (B) | 0.356 | J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.597 | J (Z) | 1.12 | J-EMPC J (Z) | 0.472 | J (Z) | 0.86 | J (Z) | 0.399 | J (Z) | 1.6 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 4.92 | J-EMPC U (B) | 0.401 | J (Z) | 0.238 | J (Z) | 0.344 | J (Z) | 0.122 | J-EMPC J (Z) | 0.44 | J-EMPC J (Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 1.08 | J (Z) | 3.99 | J (Z) | 2.24 | J (Z) | 3.39 | J (Z) | 1.12 | J (Z) | 5.79 | |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 4.92 | J-EMPC U (B) | 0.3 | J (Z) | 5.03 | U (B) | 4.96 | U (B) | 5.02 | U (B) | 0.505 | J (Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 4.92 | U | 5.14 | J-EMPC U (B) | 5.03 | J-EMPC U (B) | 4.96 | U | 5.02 | U (B) | 0.293 | J (Z) |

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

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-555-SA7-SB-0.0-0.5 | | SL-557-SA7-SB-0.0-0.5 | | SL-558-SA7-SB-0.0-0.5 | | SL-558-SA7-SB-3.0-4.0 | | SL-559-SA7-SB-0.0-0.5 | | SL-559-SA7-SB-2.0-3.0 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 04/11/2013 | | 04/17/2013 | | 04/16/2013 | | 04/17/2013 | | 04/16/2013 | | 04/16/2013 | |
| | | | SDG | PH029 | | PH033 | | PH032 | | PH033 | | PH032 | | PH032 | |
| | | | Start Depth | 0 | | 0 | | 0 | | 3 | | 0 | | 2 | |
| | | | End Depth | 0.5 | | 0.5 | | 0.5 | | 4 | | 0.5 | | 3 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.06 | J-EMPC U (B) | 1.04 | U | 0.148 | J (Z) | 1.03 | U | 1.02 | U | 1.04 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 1.2 | J-EMPC J (Z) | 5.18 | U (B) | 13.7 | | 1.15 | J (Z) | 2.68 | J (Z) | 1.07 | J-EMPC J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 296 | | 25 | | 5670 | J (*#) | 505 | | 871 | | 368 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 28.5 | | 3.42 | J (Z) | 726 | | 64.4 | | 105 | | 40.5 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 9.21 | J (Z) | 1.34 | J (Z) | 145 | | 10.8 | | 47.2 | | 18.4 | |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.475 | J (Z) | 5.18 | U | 5.16 | | 0.4 | J (Z) | 1.34 | J (Z) | 0.462 | J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.383 | J-EMPC J (Z) | 5.18 | U (B) | 1.96 | J (Z) | 5.14 | U (B) | 0.713 | J (Z) | 0.255 | J-EMPC J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.395 | J (Z) | 0.0749 | J (Z) | 0.138 | J (Z) | 1.03 | U | 0.318 | J (Z) | 0.0699 | J-EMPC J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 0.36 | J (Z) | 5.18 | U (B) | 7.49 | | 0.438 | J (Z) | 1.13 | J-EMPC J (Z) | 0.479 | J (Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 0.849 | J (Z) | 5.18 | U (B) | 0.317 | J-EMPC J (Z) | 5.14 | J-EMPC U (B) | 0.869 | J (Z) | 0.452 | J (Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.427 | J-EMPC J (Z) | 5.18 | U (B) | 0.32 | J (Z) | 5.14 | J-EMPC U (B) | 1.09 | J-EMPC J (Z) | 1.08 | J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.388 | J (Z) | 5.18 | U (B) | 1.93 | J (Z) | 5.14 | U (B) | 0.689 | J (Z) | 0.368 | J-EMPC J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 1.35 | J (Z) | 0.167 | J (Z) | 31.5 | | 2.48 | J (Z) | 3.9 | J (Z) | 1.49 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 0.433 | J (Z) | 0.0959 | J-EMPC J (Z) | 3.03 | J (Z) | 0.168 | J (Z) | 0.818 | J (Z) | 0.361 | J (Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 4.16 | J (Z) | 0.576 | J (Z) | 59.2 | | 3.96 | J (Z) | 16.1 | | 5.91 | |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 0.375 | J (Z) | 5.18 | U (B) | 2.04 | J (Z) | 5.14 | J-EMPC U (B) | 0.794 | J (Z) | 0.399 | J (Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 0.4 | J (Z) | 5.18 | U (B) | 5.02 | U | 5.14 | U (B) | 0.351 | J (Z) | 5.18 | U (B) |

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

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-560-SA7-SB-0.0-0.5 | | SL-560-SA7-SB-3.0-4.0 | | SL-561-SA7-SB-0.0-0.5 | | SL-562-SA7-SB-0.0-0.5 | | SL-562-SA7-SB-2.0-3.0 | |
| | | | Sample Type | N | | N | | N | | N | | N | |
| | | | Sample Date | 04/16/2013 | | 04/16/2013 | | 04/16/2013 | | 04/26/2013 | | 04/26/2013 | |
| | | | SDG | PH032 | | PH032 | | PH032 | | PH040 | | PH040 | |
| | | | Start Depth | 0 | | 3 | | 0 | | 0 | | 2 | |
| | | | End Depth | 0.5 | | 4 | | 0.5 | | 0.5 | | 3 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.105 | J (Z) | 0.0801 | J-EMPC J (Z) | 1.04 | U | 0.14 | J-EMPC J (Z) | 0.116 | J (Z) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 4.01 | J (Z) | 0.262 | J-EMPC J (Z) | 1.82 | J (Z) | 2.84 | J (Z) | 3.27 | J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 2180 | | 10.7 | J (Z) | 1140 | | 1540 | | 2660 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 213 | | 1.26 | J-EMPC J (Z) | 110 | | 121 | | 215 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 57.9 | | 11.2 | J-EMPC U (B) | 27.3 | | 15.1 | | 47 | |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 1.65 | J (Z) | 0.0961 | J (Z) | 0.897 | J (Z) | 1.56 | J (Z) | 1.54 | J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.937 | J (Z) | 0.235 | J-EMPC J (Z) | 0.448 | J (Z) | 0.74 | J (Z) | 0.735 | J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.191 | J-EMPC J (Z) | 0.0392 | J-EMPC J (Z) | 0.507 | J (Z) | 0.192 | J-EMPC J (Z) | 0.83 | J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 2.05 | J-EMPC J (Z) | 5.58 | U (B) | 2.07 | J (Z) | 0.57 | J (Z) | 1.64 | J (Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 0.45 | J (Z) | 5.58 | J-EMPC U (B) | 1.08 | J (Z) | 0.677 | J (Z) | 1.79 | J (Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.495 | J (Z) | 0.309 | J (Z) | 0.86 | J (Z) | 0.557 | J (Z) | 0.995 | J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.83 | J (Z) | 5.58 | U (B) | 1.49 | J (Z) | 0.584 | J (Z) | 1.49 | J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 7.63 | | 0.205 | J-EMPC J (Z) | 4 | J (Z) | 4.5 | J (Z) | 7.59 | |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 1.2 | J (Z) | 5.58 | U (B) | 1.59 | J (Z) | 0.56 | J (Z) | 1.52 | J (Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 23 | | 5.58 | U (B) | 16.3 | | 10.4 | | 27.1 | |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 0.856 | J (Z) | 5.58 | U (B) | 1.83 | J (Z) | 0.813 | J (Z) | 1.77 | J (Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 0.355 | J (Z) | 0.439 | J-EMPC J (Z) | 1.07 | J (Z) | 5.09 | U | 0.745 | J (Z) |

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

| | | | Sample Name | SL-540-SA7-SB-0.0-0.5 | SL-840-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|
| | | | Sample Type | N | FD |
| | | | Sample Date | 04/09/2013 | 04/09/2013 |
| | | | SDG | PH027 | PH027 |
| | | | Start Depth | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | |
| 8315A | 50-00-0 | Formaldehyde | µg/kg | 2100 U | 2100 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | |
|---|---|---|---|---|---|
| | | | Sample Name | SL-540-SA7-SB-0.0-0.5 | SL-840-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | FD |
| | | | Sample Date | 04/09/2013 | 04/09/2013 |
| | | | SDG | PH027 | PH027 |
| | | | Start Depth | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | |
| 7199 | 18540-29-9 | Chromium (Hexavalent Compounds) | mg/kg | 0.37 J Z | 0.26 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-500-SA7-SB-0.0-0.5 | SL-501-SA7-SB-0.0-0.5 | SL-502-SA7-SB-0.0-0.5 | SL-503-SA7-SB-0.0-0.5 | SL-504-SA7-SB-0.0-0.5 | SL-504-SA7-SB-4.0-5.0 | SL-505-SA7-SB-0.0-0.5 | SL-506-SA7-SB-0.0-0.5 | SL-507-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/17/2013 | 04/17/2013 | 04/17/2013 | 04/22/2013 | 04/22/2013 | 04/22/2013 | 04/17/2013 | 04/25/2013 | 04/24/2013 |
| | | | SDG | PH033 | PH033 | PH033 | PH036 | PH036 | PH036 | PH033 | PH039 | PH039 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0178 J Z | 0.0226 | 0.0196 J Z | 0.0293 | 0.0197 | 0.0170 J Z | 0.0226 | 0.0175 | 0.03 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-508-SA7-SB-0.0-0.5 | SL-509-SA7-SB-0.0-0.5 | SL-510-SA7-SB-0.0-0.5 | SL-810-SA7-SB-0.0-0.5 | SL-511-SA7-SB-0.0-0.5 | SL-512-SA7-SB-0.0-0.5 | SL-513-SA7-SB-0.0-0.5 | SL-913-SA7-SB-0.0-0.5 | SL-514-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | FD | N | N | N | FD | N |
| | | | Sample Date | 04/25/2013 | 04/25/2013 | 04/22/2013 | 04/22/2013 | 04/19/2013 | 04/23/2013 | 06/04/2013 | 06/04/2013 | 06/06/2013 |
| | | | SDG | PH039 | PH039 | PH036 | PH036 | PH035 | PH037 | PH046 | PH046 | PH049 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.414 | 0.09 | 0.0167 | 0.0219 | 0.0453 | 0.0133 J Z | 0.0151 J FD, Z | 0.0267 J FD | 0.0264 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-515-SA7-SB-0.0-0.5 | SL-516-SA7-SB-0.0-0.5 | SL-517-SA7-SB-0.0-0.5 | SL-518-SA7-SB-0.0-0.5 | SL-519-SA7-SB-0.0-0.5 | SL-819-SA7-SB-0.0-0.5 | SL-519-SA7-SB-2.0-3.0 | SL-520-SA7-SB-0.0-0.5 | SL-521-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | | Sample Date | 06/06/2013 | 06/04/2013 | 04/22/2013 | 04/19/2013 | 04/25/2013 | 04/25/2013 | 04/25/2013 | 04/19/2013 | 04/15/2013 |
| | | | SDG | PH049 | PH046 | PH036 | PH035 | PH039 | PH039 | PH039 | PH035 | PH031 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0112 J Z | 0.0108 J Z | 0.123 | 0.198 | 0.0581 | 0.0492 | 0.0254 | 0.0237 | 0.0176 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-522-SA7-SB-0.0-0.5 | SL-524-SA7-SB-0.0-0.5 | SL-524-SA7-SB-1.0-2.0 | SL-924-SA7-SB-1.0-2.0 | SL-525-SA7-SB-0.0-0.5 | SL-525-SA7-SB-4.0-5.0 | SL-525-SA7-SB-6.5-7.5 | SL-525-SA7-SB-9.5-10.5 | SL-526-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | FD | N | N | N | N | N |
| | | | Sample Date | 04/15/2013 | 06/04/2013 | 06/04/2013 | 06/04/2013 | 04/23/2013 | 06/03/2013 | 04/24/2013 | 06/03/2013 | 04/23/2013 |
| | | | SDG | PH031 | PH046 | PH046 | PH046 | PH037 | PH045 | PH038 | PH045 | PH037 |
| | | | Start Depth | 0 | 0 | 1 | 1 | 0 | 4 | 6.5 | 9.5 | 0 |
| | | | End Depth | 0.5 | 0.5 | 2 | 2 | 0.5 | 5 | 7.5 | 10.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0217 | 0.0177 U | 0.0178 U | 0.0178 U | 0.0311 | 0.0166 J Z | 0.0155 J Z | 0.0110 J Z | 0.0165 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-526-SA7-SB-3.5-4.5 | SL-526-SA7-SB-9.0-10.0 | SL-527-SA7-SB-0.0-0.5 | SL-527-SA7-SB-2.5-3.5 | SL-528-SA7-SB-0.0-0.5 | SL-529-SA7-SB-0.0-0.5 | SL-530-SA7-SB-0.0-0.5 | SL-531-SA7-SB-0.0-0.5 | SL-532-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/23/2013 | 06/03/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/18/2013 | 04/18/2013 | 04/18/2013 |
| | | | SDG | PH037 | PH045 | PH038 | PH038 | PH038 | PH038 | PH034 | PH034 | PH034 |
| | | | Start Depth | 3.5 | 9 | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 4.5 | 10 | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0156 J Z | 0.0176 U | 0.0239 | 0.0167 U | 0.0122 J Z | 0.0141 J Z | 0.0151 J Z | 0.0171 J Z | 0.0144 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-532-SA7-SB-3.0-4.0 | SL-533-SA7-SB-0.0-0.5 | SL-533-SA7-SB-2.5-3.5 | SL-534-SA7-SB-0.0-0.5 | SL-534-SA7-SB-5.5-6.5 | SL-535-SA7-SB-0.0-0.5 | SL-535-SA7-SB-4.0-5.0 | SL-535-SA7-SB-9.0-10.0 | SL-536-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/03/2013 | 04/18/2013 | 06/03/2013 | 04/12/2013 | 04/15/2013 | 04/12/2013 | 04/12/2013 | 04/12/2013 | 04/11/2013 |
| | | | SDG | PH045 | PH034 | PH045 | PH030 | PH031 | PH030 | PH030 | PH030 | PH029 |
| | | | Start Depth | 3 | 0 | 2.5 | 0 | 5.5 | 0 | 4 | 9 | 0 |
| | | | End Depth | 4 | 0.5 | 3.5 | 0.5 | 6.5 | 0.5 | 5 | 10 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0206 | 0.0282 | 0.0168 U | 0.0188 J Z | 0.0125 J Z | 0.0151 J Z | 0.0108 J Z | 0.0149 J Z | 0.0113 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-536-SA7-SB-3.0-4.0 | SL-836-SA7-SB-3.0-4.0 | SL-537-SA7-SB-0.0-0.5 | SL-538-SA7-SB-0.0-0.5 | SL-539-SA7-SB-0.0-0.5 | SL-540-SA7-SB-0.0-0.5 | SL-840-SA7-SB-0.0-0.5 | SL-541-SA7-SB-0.0-0.5 | SL-541-SA7-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | FD | N | N | N | N | FD | N | N |
| | | | Sample Date | 04/12/2013 | 04/12/2013 | 04/15/2013 | 04/15/2013 | 04/08/2013 | 04/09/2013 | 04/09/2013 | 10/02/2013 | 10/02/2013 |
| | | | SDG | PH030 | PH030 | PH031 | PH031 | PH027 | PH027 | PH027 | PH121 | PH121 |
| | | | Start Depth | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | | End Depth | 4 | 4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0202 U | 0.0200 U | 0.0156 J Z | 0.0152 J Z | 0.0202 U | 0.0201 U | 0.0200 U | 0.0194 | 0.0163 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-542-SA7-SB-0.0-0.5 | SL-544-SA7-SB-0.0-0.5 | SL-547-SA7-SB-0.0-0.5 | SL-548-SA7-SB-0.0-0.5 | SL-549-SA7-SB-0.0-0.5 | SL-551-SA7-SB-0.0-0.5 | SL-551-SA7-SB-2.0-3.0 | SL-552-SA7-SB-0.0-0.5 | SL-553-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/09/2013 | 04/09/2013 | 04/09/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/11/2013 |
| | | | SDG | PH027 | PH027 | PH028 | PH028 | PH028 | PH028 | PH028 | PH028 | PH029 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0203 U | 0.0199 U | 0.0203 U | 0.0199 U | 0.0203 U | 0.0110 J Z | 0.0203 U | 0.0202 U | 0.0192 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-554-SA7-SB-0.0-0.5 | SL-555-SA7-SB-0.0-0.5 | SL-557-SA7-SB-0.0-0.5 | SL-558-SA7-SB-0.0-0.5 | SL-558-SA7-SB-3.0-4.0 | SL-559-SA7-SB-0.0-0.5 | SL-559-SA7-SB-2.0-3.0 | SL-560-SA7-SB-0.0-0.5 | SL-560-SA7-SB-3.0-4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/11/2013 | 04/11/2013 | 04/17/2013 | 04/16/2013 | 04/17/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 |
| | | | SDG | PH029 | PH029 | PH033 | PH032 | PH033 | PH032 | PH032 | PH032 | PH032 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 3 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 4 | 0.5 | 3 | 0.5 | 4 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0221 | 0.0178 J Z | 0.0252 | 0.0181 J Z | 0.0203 U | 0.02 | 0.0172 J Z | 0.0259 | 0.0183 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Sample Name | SL-561-SA7-SB-0.0-0.5 | SL-562-SA7-SB-0.0-0.5 | SL-562-SA7-SB-2.0-3.0 |
| | | | Sample Type | N | N | N |
| | | | Sample Date | 04/16/2013 | 04/26/2013 | 04/26/2013 |
| | | | SDG | PH032 | PH040 | PH040 |
| | | | Start Depth | 0 | 0 | 2 |
| | | | End Depth | 0.5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0299 | 0.0118 J Z | 0.0163 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | Sample Name | SL-500-SA7-SB-0.0-0.5 | SL-501-SA7-SB-0.0-0.5 | SL-502-SA7-SB-0.0-0.5 | SL-503-SA7-SB-0.0-0.5 | SL-504-SA7-SB-0.0-0.5 | SL-504-SA7-SB-4.0-5.0 | SL-505-SA7-SB-0.0-0.5 | SL-506-SA7-SB-0.0-0.5 | SL-507-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | Sample Date | 04/17/2013 | 04/17/2013 | 04/17/2013 | 04/22/2013 | 04/22/2013 | 04/22/2013 | 04/17/2013 | 04/25/2013 | 04/24/2013 |
| | | SDG | PH033 | PH033 | PH033 | PH036 | PH036 | PH036 | PH033 | PH039 | PH039 |
| | | Start Depth | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 12000 | 13900 | 18900 | 11100 | 12200 | 15700 | 12700 | 16000 | 11500 |
| 6010C | 7439-89-6 | Iron | mg/kg | 17000 | 19800 | 26900 | 19100 | 25100 | 24800 | 24200 | 26000 | 19700 |
| 6010C | 7439-92-1 | Lead | mg/kg | 11.0 J E, Q | 10.1 J E, Q | 21.7 J E, Q | 23.7 J E, Q | 11.3 J E, Q | 7.48 J E, Q | 11.3 J E, Q | 8.97 J E, Q | 9.87 J E, Q |
| 6010C | 7439-93-2 | Lithium | mg/kg | 21.9 | 23.6 | 32.7 | 21.1 | 26.6 | 26.4 | 25.1 | 31.8 | 22.4 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 3440 | 3810 | 6200 | 4670 | 5290 | 4540 | 5400 | 7080 | 4470 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 260 | 313 | 368 | 310 | 287 | 265 | 301 | 371 | 278 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 1.99 U F | 1.99 U F | 2.05 U F | 2.03 U F | 1.98 U F | 2.07 U F | 2.06 U F | 2.02 U F | 2.01 U F |
| 6010C | 7440-02-0 | Nickel | mg/kg | 8.27 | 10.3 | 15.4 | 11.2 | 12.8 | 10.3 | 13.7 | 14.6 | 9.69 |
| 6010C | 9/7/7440 | Potassium | mg/kg | 2330 J Q | 3490 J Q | 4190 J Q | 3420 J Q | 3580 J Q | 3060 J Q | 3990 J Q | 4030 J Q | 3260 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | 118 | 84.1 J Z | 87.1 J Z | 101 U F | 99.1 U F | 104 U F | 79.4 J Z | 101 U F | 101 U F |
| 6010C | 7440-31-5 | Tin | mg/kg | 9.93 U B | 9.96 U B | 10.2 U B | 10.1 U B | 9.91 U B | 10.4 U B | 10.3 U B | 10.1 U B | 10.1 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 876 | 1080 | 1470 | 926 | 1200 | 1180 | 1180 | 1360 | 1030 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 3.97 UJ Q | 3.99 UJ Q | 0.580 J Q, Z | 4.05 UJ Q | 0.866 J Q, Z | 0.826 J Q, Z | 4.12 UJ Q | 0.916 J Q, Z | 4.03 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 9.73 | 8.43 | 7.04 | 4.97 | 5.04 | 5.06 | 4.79 | 3.92 J Z | 4.72 |
| 6010C | 7440-39-3 | Barium | mg/kg | 74.2 | 100 | 114 | 103 | 86.9 | 82.5 | 74.6 | 105 | 68.2 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.466 J Z | 0.551 J Z | 0.695 J Z | 0.454 J Z | 0.515 J Z | 0.657 J Z | 0.514 J Z | 0.573 J Z | 0.526 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 9.93 U B | 9.96 U B | 10.2 U B | 10.1 U B, F | 9.91 U B, F | 10.4 U B, F | 10.3 U B | 10.1 U F | 10.1 U F |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.165 J Z | 0.239 J Z | 0.204 J Z | 0.462 J Z | 0.239 J Z | 0.0757 J Z | 0.174 J Z | 0.302 J Z | 0.256 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 13.5 | 16.2 | 24.7 | 16.7 | 23.7 | 18.3 | 22.5 | 26.1 | 17.1 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 3.87 | 4.47 | 6.47 | 4.89 | 5.25 | 4.82 | 5.7 | 6.43 J E | 4.48 J E |
| 6010C | 7440-50-8 | Copper | mg/kg | 9.56 | 12.7 | 17.3 | 13.4 | 14.9 | 12.4 | 17.9 | 16.2 | 11.5 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 27.3 | 30.9 | 49.8 | 32.2 | 47.8 | 35.4 | 40.9 | 50 | 32.7 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 87.9 | 88.1 | 89.4 | 71.9 | 115 | 62 | 111 | 61.3 | 54.3 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 2.35 J Z | 3.15 J Z | 3.53 J Z | 2.45 J Z | 2.35 J Z | 2.53 J Z | 2.44 J Z | 2.98 J Z | 2.05 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | 2430 | 2700 | 3700 | 7680 | 4370 | 2380 | 3380 | 3680 J E | 3810 J E |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 298 | 390 | 447 | 561 | 495 | 339 | 532 | 504 J E | 382 J E |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0356 J Z | 0.0465 J Z | 0.0651 J Z | 0.0521 J Z | 0.0222 J Z | 0.0686 J Z | 0.0450 J Z | 0.0605 J Z | 0.0213 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 17.2 J Q | 20.7 J Q | 22.3 J Q | 37.0 J Q | 15.8 J Q | 16.3 J Q | 14.0 J Q | 21.7 | 22.4 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.189 J Z | 0.237 | 0.338 | 0.22 | 0.241 | 0.231 | 0.214 | 0.329 | 0.286 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.397 U | 0.399 U | 0.162 J Z | 0.131 J Z | 0.397 U | 0.415 U | 0.138 J Z | 0.187 J Z | 0.159 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-508-SA7-SB-0.0-0.5 | SL-509-SA7-SB-0.0-0.5 | SL-510-SA7-SB-0.0-0.5 | SL-810-SA7-SB-0.0-0.5 | SL-511-SA7-SB-0.0-0.5 | SL-512-SA7-SB-0.0-0.5 | SL-513-SA7-SB-0.0-0.5 | SL-913-SA7-SB-0.0-0.5 | SL-514-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | FD | N | N | N | FD | N |
| | | | | Sample Date | 04/25/2013 | 04/25/2013 | 04/22/2013 | 04/22/2013 | 04/19/2013 | 04/23/2013 | 06/04/2013 | 06/04/2013 | 06/06/2013 |
| | | | | SDG | PH039 | PH039 | PH036 | PH036 | PH035 | PH037 | PH046 | PH046 | PH049 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 10800 | 11800 | 13600 | 14600 | 12000 | 12900 | 9050 | 9640 | 13700 |
| 6010C | 7439-89-6 | Iron | mg/kg | 27200 | 21700 | 22600 | 24100 | 21300 | 20000 | 16400 | 16700 | 23600 J A |
| 6010C | 7439-92-1 | Lead | mg/kg | 20.2 J E, Q | 17.0 J E, Q | 29.2 J FD, E, Q | 81.7 J FD, E, Q | 15.0 J E, Q | 5.65 J E, Q | 7.81 | 9.75 | 10.5 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 23.7 | 23.3 | 26.6 | 26.9 | 21.5 | 21.7 | 22.2 | 22.4 | 22.9 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 4360 | 4920 | 5300 | 5060 | 4700 | 4600 | 3550 | 3720 | 4930 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 288 | 297 | 276 | 299 | 290 | 270 | 243 | 255 | 253 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 1.96 U F | 2.03 U F | 2.06 U F | 2.04 U F | 2.03 U F | 2.03 U F | 2.04 UJ F, FD, B | 2.01 UJ F, FD, B | 2.02 U |
| 6010C | 7440-02-0 | Nickel | mg/kg | 12.5 | 11.2 | 10.9 | 10.5 | 11.3 | 8.79 J A | 6.82 | 7.63 | 8.44 J E |
| 6010C | 9/7/7440 | Potassium | mg/kg | 3230 J Q | 2940 J Q | 3480 J Q | 4010 J Q | 4240 J Q | 2670 J Q | 2980 J Q | 3160 J Q | 2600 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | 98.2 U F | 101 U F | 103 U F | 102 U F | 67.7 J Z | 102 U F | 63.8 J Z | 63.2 J Z | 111 |
| 6010C | 7440-31-5 | Tin | mg/kg | 9.82 U B | 10.1 U B | 10.3 U B | 10.2 U B | 10.2 U B | 10.2 U B | 10.2 U B | 10.1 U B | 10.1 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1010 | 1000 | 1170 | 1190 | 1050 | 1120 | 945 | 1030 | 1190 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 1.04 J Q, Z | 0.692 J Q, Z | 4.11 UJ FD, Q | 0.940 J FD, Q, Z | 0.585 J Q, Z | 0.627 J Q, Z | 0.573 J Z | 0.637 J Z | 4.04 U |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 5.76 | 5.38 | 5.14 | 5.19 | 4.74 | 4.66 | 4.18 | 4.31 | 4.74 |
| 6010C | 7440-39-3 | Barium | mg/kg | 61.4 | 73 | 73.5 | 74.3 | 72.3 | 70.4 | 61.3 | 65.4 | 70.9 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.429 J Z | 0.486 J Z | 0.542 J Z | 0.589 J Z | 0.487 J Z | 0.556 J Z | 0.404 J Z | 0.453 J Z | 0.476 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 9.82 U F | 10.1 U F | 10.3 UJ B, F, FD | 10.2 UJ B, F, FD | 10.2 U B | 10.2 U F | 6.16 J Z | 6.30 J Z | 2.55 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.260 J Z | 0.330 J Z | 0.120 J Z | 0.0868 J Z | 0.336 J Z | 0.152 J Z | 0.513 J Z | 0.511 J Z | 0.397 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 21.5 | 18.2 | 20.4 | 19.7 | 20.4 | 17.3 | 11.6 | 12.4 | 17.4 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 8.41 J E | 5.83 J E | 4.8 | 5.14 | 5.18 | 4.43 J E | 3.77 | 4.18 | 6.2 |
| 6010C | 7440-50-8 | Copper | mg/kg | 20.8 | 16.3 | 12.8 | 13.2 | 16.9 | 10.9 | 5.37 | 5.92 | 11.7 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 34.9 | 34.2 | 36.7 | 38.6 | 37.3 | 34.8 | 25 | 26.7 | 38.3 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 70.8 | 90.6 | 62.4 | 69.1 | 81.4 | 51.2 | 67.4 | 76.4 | 61.7 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 2.34 J Z | 2.53 J Z | 2.52 J Z | 2.72 J Z | 2.17 J Z | 2.31 J Z | 2.22 J Z | 2.48 J Z | 5.06 U |
| 6010C | 7440-70-2 | Calcium | mg/kg | 2870 J E | 4410 J E | 2950 | 2670 | 3940 | 3070 J E | 2450 | 2620 | 3260 J E |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 448 J E | 422 J E | 436 | 486 | 577 | 315 J E, A | 385 | 389 | 417 J Q |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0678 J Z | 0.0409 J Z | 0.0279 J Z | 0.0404 J Z | 0.0715 J Z | 0.203 U | 0.0323 J FD, Z | 0.201 UJ FD | 0.0339 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 17.2 | 23.5 | 13.2 J Q | 11.4 J Q | 16.7 J Q | 21.9 | 8.69 | 9.91 | 15.7 J E |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.294 | 0.269 | 0.283 | 0.211 | 0.214 | 0.239 | 0.202 J Z | 0.209 | 0.217 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.109 J Z | 0.209 J Z | 0.411 UJ FD | 0.144 J FD, Z | 0.129 J Z | 0.164 J Z | 0.407 U | 0.402 U | 0.120 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | Sample Name | SL-515-SA7-SB-0.0-0.5 | SL-516-SA7-SB-0.0-0.5 | SL-517-SA7-SB-0.0-0.5 | SL-518-SA7-SB-0.0-0.5 | SL-519-SA7-SB-0.0-0.5 | SL-819-SA7-SB-0.0-0.5 | SL-519-SA7-SB-2.0-3.0 | SL-520-SA7-SB-0.0-0.5 | SL-521-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | Sample Date | 06/06/2013 | 06/04/2013 | 04/22/2013 | 04/19/2013 | 04/25/2013 | 04/25/2013 | 04/25/2013 | 04/19/2013 | 04/15/2013 |
| | | SDG | PH049 | PH046 | PH036 | PH035 | PH039 | PH039 | PH039 | PH035 | PH031 |
| | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 11100 | 12400 | 12500 | 13900 | 11700 | 12000 | 11700 | 12700 | 16700 |
| 6010C | 7439-89-6 | Iron | mg/kg | 23100 J A | 20900 | 22300 | 21900 | 17900 | 18500 | 20300 | 22500 | 19500 |
| 6010C | 7439-92-1 | Lead | mg/kg | 4.81 | 4.8 | 17.5 J E, Q | 24.1 J E, Q | 23.8 J E, Q | 15.1 J E, Q | 7.87 J E, Q | 13.5 J E, Q | 8.4 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 28.1 | 28.3 | 24.3 | 25.7 | 20.2 | 19.6 | 20.7 | 24.9 | 25 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 4680 | 5790 | 4870 | 5270 | 4490 | 4550 | 4810 | 5270 | 3830 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 412 | 308 | 434 | 330 | 355 | 328 | 333 | 290 | 249 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 1.97 U | 2.04 U F, B | 2.02 U F | 1.99 U F | 2.79 J FD | 2.07 UJ F, FD | 2.03 U F | 2.00 U F | 1.96 U F, B |
| 6010C | 7440-02-0 | Nickel | mg/kg | 7.22 J E | 10.5 | 18.2 | 13.4 | 8.90 J A | 10.1 | 9.69 | 11.1 | 7.54 |
| 6010C | 9/7/7440 | Potassium | mg/kg | 2750 J Q | 2930 J Q | 3300 J Q | 4520 J Q | 3090 J Q | 3320 J Q | 2850 J Q | 4220 J Q | 2990 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | 81.3 J Z | 319 | 101 U F | 77.0 J Z | 101 U F | 103 U F | 101 U F | 63.2 J Z | 64.5 J Z |
| 6010C | 7440-31-5 | Tin | mg/kg | 9.85 U B | 10.2 U B | 10.1 U B | 9.95 U B | 10.9 J FD | 10.3 UJ B, FD | 10.1 U B | 10.0 U B | 9.79 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1290 | 1270 | 1100 | 1190 | 977 | 1040 | 1060 | 1150 | 1140 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 3.94 U | 4.08 U | 1.06 J Q, Z | 0.777 J Q, Z | 4.63 J FD, Q | 0.542 J FD, Q, Z | 0.737 J Q, Z | 4.00 UJ Q | 1.52 J Q, Z |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 4.87 | 5.1 | 5.22 | 5.28 | 4.45 | 4.09 J Z | 3.96 J Z | 4.78 | 3.85 J Z |
| 6010C | 7440-39-3 | Barium | mg/kg | 66.9 | 72.9 | 80.8 | 84.9 | 104 | 107 | 83.7 | 80.7 | 79.6 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.439 J Z | 0.538 J Z | 0.510 J Z | 0.544 J Z | 0.463 J Z | 0.473 J Z | 0.506 J Z | 0.522 J Z | 0.618 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 1.67 J Z | 6.24 J Z | 10.1 U B, F | 9.95 U B | 10.1 U F | 10.3 U F | 10.1 U F | 10.0 U B | 2.86 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.404 J Z | 0.518 J Z | 0.399 J Z | 0.606 J Z | 1.19 J FD | 0.380 J FD, Z | 0.239 J Z | 0.128 J Z | 0.379 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 16.1 | 19.4 | 30.2 | 21.8 | 15.4 | 17 | 22.2 | 19.9 | 14.8 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 4.94 | 5.41 | 5.57 | 10.8 | 7.61 J FD, E | 4.40 J FD, E | 5.56 J E | 5.01 | 4.71 |
| 6010C | 7440-50-8 | Copper | mg/kg | 8.75 J Z | 6.89 | 15.1 | 20.2 | 12.3 | 12 | 11 | 14 | 5.01 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 33.9 | 39.3 | 36.9 | 40.1 | 29.3 | 30.2 | 33 | 38.3 | 29.5 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 54.1 | 58.8 | 94.5 | 109 | 71 | 69.5 | 58 | 60.6 | 80.4 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 4.92 U | 2.72 J Z | 12.5 | 2.82 J Z | 2.49 J Z | 2.54 J Z | 2.27 J Z | 2.43 J Z | 4.90 U |
| 6010C | 7440-70-2 | Calcium | mg/kg | 12000 J E | 4380 | 4080 | 3620 | 7940 J E | 6150 J E | 3800 J E | 3860 | 2210 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 438 J Q | 410 | 460 | 548 | 679 J E, A | 515 J E | 408 J E | 426 | 363 J Q |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.197 U | 0.0368 J Z | 0.0593 J Z | 0.0918 J Z | 0.0351 J Z | 0.0326 J Z | 0.0224 J Z | 0.0306 J Z | 0.0272 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 17.2 J E | 15 | 16.7 J Q | 12.9 J Q | 37.5 | 36.6 | 23.1 | 14.3 J Q | 17.3 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.237 | 0.304 | 0.245 | 0.24 | 0.23 | 0.259 | 0.315 | 0.205 | 0.245 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.105 J Z | 0.108 J Z | 0.405 U | 0.398 U | 0.189 J Z | 0.139 J Z | 0.154 J Z | 0.400 U | 0.173 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-522-SA7-SB-0.0-0.5 | SL-524-SA7-SB-0.0-0.5 | SL-524-SA7-SB-1.0-2.0 | SL-924-SA7-SB-1.0-2.0 | SL-525-SA7-SB-0.0-0.5 | SL-525-SA7-SB-4.0-5.0 | SL-525-SA7-SB-6.5-7.5 | SL-525-SA7-SB-9.5-10.5 | SL-526-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | FD | N | N | N | N | N |
| | | | | Sample Date | 04/15/2013 | 06/04/2013 | 06/04/2013 | 06/04/2013 | 04/23/2013 | 06/03/2013 | 04/24/2013 | 06/03/2013 | 04/23/2013 |
| | | | | SDG | PH031 | PH046 | PH046 | PH046 | PH037 | PH045 | PH038 | PH045 | PH037 |
| | | | | Start Depth | 0 | 0 | 1 | 1 | 0 | 4 | 6.5 | 9.5 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 2 | 2 | 0.5 | 5 | 7.5 | 10.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 12800 | 11300 | 12300 | 13300 | 13000 | 16600 | 14600 | 19500 | 15400 |
| 6010C | 7439-89-6 | Iron | mg/kg | 18300 | 19000 | 22000 J A | 21500 J A | 18200 | 16900 | 18000 | 17700 | 21500 |
| 6010C | 7439-92-1 | Lead | mg/kg | 13.3 | 4.2 | 5.69 | 5.95 | 12.5 J E, Q | 5.46 | 7.48 J E, Q | 4.67 | 6.86 J E, Q |
| 6010C | 7439-93-2 | Lithium | mg/kg | 23.6 | 20.4 | 27.4 | 27 | 21.1 | 19.1 | 22.3 | 18.5 | 22.4 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 3780 | 3960 | 4840 | 4600 | 3950 | 3690 | 3960 | 3490 | 4640 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 304 | 258 | 280 | 269 | 228 | 224 | 256 | 259 | 251 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 2.07 U F, B | 2.11 U F | 2.08 UJ F, FD, B | 2.12 UJ F, FD, B | 2.04 U F | 2.02 U F, B | 2.06 U F | 2.02 U F, B | 2.17 U F |
| 6010C | 7440-02-0 | Nickel | mg/kg | 8.48 | 9.34 | 7.90 J E | 8.12 J E | 8.31 J A | 6.52 | 8.84 J A | 6.73 | 9.24 J A |
| 6010C | 9/7/7440 | Potassium | mg/kg | 2900 J Q | 2560 | 3230 J Q | 2870 J Q | 3300 J Q | 1140 J Q | 2490 J Q | 1300 J Q | 2980 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | 70.7 J Z | 111 | 123 | 132 | 102 U F | 101 | 103 U F | 111 | 108 U F |
| 6010C | 7440-31-5 | Tin | mg/kg | 10.4 U B | 10.6 U B | 10.4 U B | 10.6 U B | 10.2 U B | 10.1 U B | 10.3 U B | 10.1 U B | 10.8 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 973 | 926 | 1280 | 1250 | 1080 | 1030 | 1060 | 1210 | 1140 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 1.89 J Q, Z | 4.22 U | 4.16 U | 4.25 U | 0.545 J Q, Z | 0.736 J Z | 0.754 J Q, Z | 0.721 J Z | 4.33 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 2.40 J Z | 4.01 J Z | 3.93 J Z | 4.15 J Z | 4.95 | 4.51 | 5.02 | 6.03 | 4.97 |
| 6010C | 7440-39-3 | Barium | mg/kg | 88.8 | 70.4 | 88.1 | 78.6 | 66.2 | 44.9 | 56.5 | 44.8 | 69.9 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.537 J Z | 0.490 J Z | 0.480 J Z | 0.518 J Z | 0.510 J Z | 0.740 J Z | 0.603 J Z | 0.630 J Z | 0.629 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 3.26 J Z | 2.52 J Z | 1.87 J Z | 2.31 J Z | 10.2 U F | 6.22 J Z | 10.3 U F | 6.43 J Z | 10.8 U F |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.468 J Z | 1.06 U | 0.370 J Z | 0.363 J Z | 0.231 J Z | 0.381 J Z | 0.142 J Z | 0.349 J Z | 0.233 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 14.7 | 14.3 | 18.5 | 17.8 | 16.1 | 16.5 | 19 | 17.3 | 20.3 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 4.75 | 3.77 | 4.59 | 4.93 | 3.90 J E | 3.94 | 4.23 J E | 4.04 | 4.64 J E |
| 6010C | 7440-50-8 | Copper | mg/kg | 6.52 | 7.27 | 10.3 J Z | 10.1 J Z | 10.7 | 4.08 | 11.1 | 4.7 | 11.1 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 27.1 | 42.4 | 32.9 | 34.2 | 31.7 | 30.6 | 30.1 | 31 | 38.1 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 59.4 | 50.2 | 59.2 | 54.3 | 53.1 | 34.9 | 47.8 | 36.8 | 50.5 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 5.19 U | 3.19 J Z | 5.20 UJ FD | 1.01 J FD, Z | 2.29 J Z | 3.13 J Z | 2.41 J Z | 3.20 J Z | 2.78 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | 2600 | 5380 | 5580 J FD, E | 3310 J FD, E | 3910 J E | 1830 | 3680 J E | 2080 | 3050 J E |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 406 J Q | 513 | 401 J Q | 410 J Q | 305 J E, A | 121 | 255 J E, A | 191 | 300 J E, A |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0296 J Z | 0.0320 J Z | 0.208 UJ FD | 0.0230 J FD, Z | 0.0696 J Z | 0.202 U | 0.0459 J Z | 0.0319 J Z | 0.0470 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 22.5 | 23.9 | 17.9 J E | 15.4 J E | 26.5 | 14.4 | 21.8 | 12.7 | 21.8 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.236 | 0.303 | 0.285 | 0.228 | 0.286 | 0.176 J Z | 0.253 | 0.185 J Z | 0.297 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.145 J Z | 0.137 J Z | 0.416 U | 0.425 U | 0.182 J Z | 0.103 J Z | 0.412 U | 0.403 U | 0.159 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | Sample Name | SL-526-SA7-SB-3.5-4.5 | SL-526-SA7-SB-9.0-10.0 | SL-527-SA7-SB-0.0-0.5 | SL-527-SA7-SB-2.5-3.5 | SL-528-SA7-SB-0.0-0.5 | SL-529-SA7-SB-0.0-0.5 | SL-530-SA7-SB-0.0-0.5 | SL-531-SA7-SB-0.0-0.5 | SL-532-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | Sample Date | 04/23/2013 | 06/03/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/18/2013 | 04/18/2013 | 04/18/2013 |
| | | SDG | PH037 | PH045 | PH038 | PH038 | PH038 | PH038 | PH034 | PH034 | PH034 |
| | | Start Depth | 3.5 | 9 | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 |
| | | End Depth | 4.5 | 10 | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 20000 | 18400 | 14800 | 14000 | 12700 | 9390 | 8670 | 10600 | 9440 |
| 6010C | 7439-89-6 | Iron | mg/kg | 23500 | 20600 | 24300 | 22500 | 24700 | 21800 | 15400 | 18900 | 19000 |
| 6010C | 7439-92-1 | Lead | mg/kg | 6.34 J E, Q | 5.96 | 13.2 J E, Q | 4.78 J E, Q | 6.10 J E, Q | 8.52 J E, Q | 25.2 J E, Q | 7.89 J E, Q | 5.40 J E, Q |
| 6010C | 7439-93-2 | Lithium | mg/kg | 24.5 | 23.4 | 25.7 | 17.7 | 20.4 | 20.1 | 18.7 | 24.1 | 26.7 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 4360 | 3220 | 6170 | 5820 | 6430 | 5430 | 2760 | 4700 | 4230 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 171 | 180 | 342 | 277 | 330 | 211 | 250 | 285 | 269 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 2.07 U F | 2.12 U F, B | 2.01 U F | 2.05 U F | 2.01 U F | 2.04 U | 2.02 U | 1.99 U | 2.00 U |
| 6010C | 7440-02-0 | Nickel | mg/kg | 9.17 J A | 5.91 | 14.6 J A | 13.0 J A | 11.7 J A | 9.25 J A | 5.31 | 8.18 | 6.94 |
| 6010C | 9/7/7440 | Potassium | mg/kg | 1370 J Q | 1330 J Q | 3590 J Q | 2210 J Q | 2130 J Q | 1850 J Q | 3640 J Q | 4180 J Q | 3290 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | 118 | 106 | 101 U F | 103 U F | 101 U F | 102 U F | 57.4 J Z | 56.5 J Z | 53.0 J Z |
| 6010C | 7440-31-5 | Tin | mg/kg | 10.4 U B | 10.6 U B | 10.1 U B | 10.3 U B | 10.1 U B | 10.2 U B | 10.1 U B | 9.93 U B | 9.98 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1100 | 1010 | 1370 | 1370 | 1310 | 971 | 891 | 1070 | 1030 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 4.14 UJ B, Q | 0.959 J Z | 0.726 J Q, Z | 0.830 J Q, Z | 0.903 J Q, Z | 0.598 J Q, Z | 4.04 UJ Q | 3.97 UJ Q | 3.99 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 5.22 | 6.72 | 3.93 J Z | 3.93 J Z | 4.35 | 4.64 | 4.53 | 3.82 J Z | 3.93 J Z |
| 6010C | 7440-39-3 | Barium | mg/kg | 65.3 | 41.6 | 96.9 | 63.1 | 72.4 | 59 | 68 | 77.7 | 69.2 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.817 J Z | 0.789 J Z | 0.569 J Z | 0.795 J Z | 0.560 J Z | 0.536 J Z | 0.395 J Z | 0.463 J Z | 0.382 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 10.4 U F | 7.42 J Z | 10.1 U F | 10.3 U F | 10.1 U F | 10.2 U F | 10.1 U B | 9.93 U B | 9.98 U B |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.0952 J Z | 0.402 J Z | 0.294 J Z | 0.189 J Z | 0.181 J Z | 0.151 J Z | 0.194 J Z | 0.139 J Z | 0.106 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 21.9 | 15 | 25.1 | 26.8 | 23.4 | 18.2 | 9.62 | 15.8 | 13.1 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 3.89 J E | 4.07 | 5.80 J E | 7.28 J E | 6.60 J E | 4.26 J E | 3.26 | 4.57 | 3.67 |
| 6010C | 7440-50-8 | Copper | mg/kg | 9.6 | 5.12 | 14.9 | 14 | 15.4 | 8.58 | 8.23 | 10.7 | 8.85 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 40.4 | 36.6 | 44.6 | 42.6 | 44.6 | 33.3 | 19 | 30.9 | 26.8 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 41 | 34.8 | 61.6 | 52.2 | 57.5 | 55.5 | 61 | 57.9 | 57 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 2.90 J Z | 2.93 J Z | 2.54 J Z | 2.63 J Z | 2.30 J Z | 1.55 J Z | 1.59 J Z | 1.97 J Z | 1.58 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | 2520 J E | 1720 | 3850 J E | 1740 J E | 3850 J E | 2830 J E | 2410 | 2780 | 3900 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 164 J E, A | 234 | 437 J E, A | 349 J E, A | 401 J E, A | 338 J E, A | 399 | 445 | 370 |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0711 J Z | 0.0362 J Z | 0.0447 J Z | 0.205 U | 0.0256 J Z | 0.0393 J Z | 0.0245 J Z | 0.199 U | 0.200 U |
| 6020A | 7440-24-6 | Strontium | mg/kg | 22.4 | 11.9 | 27.8 | 11.7 | 18.6 | 17.9 | 10.8 J Q | 9.97 | 9.47 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.28 | 0.176 J Z | 0.36 | 0.314 | 0.364 | 0.398 | 0.226 | 0.198 J Z | 0.206 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.104 J Z | 0.112 J Z | 0.182 J Z | 0.109 J Z | 0.180 J Z | 0.358 J Z | 0.404 U | 0.397 U | 0.399 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-532-SA7-SB-3.0-4.0 | SL-533-SA7-SB-0.0-0.5 | SL-533-SA7-SB-2.5-3.5 | SL-534-SA7-SB-0.0-0.5 | SL-534-SA7-SB-5.5-6.5 | SL-535-SA7-SB-0.0-0.5 | SL-535-SA7-SB-4.0-5.0 | SL-535-SA7-SB-9.0-10.0 | SL-536-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 06/03/2013 | 04/18/2013 | 06/03/2013 | 04/12/2013 | 04/15/2013 | 04/12/2013 | 04/12/2013 | 04/12/2013 | 04/11/2013 |
| | | | | SDG | PH045 | PH034 | PH045 | PH030 | PH031 | PH030 | PH030 | PH030 | PH029 |
| | | | | Start Depth | 3 | 0 | 2.5 | 0 | 5.5 | 0 | 4 | 9 | 0 |
| | | | | End Depth | 4 | 0.5 | 3.5 | 0.5 | 6.5 | 0.5 | 5 | 10 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 17400 | 17200 | 12900 | 15300 | 14300 | 11800 | 15900 | 13400 | 9260 |
| 6010C | 7439-89-6 | Iron | mg/kg | 29600 | 23100 | 20400 | 22800 | 23300 | 21600 | 24000 | 22500 | 15500 |
| 6010C | 7439-92-1 | Lead | mg/kg | 6.11 | 10.2 J E, Q | 4.87 | 6.81 | 5.42 | 7.03 | 6.08 | 6.56 | 4.32 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 37.3 | 26.5 | 17.6 | 27.8 | 24.2 | 27.7 | 30.3 | 25.9 | 22 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 8940 | 5680 | 5670 | 5130 | 5260 | 4660 | 5420 | 5060 | 3870 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 426 | 382 | 245 | 323 | 289 | 299 | 346 | 347 | 228 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 2.09 U F, B | 1.99 U F | 2.04 U F, B | 2.08 U F | 2.02 U F, B | 2.00 U F | 2.02 U F | 2.03 U F | 2.03 U |
| 6010C | 7440-02-0 | Nickel | mg/kg | 22.7 | 14.8 | 12 | 11.8 | 10.9 | 9.04 | 12.9 | 11.6 | 7.27 |
| 6010C | 9/7/7440 | Potassium | mg/kg | 3310 J Q | 3860 J Q | 2070 J Q | 4390 J Q | 2570 J Q | 4110 J Q | 4100 J Q | 3650 J Q | 3030 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | 118 | 63.6 J Z | 110 | 60.8 J Z | 67.8 J Z | 61.6 J Z | 70.7 J Z | 71.3 J Z | 55.1 J Z |
| 6010C | 7440-31-5 | Tin | mg/kg | 10.4 U B | 9.97 U B | 10.2 U B | 10.4 U B | 10.1 U B | 9.98 U B | 10.1 U B | 10.2 U B | 10.2 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1740 | 1340 | 1270 | 1230 | 1200 | 1150 | 1300 | 1210 | 875 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 0.822 J Z | 0.770 J Q, Z | 0.653 J Z | 1.96 J Q, Z | 1.87 J Q, Z | 1.78 J Q, Z | 2.47 J Q, Z | 2.10 J Q, Z | 4.07 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 5.4 | 4.95 | 4.76 | 2.83 J Z | 2.46 J Z | 2.11 J Z | 2.17 J Z | 2.20 J Z | 3.54 J Z |
| 6010C | 7440-39-3 | Barium | mg/kg | 130 | 95.3 | 53.2 | 90.9 | 81 | 80.6 | 96.9 | 82.8 | 61.4 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.802 J Z | 0.669 J Z | 0.543 J Z | 0.592 J Z | 0.582 J Z | 0.521 J Z | 0.596 J Z | 0.546 J Z | 0.411 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 7.47 J Z | 9.97 U B | 6.47 J Z | 4.80 J Z | 1.47 J Z | 3.82 J Z | 2.92 J Z | 2.37 J Z | 2.81 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.667 J Z | 0.0439 J Z | 0.485 J Z | 0.533 J Z | 0.418 J Z | 0.541 J Z | 0.603 J Z | 0.511 J Z | 0.162 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 38.8 | 25.7 | 26.7 | 20.7 | 24.5 | 17.9 | 22.3 | 27.8 | 12.7 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 7.49 | 6.38 | 5.99 | 6.36 | 5.81 | 5.4 | 6.49 | 6.43 | 3.5 |
| 6010C | 7440-50-8 | Copper | mg/kg | 8.78 | 16.4 | 8.68 | 8.38 | 6.24 | 6.46 | 9.09 | 6.96 | 5.16 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 54.3 | 49.1 | 41.8 | 39.4 | 39.4 | 31.7 | 40.8 | 37 | 24.9 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 78.4 | 60.9 | 56.5 | 59.4 | 50.4 | 66.5 | 63.2 | 60.5 | 63 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 3.05 J Z | 3.18 J Z | 2.07 J Z | 1.13 J Z | 5.04 U | 4.99 U | 1.05 J Z | 5.08 U | 5.08 U |
| 6010C | 7440-70-2 | Calcium | mg/kg | 4150 | 3660 | 2650 | 3600 | 2510 | 3510 | 2360 | 2890 | 2690 J E |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 524 | 375 | 385 | 532 J Q | 295 J Q | 484 J Q | 531 J Q | 470 J Q | 372 J Q |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.209 U | 0.0368 J Z | 0.204 U | 0.0407 J Z | 0.0330 J Z | 0.200 U | 0.0452 J Z | 0.0260 J Z | 0.203 U |
| 6020A | 7440-24-6 | Strontium | mg/kg | 15.2 | 19.7 | 11.7 | 17.7 | 13.8 | 15.1 | 14.3 | 15 | 11.0 J Q |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.352 | 0.271 | 0.249 | 0.272 | 0.227 | 0.258 | 0.262 | 0.273 | 0.204 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.151 J Z | 0.231 J Z | 0.414 | 0.415 U | 0.403 U | 0.399 U | 0.166 J Z | 0.119 J Z | 0.407 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | Sample Name | SL-536-SA7-SB-3.0-4.0 | SL-836-SA7-SB-3.0-4.0 | SL-537-SA7-SB-0.0-0.5 | SL-538-SA7-SB-0.0-0.5 | SL-539-SA7-SB-0.0-0.5 | SL-540-SA7-SB-0.0-0.5 | SL-840-SA7-SB-0.0-0.5 | SL-541-SA7-SB-0.0-0.5 | SL-541-SA7-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Type | N | FD | N | N | N | N | FD | N | N |
| | | Sample Date | 04/12/2013 | 04/12/2013 | 04/15/2013 | 04/15/2013 | 04/08/2013 | 04/09/2013 | 04/09/2013 | 10/02/2013 | 10/02/2013 |
| | | SDG | PH030 | PH030 | PH031 | PH031 | PH027 | PH027 | PH027 | PH121 | PH121 |
| | | Start Depth | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | End Depth | 4 | 4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 10800 | 10800 | 11000 | 11600 | 11100 | 13300 | 14800 | 10800 | 9070 |
| 6010C | 7439-89-6 | Iron | mg/kg | 19000 | 19600 | 20600 | 19500 | 18100 | 19000 | 19100 | 16400 | 15900 |
| 6010C | 7439-92-1 | Lead | mg/kg | 5.13 | 5.13 | 11.8 | 10.6 | 5.7 | 5.22 | 4.92 | 4.47 | 3.39 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 23.5 | 23.8 | 27.2 | 24.5 | 24.9 | 22.4 | 23.6 | 17.6 | 27.7 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 4080 | 3870 | 4640 | 4030 | 4370 | 4080 | 4100 | 3720 | 4470 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 283 | 276 | 296 | 281 | 253 | 244 | 245 | 274 | 228 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 1.97 UJ F, FD | 1.98 UJ F, FD | 2.03 U | 2.01 U F, B | 2.05 U | 2.05 UJ F, FD, B | 2.00 UJ FD | 2.12 U F | 2.06 U F |
| 6010C | 7440-02-0 | Nickel | mg/kg | 8.67 | 7.16 | 8.37 | 8.86 | 8.54 | 8.81 | 8.86 | 7.67 | 7.33 |
| 6010C | 9/7/7440 | Potassium | mg/kg | 2760 J Q | 2710 J Q | 3900 J Q | 3600 J Q | 3290 J Q | 3560 J Q | 3400 J Q | 2340 J Q | 2580 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | 61.3 J Z | 59.4 J Z | 62.0 J Z | 60.1 J Z | 66.5 J Z | 69.3 J Z | 69.5 J Z | 114 | 111 |
| 6010C | 7440-31-5 | Tin | mg/kg | 9.87 U B | 9.89 U B | 10.1 U B | 10.1 U B | 10.2 U B | 10.2 U B | 9.98 U B | 10.6 U B | 10.3 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1060 | 979 | 1110 | 1060 | 1030 | 888 | 983 | 735 | 833 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 1.58 J Q, Z | 1.47 J Q, Z | 1.73 J Q, Z | 1.49 J Q, Z | 4.10 UJ Q | 4.10 UJ Q | 3.99 UJ Q | 4.23 UJ Q | 4.12 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 2.06 J Z | 2.38 J Z | 2.50 J Z | 1.83 J Z | 4.15 | 4.19 | 4.74 | 2.05 J Z | 4.06 J Z |
| 6010C | 7440-39-3 | Barium | mg/kg | 72.1 | 66.7 | 73.3 | 81.1 | 72.8 | 72.7 | 73.5 | 81 | 62.5 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.482 J Z | 0.501 J Z | 0.477 J Z | 0.492 J Z | 0.480 J Z | 0.556 J Z | 0.998 U B | 0.402 J Z | 0.415 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 3.20 J Z | 2.90 J Z | 2.96 J Z | 3.01 J Z | 4.32 J Z | 10.2 U | 9.98 U | 5.20 J Z | 6.34 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.420 J Z | 0.453 J Z | 0.511 J Z | 0.445 J Z | 0.161 J Z | 0.0727 J Z | 0.998 U B | 0.210 J Z | 0.219 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 18.5 | 14 | 16.5 | 17 | 14.6 | 15.2 | 15.4 | 13.2 | 14.7 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 5.11 | 4.93 | 5.33 | 4.87 | 3.98 | 4.28 | 4 | 5.9 | 3.95 |
| 6010C | 7440-50-8 | Copper | mg/kg | 5.13 | 4.57 | 6.31 | 5.72 | 6.64 | 6.71 | 6.02 | 10.5 | 9.45 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 28.8 | 26.8 | 31 | 28.9 | 29.3 | 29.8 | 32 | 26.4 | 27.6 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 55.1 | 54.9 | 62.8 | 76.1 | 66.4 | 55.8 | 52.3 | 42.5 | 48.8 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 1.11 J FD, Z | 4.95 UJ FD | 0.916 J Z | 5.03 U | 5.12 U | 0.921 J FD, Z | 4.99 UJ FD | 1.91 J Z | 2.37 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | 3140 | 2540 | 3020 | 2470 | 3360 J E | 3100 J E | 2670 J E | 3350 | 7590 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 367 J Q | 344 J Q | 466 J Q | 409 J Q | 396 J Q | 399 J Q | 426 J Q | 516 J Q, E | 383 J Q, E |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0307 J FD, Z | 0.198 UJ FD | 0.0361 J Z | 0.0394 J Z | 0.0585 J Z | 0.0240 J FD, Z | 0.200 UJ FD | 0.212 U | 0.206 U |
| 6020A | 7440-24-6 | Strontium | mg/kg | 12 | 10.9 | 11.3 | 13.6 | 13.9 J Q | 19.4 J Q | 14.9 J Q | 19.4 J Q, E, A | 18.6 J Q, E, A |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.232 | 0.248 | 0.25 | 0.267 | 0.255 | 0.223 | 0.244 | 0.259 | 0.248 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.395 U | 0.396 U | 0.405 U | 0.402 U | 0.410 U | 0.102 J FD, Z | 0.399 UJ FD | 0.572 | 0.412 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-542-SA7-SB-0.0-0.5 | SL-544-SA7-SB-0.0-0.5 | SL-547-SA7-SB-0.0-0.5 | SL-548-SA7-SB-0.0-0.5 | SL-549-SA7-SB-0.0-0.5 | SL-551-SA7-SB-0.0-0.5 | SL-551-SA7-SB-2.0-3.0 | SL-552-SA7-SB-0.0-0.5 | SL-553-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 04/09/2013 | 04/09/2013 | 04/09/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/11/2013 |
| | | | | SDG | PH027 | PH027 | PH028 | PH028 | PH028 | PH028 | PH028 | PH028 | PH029 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 13400 | 10800 | 11400 | 9600 | 11700 | 12000 | 11300 | 9920 | 11500 |
| 6010C | 7439-89-6 | Iron | mg/kg | 17600 | 18200 | 16500 | 18500 | 19900 | 18600 | 18100 | 17500 | 20400 |
| 6010C | 7439-92-1 | Lead | mg/kg | 4.91 | 4.04 | 5.62 | 5.75 | 7.88 | 7.1 | 4.81 | 4.34 | 7.06 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 21.7 | 25.1 | 22.5 | 24.7 | 25.7 | 23.9 | 26.1 | 26.9 | 29.2 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 3950 | 4210 | 3120 | 3650 | 5080 | 4090 | 4490 | 4960 | 6440 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 241 | 262 | 237 | 255 | 338 | 251 | 283 | 255 | 302 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 2.04 U | 1.97 U | 2.00 U | 0.403 J Z | 2.04 U | 2.03 U | 2.08 U | 2.02 U | 2.00 U |
| 6010C | 7440-02-0 | Nickel | mg/kg | 8.56 | 7.81 | 5.93 | 6.27 | 10.2 | 8.2 | 8.96 | 10 | 11.8 |
| 6010C | 9/7/7440 | Potassium | mg/kg | 2560 J Q | 3280 J Q | 3600 J Q | 3750 J Q | 4180 J Q | 3880 J Q | 3280 J Q | 2950 J Q | 3090 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | 71.7 J Z | 66.5 J Z | 66.5 J Z | 56.7 J Z | 62.7 J Z | 65.0 J Z | 62.5 J Z | 86.7 J Z | 69.1 J Z |
| 6010C | 7440-31-5 | Tin | mg/kg | 10.2 U B | 9.84 U B | 10.0 U B | 9.96 U B | 10.2 U B | 10.1 U B | 10.4 U B | 10.1 U B | 10.0 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 932 | 1000 | 958 | 999 | 1050 | 982 | 1040 | 1000 | 1190 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 4.08 UJ Q | 3.94 UJ Q | 4.01 UJ Q | 1.41 J Q, Z | 4.08 UJ Q | 4.05 UJ Q | 4.16 UJ Q | 4.04 UJ Q | 4.00 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 4.48 | 3.40 J Z | 3.78 J Z | 1.72 J Z | 4.51 | 4.03 J Z | 4.02 J Z | 3.35 J Z | 4 |
| 6010C | 7440-39-3 | Barium | mg/kg | 70.3 | 70.7 | 67.8 | 71.2 | 74.6 | 77.6 | 77.4 | 67.9 | 88.2 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.527 J Z | 0.984 U B | 1.00 U B | 0.408 J Z | 1.02 U B | 1.01 U B | 1.04 U B | 1.01 U B | 1.00 U B |
| 6010C | 7440-42-8 | Boron | mg/kg | 10.2 U | 9.84 U | 2.59 J Z | 4.15 J Z | 10.2 U | 10.1 U | 10.4 U | 10.1 U | 10.0 U |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.118 J Z | 0.984 U B | 1.00 U B | 0.448 J Z | 1.02 U B | 1.01 U B | 1.04 U B | 1.01 U B | 1.00 U B |
| 6010C | 7440-47-3 | Chromium | mg/kg | 15 | 14.3 | 9.79 | 12 | 17.2 | 13.9 | 15.6 | 19 | 20.7 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 4.04 | 3.74 | 3.19 | 4.53 | 5.78 | 3.73 | 4.09 | 4.27 | 4.78 |
| 6010C | 7440-50-8 | Copper | mg/kg | 6.05 | 5.32 | 3.54 | 4.26 | 6.96 | 6.2 | 5.44 | 7.1 | 7.89 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 30.4 | 29.2 | 21.3 | 23.6 | 34 | 28.6 | 30.4 | 33.7 | 40.1 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 48.8 | 56.3 | 56.4 | 61.4 | 56.2 | 72.3 | 55.2 | 59 | 60.8 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 5.10 U | 4.92 U | 5.01 U | 4.98 U | 5.10 U | 5.06 U | 5.20 U | 5.05 U | 5.01 U |
| 6010C | 7440-70-2 | Calcium | mg/kg | 3600 J E | 2460 J E | 1360 J E | 2230 J E | 6380 J E | 2720 J E | 4750 J E | 3470 J E | 8930 J E |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 369 J Q | 405 J Q | 277 | 406 J Q | 438 J Q | 405 J Q | 366 J Q | 430 J Q | 459 J Q |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.204 U | 0.0205 J Z | 0.200 U | 0.0315 J Z | 0.0306 J Z | 0.0411 J Z | 0.208 U | 0.202 U | 0.0459 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 18.2 J Q | 10.0 J Q | 7.03 J Q | 8.13 J Q | 12.5 J Q | 12.3 J Q | 11.3 J Q | 10.8 J Q | 19.2 J Q |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.241 | 0.25 | 0.257 | 0.232 | 0.232 | 0.253 | 0.209 | 0.206 | 0.223 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.187 J Z | 0.394 U | 0.401 U | 0.399 U | 0.196 J Z | 0.405 U | 0.416 U | 0.106 J Z | 0.107 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | Sample Name | SL-554-SA7-SB-0.0-0.5 | SL-555-SA7-SB-0.0-0.5 | SL-557-SA7-SB-0.0-0.5 | SL-558-SA7-SB-0.0-0.5 | SL-558-SA7-SB-3.0-4.0 | SL-559-SA7-SB-0.0-0.5 | SL-559-SA7-SB-2.0-3.0 | SL-560-SA7-SB-0.0-0.5 | SL-560-SA7-SB-3.0-4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | Sample Date | 04/11/2013 | 04/11/2013 | 04/17/2013 | 04/16/2013 | 04/17/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 |
| | | SDG | PH029 | PH029 | PH033 | PH032 | PH033 | PH032 | PH032 | PH032 | PH032 |
| | | Start Depth | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 3 |
| | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 4 | 0.5 | 3 | 0.5 | 4 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 13300 | 14800 | 15200 | 9610 | 14800 | 15500 | 15600 | 15900 | 30600 |
| 6010C | 7439-89-6 | Iron | mg/kg | 19400 | 19600 | 26000 | 14000 | 22700 | 21500 | 21200 | 22100 | 30900 |
| 6010C | 7439-92-1 | Lead | mg/kg | 8.02 | 10.5 | 7.50 J E, Q | 19.5 | 5.53 J E, Q | 10.2 | 10 | 30.2 | 12.1 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 22.7 | 20.4 | 25.7 | 12 | 26 | 19.7 | 19.6 | 19.5 | 26.3 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 4510 | 4080 | 6280 | 2600 | 4890 | 3950 | 3820 | 4410 | 7330 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 281 | 291 | 365 | 198 | 320 | 288 | 328 | 297 | 493 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 2.03 U | 2.06 U | 2.09 U F | 2.01 U F, B | 2.07 U F | 2.01 U F, B | 2.06 U F, B | 2.06 U F, B | 2.20 U F, B |
| 6010C | 7440-02-0 | Nickel | mg/kg | 11.4 | 12.9 | 13.7 | 7.15 | 10.7 | 10.5 | 10.8 | 9.38 | 18.8 |
| 6010C | 9/7/7440 | Potassium | mg/kg | 3430 J Q | 3660 J Q | 2300 J Q | 2190 J Q | 3090 J Q | 3800 J Q | 2920 J Q | 3210 J Q | 4110 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | 66.8 J Z | 76.8 J Z | 80.6 J Z | 77.4 J Z | 111 | 82.6 J Z | 82.0 J Z | 99.7 J Z | 113 |
| 6010C | 7440-31-5 | Tin | mg/kg | 10.2 U B | 10.3 U B | 10.5 U B | 10.1 U B | 10.4 U B | 10.0 U B | 10.3 U B | 10.3 U B | 11.0 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 988 | 965 | 1290 | 713 | 1230 | 1100 | 1080 | 1170 | 1390 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 4.07 UJ Q | 4.12 UJ Q | 0.592 J Q, Z | 1.18 J Q, Z | 4.15 UJ Q | 2.12 J Q, Z | 2.08 J Q, Z | 1.91 J Q, Z | 2.55 J Q, Z |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 4.23 | 3.64 J Z | 5.65 | 1.55 J Z | 4.67 | 2.48 J Z | 3.18 J Z | 2.31 J Z | 4.63 |
| 6010C | 7440-39-3 | Barium | mg/kg | 80.6 | 84.2 | 88.2 | 55.4 | 78.9 | 91.2 | 90.5 | 99.2 | 132 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 1.02 U B | 1.03 U B | 0.740 J Z | 0.378 J Z | 0.573 J Z | 0.650 J Z | 0.673 J Z | 0.579 J Z | 1.01 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 10.2 U | 6.79 J Z | 10.5 U B | 3.37 J Z | 10.4 U B | 3.07 J Z | 3.55 J Z | 4.59 J Z | 5.41 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 1.02 U B | 1.03 U B | 0.0858 J Z | 0.651 J Z | 0.102 J Z | 0.469 J Z | 0.467 J Z | 0.445 J Z | 0.736 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 17.7 | 16.9 | 24.7 | 14.3 | 19.5 | 20.2 | 21.3 | 18.7 | 38.5 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 4.98 | 5.08 | 6.86 | 3.82 | 5.21 | 6.07 | 6.51 | 6.2 | 10.5 |
| 6010C | 7440-50-8 | Copper | mg/kg | 8.26 | 8.64 | 14.9 | 6.4 | 12.4 | 8.86 | 7.9 | 9.98 | 17 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 35.8 | 36.4 | 47.9 | 22.7 | 39 | 38.4 | 36 | 39.6 | 69 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 60 | 67.5 | 56.1 | 48.7 | 53.1 | 59 | 53.9 | 66.1 | 69.6 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 5.09 U | 0.902 J Z | 2.47 J Z | 1.32 J Z | 2.38 J Z | 1.39 J Z | 1.37 J Z | 0.971 J Z | 4.08 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | 3670 J E | 4940 J E | 3820 | 2160 | 2570 | 2670 | 2990 | 3670 | 12600 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 426 J Q | 445 J Q | 267 | 308 J Q | 384 | 412 J Q | 363 J Q | 419 J Q | 386 J Q |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0846 J Z | 0.0523 J Z | 0.0582 J Z | 0.0267 J Z | 0.0854 J Z | 0.0648 J Z | 0.0625 J Z | 0.0303 J Z | 0.0406 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 15.8 J Q | 23.4 J Q | 12.1 J Q | 12.8 | 14.7 J Q | 18.9 | 19.7 | 20.4 | 42.8 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.23 | 0.188 J Z | 0.255 | 0.138 J Z | 0.235 | 0.263 | 0.273 | 0.256 | 0.349 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.117 J Z | 0.134 J Z | 0.202 J Z | 0.402 U | 0.152 J Z | 0.401 U | 0.413 U | 0.413 U | 0.161 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-561-SA7-SB-0.0-0.5 | SL-562-SA7-SB-0.0-0.5 | SL-562-SA7-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N |
| | | | | Sample Date | 04/16/2013 | 04/26/2013 | 04/26/2013 |
| | | | | SDG | PH032 | PH040 | PH040 |
| | | | | Start Depth | 0 | 0 | 2 |
| | | | | End Depth | 0.5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 14300 | 12600 | 12100 |
| 6010C | 7439-89-6 | Iron | mg/kg | 21400 | 20300 | 20500 |
| 6010C | 7439-92-1 | Lead | mg/kg | 26 | 10.5 J E, Q | 15.8 J E, Q |
| 6010C | 7439-93-2 | Lithium | mg/kg | 24.8 | 24.1 | 25.1 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 4750 | 4410 | 4340 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 560 | 280 | 284 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 2.02 U F, B | 2.03 U F | 2.06 U F |
| 6010C | 7440-02-0 | Nickel | mg/kg | 11.4 | 9.24 J A | 13.8 J A |
| 6010C | 9/7/7440 | Potassium | mg/kg | 3510 J Q | 3300 J Q | 3150 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | 93.3 J Z | 102 U F | 103 U F |
| 6010C | 7440-31-5 | Tin | mg/kg | 10.1 U B | 10.2 U B | 10.3 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1150 | 1100 | 1100 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 1.73 J Q, Z | 0.665 J Q, Z | 0.557 J Q, Z |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 2.59 J Z | 4.38 | 4.22 |
| 6010C | 7440-39-3 | Barium | mg/kg | 108 | 78 | 85.4 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.562 J Z | 0.491 J Z | 0.487 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 4.91 J Z | 10.2 U F | 10.3 U F |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.581 J Z | 0.270 J Z | 0.399 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 19.9 | 16.5 | 18.6 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 5.85 | 4.54 J E | 4.50 J E |
| 6010C | 7440-50-8 | Copper | mg/kg | 9.12 | 12.5 | 11.6 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 36 | 33.1 | 35.4 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 96.8 | 91.2 | 129 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 5.05 U | 2.87 J Z | 2.56 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | 4290 | 3400 J E | 3250 J E |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 601 J Q | 427 J E, A | 370 J E, A |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0434 J Z | 0.0337 J Z | 0.0694 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 35 | 19.3 | 17.5 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.24 | 0.283 | 0.238 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.140 J Z | 0.143 J Z | 0.145 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-500-SA7-SB-0.0-0.5 | SL-501-SA7-SB-0.0-0.5 | SL-502-SA7-SB-0.0-0.5 | SL-503-SA7-SB-0.0-0.5 | SL-504-SA7-SB-0.0-0.5 | SL-504-SA7-SB-4.0-5.0 | SL-505-SA7-SB-0.0-0.5 | SL-506-SA7-SB-0.0-0.5 | SL-507-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/17/2013 | 04/17/2013 | 04/17/2013 | 04/22/2013 | 04/22/2013 | 04/22/2013 | 04/17/2013 | 04/25/2013 | 04/24/2013 |
| | | | SDG | PH033 | PH033 | PH033 | PH036 | PH036 | PH036 | PH033 | PH039 | PH039 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 2.2 | 1.6 | 3.3 | 2.3 | 3 | 5.5 | 2.9 | 3.7 | 3.6 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-508-SA7-SB-0.0-0.5 | SL-509-SA7-SB-0.0-0.5 | SL-510-SA7-SB-0.0-0.5 | SL-810-SA7-SB-0.0-0.5 | SL-511-SA7-SB-0.0-0.5 | SL-512-SA7-SB-0.0-0.5 | SL-513-SA7-SB-0.0-0.5 | SL-913-SA7-SB-0.0-0.5 | SL-514-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | FD | N | N | N | FD | N |
| | | | Sample Date | 04/25/2013 | 04/25/2013 | 04/22/2013 | 04/22/2013 | 04/19/2013 | 04/23/2013 | 06/04/2013 | 06/04/2013 | 06/06/2013 |
| | | | SDG | PH039 | PH039 | PH036 | PH036 | PH035 | PH037 | PH046 | PH046 | PH049 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 1.1 | 3.4 | 3.7 | 3 | 4.4 | 2.5 | 1.8 | 1.5 | 1.1 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-515-SA7-SB-0.0-0.5 | SL-516-SA7-SB-0.0-0.5 | SL-517-SA7-SB-0.0-0.5 | SL-518-SA7-SB-0.0-0.5 | SL-519-SA7-SB-0.0-0.5 | SL-819-SA7-SB-0.0-0.5 | SL-519-SA7-SB-2.0-3.0 | SL-520-SA7-SB-0.0-0.5 | SL-521-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | | Sample Date | 06/06/2013 | 06/04/2013 | 04/22/2013 | 04/19/2013 | 04/25/2013 | 04/25/2013 | 04/25/2013 | 04/19/2013 | 04/15/2013 |
| | | | SDG | PH049 | PH046 | PH036 | PH035 | PH039 | PH039 | PH039 | PH035 | PH031 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 1.4 | 3.9 | 2.1 | 2.4 | 2.4 | 4.3 | 3.4 | 2 | 1.8 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-522-SA7-SB-0.0-0.5 | SL-524-SA7-SB-0.0-0.5 | SL-524-SA7-SB-1.0-2.0 | SL-924-SA7-SB-1.0-2.0 | SL-525-SA7-SB-0.0-0.5 | SL-525-SA7-SB-4.0-5.0 | SL-525-SA7-SB-6.5-7.5 | SL-525-SA7-SB-9.5-10.5 | SL-526-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | FD | N | N | N | N | N |
| | | | Sample Date | 04/15/2013 | 06/04/2013 | 06/04/2013 | 06/04/2013 | 04/23/2013 | 06/03/2013 | 04/24/2013 | 06/03/2013 | 04/23/2013 |
| | | | SDG | PH031 | PH046 | PH046 | PH046 | PH037 | PH045 | PH038 | PH045 | PH037 |
| | | | Start Depth | 0 | 0 | 1 | 1 | 0 | 4 | 6.5 | 9.5 | 0 |
| | | | End Depth | 0.5 | 0.5 | 2 | 2 | 0.5 | 5 | 7.5 | 10.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 3.6 | 7.1 | 7.5 | 7.7 | 4.1 | 4.1 | 4.9 | 3.7 | 9.5 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-526-SA7-SB-3.5-4.5 | SL-526-SA7-SB-9.0-10.0 | SL-527-SA7-SB-0.0-0.5 | SL-527-SA7-SB-2.5-3.5 | SL-528-SA7-SB-0.0-0.5 | SL-529-SA7-SB-0.0-0.5 | SL-530-SA7-SB-0.0-0.5 | SL-531-SA7-SB-0.0-0.5 | SL-532-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/23/2013 | 06/03/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/18/2013 | 04/18/2013 | 04/18/2013 |
| | | | SDG | PH037 | PH045 | PH038 | PH038 | PH038 | PH038 | PH034 | PH034 | PH034 |
| | | | Start Depth | 3.5 | 9 | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 4.5 | 10 | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 7.1 | 7.7 | 3.6 | 3.5 | 2.6 | 4.6 | 2.9 | 2.2 | 1.8 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-532-SA7-SB-3.0-4.0 | SL-533-SA7-SB-0.0-0.5 | SL-533-SA7-SB-2.5-3.5 | SL-534-SA7-SB-0.0-0.5 | SL-534-SA7-SB-5.5-6.5 | SL-535-SA7-SB-0.0-0.5 | SL-535-SA7-SB-4.0-5.0 | SL-535-SA7-SB-9.0-10.0 | SL-536-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/03/2013 | 04/18/2013 | 06/03/2013 | 04/12/2013 | 04/15/2013 | 04/12/2013 | 04/12/2013 | 04/12/2013 | 04/11/2013 |
| | | | SDG | PH045 | PH034 | PH045 | PH030 | PH031 | PH030 | PH030 | PH030 | PH029 |
| | | | Start Depth | 3 | 0 | 2.5 | 0 | 5.5 | 0 | 4 | 9 | 0 |
| | | | End Depth | 4 | 0.5 | 3.5 | 0.5 | 6.5 | 0.5 | 5 | 10 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 4.1 | 3.6 | 3.7 | 3.7 | 4.6 | 2.7 | 4.1 | 4.4 | 1.6 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-536-SA7-SB-3.0-4.0 | SL-836-SA7-SB-3.0-4.0 | SL-537-SA7-SB-0.0-0.5 | SL-538-SA7-SB-0.0-0.5 | SL-539-SA7-SB-0.0-0.5 | SL-540-SA7-SB-0.0-0.5 | SL-840-SA7-SB-0.0-0.5 | SL-541-SA7-SB-0.0-0.5 | SL-541-SA7-SB-2.0-3.0 |
| | | | Sample Type | N | FD | N | N | N | N | FD | N | N |
| | | | Sample Date | 04/12/2013 | 04/12/2013 | 04/15/2013 | 04/15/2013 | 04/08/2013 | 04/09/2013 | 04/09/2013 | 10/02/2013 | 10/02/2013 |
| | | | SDG | PH030 | PH030 | PH031 | PH031 | PH027 | PH027 | PH027 | PH121 | PH121 |
| | | | Start Depth | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | | End Depth | 4 | 4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 2.6 | 2.8 | 2.3 | 1.5 | 2.4 | 3.3 | 2.7 | 5.5 | 3 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-542-SA7-SB-0.0-0.5 | SL-543A-SA7-SB-0.0-0.5 | SL-543B-SA7-SB-0.0-0.5 | SL-543C-SA7-SB-0.0-0.5 | SL-543D-SA7-SB-0.0-0.5 | SL-544-SA7-SB-0.0-0.5 | SL-545A-SA7-SB-0.0-0.5 | SL-545B-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/09/2013 | 04/25/2013 | 04/25/2013 | 04/25/2013 | 04/25/2013 | 04/09/2013 | 06/03/2013 | 06/03/2013 |
| | | | SDG | PH027 | PH040 | PH040 | PH040 | PH040 | PH027 | PH046 | PH046 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 2 | 2.1 | 2.2 | 2.5 | 1.8 | 2.3 | 4.3 | 6 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-545C-SA7-SB-0.0-0.5 | SL-546-SA7-SB-0.0-0.5 | SL-547-SA7-SB-0.0-0.5 | SL-548-SA7-SB-0.0-0.5 | SL-549-SA7-SB-0.0-0.5 | SL-551-SA7-SB-0.0-0.5 | SL-551-SA7-SB-2.0-3.0 | SL-552-SA7-SB-0.0-0.5 | SL-553-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/03/2013 | 04/09/2013 | 04/09/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/11/2013 |
| | | | SDG | PH046 | PH027 | PH028 | PH028 | PH028 | PH028 | PH028 | PH028 | PH029 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 3.8 | 1.6 | 2.2 | 1.6 | 1.9 | 3.2 | 3.8 | 3 | 1.1 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-554-SA7-SB-0.0-0.5 | SL-555-SA7-SB-0.0-0.5 | SL-557-SA7-SB-0.0-0.5 | SL-558-SA7-SB-0.0-0.5 | SL-558-SA7-SB-3.0-4.0 | SL-559-SA7-SB-0.0-0.5 | SL-559-SA7-SB-2.0-3.0 | SL-560-SA7-SB-0.0-0.5 | SL-560-SA7-SB-3.0-4.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/11/2013 | 04/11/2013 | 04/17/2013 | 04/16/2013 | 04/17/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 |
| | | | SDG | PH029 | PH029 | PH033 | PH032 | PH033 | PH032 | PH032 | PH032 | PH032 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 3 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 4 | 0.5 | 3 | 0.5 | 4 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 3.6 | 6.6 | 4.4 | 2.5 | 3.5 | 3.2 | 5 | 5 | 10.9 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Sample Name | SL-561-SA7-SB-0.0-0.5 | SL-562-SA7-SB-0.0-0.5 | SL-562-SA7-SB-2.0-3.0 |
| | | | Sample Type | N | N | N |
| | | | Sample Date | 04/16/2013 | 04/26/2013 | 04/26/2013 |
| | | | SDG | PH032 | PH040 | PH040 |
| | | | Start Depth | 0 | 0 | 2 |
| | | | End Depth | 0.5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | |
| 160.3M | MOIST | Moisture | % | 3.9 | 3.6 | 2.9 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-500-SA7-SB-0.0-0.5 | SL-501-SA7-SB-0.0-0.5 | SL-502-SA7-SB-0.0-0.5 | SL-503-SA7-SB-0.0-0.5 | SL-504-SA7-SB-0.0-0.5 | SL-504-SA7-SB-4.0-5.0 | SL-505-SA7-SB-0.0-0.5 | SL-506-SA7-SB-0.0-0.5 | SL-507-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 04/17/2013 | 04/17/2013 | 04/17/2013 | 04/22/2013 | 04/22/2013 | 04/22/2013 | 04/17/2013 | 04/25/2013 | 04/24/2013 |
| | | | | SDG | PH033 | PH033 | PH033 | PH036 | PH036 | PH036 | PH033 | PH039 | PH039 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 7.2 J Z | 18 U | 12 J Z | 8.4 J Z | 190 U | 6.6 J Z | 13 J Z | 7.8 J Z | 9.9 J Z |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 18 U | 18 U | 19 U | 18 U | 190 U | 19 U | 18 U | 19 U | 19 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 0.83 J Z | 0.92 J Z | 0.45 J Z | 17 U | 1.8 U | 0.71 J Z | 0.41 J Z | 1.7 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 2.2 | 12 | 46 | 3.9 | 8.7 J Z | 1.1 J Z | 9.8 | 1.7 | 2.3 |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 18 U | 18 U | 19 U | 18 U | 190 U | 19 U | 18 U | 19 U | 19 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 0.86 J Z | 2.7 | 8.3 | 0.92 J Z | 17 U | 0.74 J Z | 3.1 | 1.7 U | 0.94 J Z |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 17 U | 4.8 J Z | 20 | 17 U | 180 U | 18 U | 5.4 J Z | 18 U | 18 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 0.84 J Z | 2.7 | 8.7 | 0.77 J Z | 17 U | 1.8 U | 2.7 | 1.7 U | 0.84 J Z |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 2.8 | 12 | 58 | 3.2 | 8.7 J Z | 1.8 | 17 | 2 | 2.8 |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 2.4 | 11 | 46 | 4.4 | 10 J Z | 1.3 J Z | 11 | 2 | 3.3 |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 4 | 8.3 | 23 | 5.3 | 52 | 12 | 11 | 8.4 | 8.5 |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 17 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 2.1 | 8.5 | 32 | 4 | 8.2 J Z | 2.2 | 8.4 | 1.7 | 2.3 |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.2 J Z | 7.5 | 29 | 1.3 J Z | 17 U | 0.85 J Z | 5.8 | 0.82 J Z | 1.3 J Z |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 0.99 J Z | 2.8 | 1.7 U | 17 U | 1.8 U | 1.3 J Z | 1.7 U | 1.7 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 0.90 J Z | 6.3 | 35 | 1.1 J Z | 17 U | 1.8 U | 4.8 | 0.71 J Z | 1.1 J Z |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 17 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 17 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 18 U | 18 U | 19 U | 18 U | 190 U | 19 U | 18 U | 19 U | 19 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 18 U | 18 U | 19 U | 18 U | 190 U | 19 U | 18 U | 19 U | 19 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.1 J Z | 4.2 | 5.2 | 5.6 | 17 U | 0.84 J Z | 3.9 | 1.7 | 1.7 |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 18 U | 18 U | 19 U | 18 U | 190 U | 19 U | 18 U | 17 J Z | 14 J Z |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 17 U | 0.86 J Z | 1.4 J Z | 1.7 U | 1.7 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.0 J Z | 17 U | 1.8 U | 0.98 J Z | 0.81 J Z | 0.84 J Z |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.7 U | 1.7 U | 1.2 J Z | 8.7 | 17 U | 1.8 U | 2.3 | 1.8 | 0.97 J Z |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 0.75 J Z | 1.6 J Z | 17 U | 1.8 U | 1.6 J Z | 1.2 J Z | 1.4 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-508-SA7-SB-0.0-0.5 | SL-509-SA7-SB-0.0-0.5 | SL-510-SA7-SB-0.0-0.5 | SL-810-SA7-SB-0.0-0.5 | SL-511-SA7-SB-0.0-0.5 | SL-512-SA7-SB-0.0-0.5 | SL-513-SA7-SB-0.0-0.5 | SL-913-SA7-SB-0.0-0.5 | SL-514-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | FD | N | N | N | FD | N |
| | | | | Sample Date | 04/25/2013 | 04/25/2013 | 04/22/2013 | 04/22/2013 | 04/19/2013 | 04/23/2013 | 06/04/2013 | 06/04/2013 | 06/06/2013 |
| | | | | SDG | PH039 | PH039 | PH036 | PH036 | PH035 | PH037 | PH046 | PH046 | PH049 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 8.9 J Z | 610 | 7.3 J FD, Z | 76 J FD | 31 | 18 U | 180 U | 180 U | 180 U | |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 18 U | 19 U | 19 U | 19 U | 19 U | 18 U | 180 U | 180 U | 180 U | |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 0.64 J Z | 0.60 J Z | 1.7 U | 1.7 U | 0.73 J Z | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 7.8 | 4.2 | 3.4 J FD | 1.8 J FD | 7.3 | 0.99 J Z | 7.5 J Z | 8.4 J Z | 17 U | |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 18 U | 19 U | 19 U | 19 U | 19 U | 18 U | 180 U | 180 U | 180 U | |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 3.6 | 2.3 | 1.4 J FD, Z | 0.83 J FD, Z | 3 | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 7.4 J Z | 4.5 J Z | 18 U | 18 U | 4.2 J Z | 17 U | 170 U | 170 U | 170 U | |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 3.1 | 1.8 | 2.0 J FD | 0.69 J FD, Z | 1.9 | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 12 | 6.3 | 5.0 J FD | 2.4 J FD | 9.3 | 1.1 J Z | 18 | 13 J Z | 17 U | |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 9.3 | 5.4 | 4.1 J FD | 2.1 J FD | 7.6 | 1.0 J Z | 7.0 J Z | 8.3 J Z | 6.8 J Z | |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 5.7 | 2 | 9.4 | 8.5 | 19 | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.0 J Z | 0.46 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 7.6 | 4.7 | 2.9 | 1.9 | 6.7 | 0.90 J Z | 23 | 20 | 5.1 J Z | |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 6.4 | 2.9 | 1.8 J FD | 1.0 J FD, Z | 3.5 | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.3 J Z | 1.1 J Z | 1.7 U | 1.7 U | 1.2 J Z | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 5.1 | 2.5 | 1.3 J FD, Z | 0.74 J FD, Z | 3.3 | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 18 U | 19 U | 19 U | 19 U | 19 U | 18 U | 180 U | 180 U | 180 U | |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 18 U | 19 U | 19 U | 19 U | 19 U | 18 U | 180 U | 180 U | 180 U | |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 2.1 | 2.5 | 1.9 | 1.3 J Z | 5.4 | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 18 U | 17 J Z | 19 U | 19 U | 19 U | 18 U | 180 U | 180 U | 180 U | |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.9 | 1.7 UJ FD | 0.69 J FD, Z | 0.98 J Z | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 0.75 J Z | 1.1 J Z | 1.7 U | 1.7 U | 1.6 J Z | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 6 | 2.5 | 0.93 J Z | 1.2 J Z | 3.9 | 1.7 U | 17 U | 17 U | 17 U | |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.4 J Z | 1.7 | 1.7 U | 1.7 U | 2.2 | 1.7 U | 17 U | 17 U | 17 U | |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-515-SA7-SB-0.0-0.5 | SL-516-SA7-SB-0.0-0.5 | SL-517-SA7-SB-0.0-0.5 | SL-518-SA7-SB-0.0-0.5 | SL-519-SA7-SB-0.0-0.5 | SL-819-SA7-SB-0.0-0.5 | SL-519-SA7-SB-2.0-3.0 | SL-520-SA7-SB-0.0-0.5 | SL-521-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | | | Sample Date | 06/06/2013 | 06/04/2013 | 04/22/2013 | 04/19/2013 | 04/25/2013 | 04/25/2013 | 04/25/2013 | 04/19/2013 | 04/15/2013 |
| | | | | SDG | PH049 | PH046 | PH036 | PH035 | PH039 | PH039 | PH039 | PH035 | PH031 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 | 19 U | 150 J Z | 180 U | 21 | 14 J Z | 10 J Z | 10 J Z | 8.4 J Z |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 18 U | 19 U | 180 U | 180 U | 18 U | 19 U | 19 U | 18 U | 18 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 1.7 U | 17 U | 17 U | 0.52 J Z | 0.59 J Z | 0.68 J Z | 1.7 U | 1.0 J Z |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 1.7 U | 1.7 U | 10 J Z | 7.7 J Z | 7.9 J Q | 5 | 9.1 | 1.6 J Z | 8.1 |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 18 U | 19 U | 180 U | 180 U | 18 U | 19 U | 19 U | 18 U | 18 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.7 U | 1.7 U | 17 U | 17 U | 2.8 J FD, Q | 1.4 J FD, Z | 1.8 | 1.1 J Z | 1.3 J Z |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 17 U | 18 U | 170 U | 170 U | 5.5 J FD, Q, Z | 18 UJ FD | 4.1 J Z | 17 U | 17 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.7 U | 1.7 U | 17 U | 17 U | 2.5 J FD, Q | 1.4 J FD, Z | 2 | 0.86 J Z | 1.1 J Z |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.7 U | 1.7 U | 14 J Z | 13 J Z | 13 J FD, Q | 5.9 J FD | 9.4 | 2.4 | 6.4 |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.7 U | 1.7 U | 11 J Z | 7.7 J Z | 9.1 J Q | 5.8 | 9.4 | 1.6 J Z | 11 |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.7 U | 1.7 U | 8.6 J Z | 14 J Z | 9.1 J FD | 2.4 J FD | 3.9 | 7.6 | 2.7 |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.7 U | 17 U | 17 U | 0.39 J FD, Z | 1.7 UJ FD | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 0.34 J Z | 1.7 U | 9.1 J Z | 7.5 J Z | 9.0 J FD, Q | 5.0 J FD | 7.9 | 1.9 | 7.6 |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.7 U | 1.7 U | 17 U | 17 U | 5.0 J FD, Q | 2.7 J FD | 5.4 | 1.1 J Z | 1.1 J Z |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.7 U | 17 U | 17 U | 1.0 J FD, Z | 1.7 UJ FD | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.7 U | 1.7 U | 17 U | 17 U | 4.5 J Q | 2.8 | 5.9 | 1.7 U | 1.5 J Z |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 17 U | 17 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 3.2 |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 17 U | 17 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 18 U | 19 U | 180 U | 180 U | 18 U | 19 U | 19 U | 18 U | 18 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 18 U | 19 U | 180 U | 180 U | 18 U | 19 U | 19 U | 18 U | 18 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.7 U | 1.7 U | 14 J Z | 17 U | 3.1 | 3.3 | 2.9 | 0.91 J Z | 5.9 |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 18 U | 19 U | 180 U | 180 U | 18 U | 19 U | 19 U | 14 J Z | 18 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.7 U | 17 U | 17 U | 3.9 | 3.5 | 2.3 | 1.7 U | 1.7 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 17 U | 17 U | 0.88 J Z | 1.1 J Z | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.7 U | 1.7 U | 8.6 J Z | 17 U | 1.5 J Z | 2.1 | 0.95 J Z | 1.7 U F | 1.7 U |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 13 J Z | 17 U | 1.5 J Z | 1.8 | 0.96 J Z | 1.7 U | 1.7 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-522-SA7-SB-0.0-0.5 | SL-524-SA7-SB-0.0-0.5 | SL-524-SA7-SB-1.0-2.0 | SL-924-SA7-SB-1.0-2.0 | SL-525-SA7-SB-0.0-0.5 | SL-525-SA7-SB-4.0-5.0 | SL-525-SA7-SB-6.5-7.5 | SL-525-SA7-SB-9.5-10.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | FD | N | N | N | N |
| | | | | Sample Date | 04/15/2013 | 06/04/2013 | 06/04/2013 | 06/04/2013 | 04/23/2013 | 06/03/2013 | 04/24/2013 | 06/03/2013 |
| | | | | SDG | PH031 | PH046 | PH046 | PH046 | PH037 | PH045 | PH038 | PH045 |
| | | | | Start Depth | 0 | 0 | 1 | 1 | 0 | 4 | 6.5 | 9.5 |
| | | | | End Depth | 0.5 | 0.5 | 2 | 2 | 0.5 | 5 | 7.5 | 10.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 | 7.8 J Z | 19 U | 20 U | 11 J Z | 19 U | 19 U | 19 U |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 19 U | 19 U | 20 U | 19 U | 19 U | 19 U | 19 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.6 J Z | 0.63 J Z | 1.8 U | 1.8 U | 0.50 J Z | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 13 | 8.9 | 2.5 J FD, Q | 4.6 J FD | 2.9 | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 19 U | 19 U | 20 U | 19 U | 19 U | 19 U | 19 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.7 | 1.9 | 1.3 J Z | 1.0 J Z | 1.4 J Z | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 3.5 J Z | 13 J Z | 6.5 J Q, Z | 8.0 J Z | 18 U | 18 U | 18 U | 18 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.4 J Z | 1.1 J Z | 1.8 U | 1.8 U | 1.5 J Z | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 7.8 | 8 | 2.5 | 3.7 | 4.1 | 1.7 U | 1.0 J Z | 1.7 U |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 16 | 3.1 | 0.96 J Z | 1.1 J Z | 3.7 | 1.7 U | 0.79 J Z | 1.7 U |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 2.5 | 1.9 | 1.8 UJ FD | 1.8 J FD | 1.6 J Z | 1.7 U | 3.9 | 1.7 U |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 0.40 J Z | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 9.3 | 20 | 7.2 J Q | 8.6 | 3.5 | 0.43 J Z | 0.72 J Z | 1.7 U |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 2.1 | 3.7 | 1.5 J Z | 1.7 J Z | 1.6 J Z | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.1 J Z | 0.75 J FD, Z | 1.8 UJ FD | 1.7 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 2.7 | 4.3 | 1.5 J Q, Z | 1.3 J Z | 1.1 J Z | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 19 U | 19 U | 20 U | 19 U | 19 U | 19 U | 19 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 19 U | 19 U | 20 U | 19 U | 19 U | 19 U | 19 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 14 | 16 | 4.1 J Q | 3.7 | 2 | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 19 U | 19 U | 20 U | 19 U | 19 U | 7.9 J Z | 19 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.2 J Z | 1.8 U | 1.8 U | 1.8 U | 2.6 | 1.7 U | 0.98 J Z | 1.7 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 0.94 J Z | 1.7 J Z | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 0.73 J Z | 1.7 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 2.6 | 1.8 U | 1.8 U | 1.8 U | 0.96 J Z | 1.3 J Z | 1.8 U | 1.0 J Z |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.5 J Z | 2 | 1.8 U | 1.8 U | 0.81 J Z | 1.7 U | 0.99 J Z | 1.7 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-526-SA7-SB-0.0-0.5 | SL-526-SA7-SB-3.5-4.5 | SL-526-SA7-SB-9.0-10.0 | SL-527-SA7-SB-0.0-0.5 | SL-527-SA7-SB-2.5-3.5 | SL-528-SA7-SB-0.0-0.5 | SL-529-SA7-SB-0.0-0.5 | SL-530-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 04/23/2013 | 04/23/2013 | 06/03/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/18/2013 |
| | | | | SDG | PH037 | PH037 | PH045 | PH038 | PH038 | PH038 | PH038 | PH034 |
| | | | | Start Depth | 0 | 3.5 | 9 | 0 | 2.5 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 4.5 | 10 | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 36 | 19 U | 20 U | 22 | 19 U | 18 U | 6.7 J Z | 48 |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 20 U | 19 U | 20 U | 19 U | 19 U | 18 U | 19 U | 18 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.8 U | 1.8 U | 1.8 U | 0.42 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 2 | 1.8 U | 1.8 U | 2.6 | 1.7 U | 1.7 U | 0.96 J Z | 3.3 |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 20 U | 19 U | 20 U | 19 U | 19 U | 18 U | 19 U | 18 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 0.94 J Z | 1.8 U | 1.8 U | 1.2 J Z | 1.7 U | 1.7 U | 1.7 U | 1.5 J Z |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 19 U | 18 U | 18 U | 18 U | 18 U | 17 U | 18 U | 17 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.0 J Z | 1.8 U | 1.8 U | 1.4 J Z | 1.7 U | 1.7 U | 1.7 U | 1.2 J Z |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.9 | 1.8 U | 1.8 U | 3.8 | 1.7 U | 1.7 U | 1.2 J Z | 4.5 |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 2.3 | 1.8 U | 1.8 U | 4.3 | 1.7 U | 1.7 U | 1.2 J Z | 3.4 |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 0.75 J Z | 1.8 U | 1.8 U | 13 | 0.77 J Z | 1.7 U | 7.2 | 6.8 |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.9 | 1.8 U | 1.8 U | 3.2 | 1.7 U | 1.7 U | 1.0 J Z | 2.9 |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 0.86 J Z | 1.8 U | 1.8 U | 1.6 J Z | 1.7 U | 1.7 U | 1.7 U | 1.9 |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.8 U | 1.8 U | 1.8 U | 0.90 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 0.88 J Z | 1.8 U | 1.8 U | 1.2 J Z | 1.7 U | 1.7 U | 1.7 U | 1.4 J Z |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 0.81 J Z | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 20 U | 19 U | 20 U | 19 U | 19 U | 18 U | 19 U | 18 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 20 U | 19 U | 20 U | 19 U | 19 U | 18 U | 19 U | 18 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.4 J Z | 1.8 U | 1.8 U | 2.3 | 1.7 U | 1.7 U | 1.7 U | 1.8 |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 20 U | 19 U | 20 U | 19 | 19 U | 18 U | 9.0 J Z | 18 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.3 J Z | 1.8 U | 1.8 U | 1.7 | 1.7 U | 1.7 U | 1.1 J Z | 1.7 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.1 J Z | 1.7 U | 1.1 J Z | 0.96 J Z | 1.7 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.2 J Z | 1.8 U | 1.8 U | 1.6 J Z | 1.7 U | 1.7 U F | 1.0 J Z | 1.7 U |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.9 | 1.7 U | 1.8 | 1.4 J Z | 1.7 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-531-SA7-SB-0.0-0.5 | SL-532-SA7-SB-0.0-0.5 | SL-532-SA7-SB-3.0-4.0 | SL-533-SA7-SB-0.0-0.5 | SL-533-SA7-SB-2.5-3.5 | SL-534-SA7-SB-0.0-0.5 | SL-534-SA7-SB-5.5-6.5 | SL-535-SA7-SB-0.0-0.5 | SL-535-SA7-SB-4.0-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 04/18/2013 | 04/18/2013 | 06/03/2013 | 04/18/2013 | 06/03/2013 | 04/12/2013 | 04/15/2013 | 04/12/2013 | 04/12/2013 |
| | | | | SDG | PH034 | PH034 | PH045 | PH034 | PH045 | PH030 | PH031 | PH030 | PH030 |
| | | | | Start Depth | 0 | 0 | 3 | 0 | 2.5 | 0 | 5.5 | 0 | 4 |
| | | | | End Depth | 0.5 | 0.5 | 4 | 0.5 | 3.5 | 0.5 | 6.5 | 0.5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 18 U | 18 U | 7.5 J Z | 6.5 J Z | 19 U | 9.3 J Z | 8.0 J Z | 6.3 J Z | 19 U |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 18 U | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 18 U | 19 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 0.40 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 1.4 J Z | 0.80 J Z | 1.7 U | 1.5 J Z | 1.7 U | 1.7 | 1.7 U | 1.2 J Z | 1.7 U |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 18 U | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 18 U | 19 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 0.86 J Z | 1.7 U | 1.7 U | 0.82 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 17 U | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U | 18 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 0.86 J Z | 1.7 U | 1.7 U | 0.77 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.4 J Z | 1.7 U | 1.7 U | 1.9 | 1.7 U | 1.4 J Z | 1.7 U | 1.2 J Z | 1.7 U |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.5 J Z | 0.96 J Z | 0.75 J Z | 1.8 | 1.7 U | 1.8 | 1.7 U | 1.1 J Z | 1.7 U |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 4.4 | 1.7 U | 1.7 U | 8.7 | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.4 J Z | 0.61 J Z | 0.58 J Z | 1.6 J Z | 1.7 U | 1.5 J Z | 1.7 U | 1.1 J Z | 1.7 U |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.0 J Z | 1.7 U | 0.91 J Z | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 18 U | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 18 U | 19 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 18 U | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 18 U | 19 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.3 J Z | 1.5 J Z | 1.7 U | 0.95 J Z | 1.7 U | 1.1 J Z | 1.7 U | 0.76 J Z | 1.7 U |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 18 U | 18 U | 19 U | 12 J Z | 19 U | 19 U | 19 U | 18 U | 19 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 0.86 J Z | 1.7 U | 1.4 J Z | 1.7 U | 0.79 J Z | 1.7 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 0.90 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.1 J Z | 0.92 J Z | 1.0 J Z | 1.1 J Z | 1.1 J Z | 1.7 U F | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 0.87 J Z | 1.7 U | 1.7 U | 0.86 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-535-SA7-SB-9.0-10.0 | SL-536-SA7-SB-0.0-0.5 | SL-536-SA7-SB-3.0-4.0 | SL-836-SA7-SB-3.0-4.0 | SL-537-SA7-SB-0.0-0.5 | SL-538-SA7-SB-0.0-0.5 | SL-539-SA7-SB-0.0-0.5 | SL-540-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | FD | N | N | N | N |
| | | | | Sample Date | 04/12/2013 | 04/11/2013 | 04/12/2013 | 04/12/2013 | 04/15/2013 | 04/15/2013 | 04/08/2013 | 04/09/2013 |
| | | | | SDG | PH030 | PH029 | PH030 | PH030 | PH031 | PH031 | PH027 | PH027 |
| | | | | Start Depth | 9 | 0 | 3 | 3 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 10 | 0.5 | 4 | 4 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 U | 10 J Z | 18 U | 18 U | 32 | 18 U | 180 U | 15 J Z | |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 18 U | 18 U | 18 U | 18 U | 18 U | 180 U | 19 U | |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 0.41 J Z | 1.7 U | 1.7 U | 1.7 U | 0.50 J Z | 6.0 J Z | 1.7 U | |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 1.7 U | 11 | 2.6 J Q | 3.8 | 3.1 | 9.6 | 64 | 1.5 J Z | |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 18 U | 18 U | 18 U | 18 U | 18 U | 180 U | 19 U | |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.7 U | 3 | 1.1 J Z | 1.7 | 1.6 J Z | 3.7 | 17 U | 0.98 J Z | |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 U | 4.3 J Z | 17 U | 17 U | 17 U | 3.9 J Z | 170 U | 18 UJ Q | |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.7 U | 2.4 | 0.91 J Z | 1.3 J Z | 0.97 J Z | 3.1 | 17 U | 1.7 U | |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.7 U | 9.9 | 2.1 | 3.5 | 3 | 8.8 | 11 J Z | 1.4 J Z | |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.7 U | 10 | 2.4 | 3.5 | 2.5 | 8.2 | 82 | 1.4 J Z | |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.7 U | 3.2 | 0.89 J Z | 1.0 J Z | 1.4 J Z | 3.2 | 17 U | 1.7 U | |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 17 U | 1.7 U | |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.7 U | 7 | 1.8 | 2.6 | 2.8 | 6.4 | 22 | 1.6 J Z | |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.7 U | 4.4 | 1.2 J Z | 1.5 J Z | 1.5 J Z | 4.4 | 17 U | 0.74 J Z | |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 0.89 J Z | 17 U | 1.7 U | |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.7 U | 2.3 | 0.98 J Z | 0.91 J Z | 1.1 J Z | 3.4 | 17 U | 1.7 UJ FD | |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 3.4 | 1.7 U | 17 U | 1.7 U | |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 17 U | 1.7 U | |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 18 U | 18 U | 18 U | 18 U | 18 U | 180 U | 19 U | |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 7.6 J Z | 18 U | 18 U | 18 U | 18 U | 180 U | 19 U | |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.7 U | 5.8 | 1.2 J Z | 2 | 2.1 | 4.8 | 63 | 0.77 J Z | |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 18 U | 18 U | 18 U | 18 U | 18 U | 180 U | 6.7 J Z | |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 0.72 J Z | 1.7 U | 1.7 U | 1.7 U | 0.79 J Z | 17 U | 1.7 U | |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 17 U | 1.7 U | |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.7 U | 1.2 J Z | 1.7 U | 1.7 U | 1.7 U F | 0.88 J Z | 17 U | 1.7 UJ F, FD | |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 0.72 J Z | 0.93 J Z | 17 U | 1.7 U | |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-840-SA7-SB-0.0-0.5 | SL-541-SA7-SB-0.0-0.5 | SL-541-SA7-SB-2.0-3.0 | SL-542-SA7-SB-0.0-0.5 | SL-544-SA7-SB-0.0-0.5 | SL-547-SA7-SB-0.0-0.5 | SL-548-SA7-SB-0.0-0.5 | SL-549-SA7-SB-0.0-0.5 | SL-551-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | FD | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 04/09/2013 | 10/02/2013 | 10/02/2013 | 04/09/2013 | 04/09/2013 | 04/09/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 |
| | | | | SDG | PH027 | PH121 | PH121 | PH027 | PH027 | PH028 | PH028 | PH028 | PH028 |
| | | | | Start Depth | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 3 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 13 J Z | 190 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 9.0 J Z |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 190 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 18 U | 1.7 U | 1.8 | 1.7 U | 1.7 U | 0.35 J Z | 1.7 U | 0.47 J Z | |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 2.1 | 18 U | 1.7 U | 13 | 1.1 J Z | 4.7 | 3.9 | 1.6 J Z | 6.2 | |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 190 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U | |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 0.77 J Z | 18 U | 1.7 U | 3.7 | 1.2 J Z | 1.0 J Z | 1.3 J Z | 1.7 U | 2.3 | |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 17 U | 180 U | 17 U | 4.0 J Z | 17 U | 17 U | 17 U | 17 U | 18 U | |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.7 U | 18 U | 1.7 U | 3.2 | 1.7 U | 1.0 J Z | 1.0 J Z | 1.7 U | 1.6 J Z | |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.6 J Z | 18 U | 1.7 U | 8 | 1.4 J Z | 2.9 | 3 | 1.5 J Z | 5 | |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.7 | 18 U | 1.7 U | 12 | 1.1 J Z | 4.7 | 4 | 1.6 J Z | 6.8 | |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.7 U | 18 U | 1.7 U | 4.4 | 1.7 U | 0.93 J Z | 1.2 J Z | 1.7 U | 1.9 | |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 18 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.5 J Z | 18 U | 0.42 J Z | 7.8 | 1.6 J Z | 2.9 | 2.8 | 1.7 | 4.3 | |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 0.89 J Z | 18 U | 1.7 U | 5.6 | 0.71 J Z | 1.4 J Z | 1.5 J Z | 1.7 U | 2.8 | |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 18 U | 1.7 U | 1.0 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 0.80 J FD, Z | 18 U | 1.7 U | 5.8 | 1.7 U | 1.1 J Z | 1.2 J Z | 1.7 U | 1.9 | |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 18 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 18 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 190 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U | |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 190 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U | |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.1 J Z | 18 U | 1.7 U | 6.6 | 0.84 J Z | 3 | 3.3 | 0.93 J Z | 5 | |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 8.7 J Z | 190 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U | |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 18 U | 1.7 U | 0.71 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 18 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 0.94 J Z | 1.7 U | 1.0 J Z | |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.7 UJ FD | 18 U | 1.7 U | 1.2 J Z | 1.7 U | 1.7 U | 2.6 | 1.0 J Z | 2.5 | |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.7 U | 18 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.6 J Z | 0.73 J Z | 1.7 | |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-551-SA7-SB-2.0-3.0 | SL-552-SA7-SB-0.0-0.5 | SL-553-SA7-SB-0.0-0.5 | SL-554-SA7-SB-0.0-0.5 | SL-555-SA7-SB-0.0-0.5 | SL-557-SA7-SB-0.0-0.5 | SL-558-SA7-SB-0.0-0.5 | SL-558-SA7-SB-3.0-4.0 | SL-559-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 04/10/2013 | 04/10/2013 | 04/11/2013 | 04/11/2013 | 04/11/2013 | 04/17/2013 | 04/16/2013 | 04/17/2013 | 04/16/2013 |
| | | | | SDG | PH028 | PH028 | PH029 | PH029 | PH029 | PH033 | PH032 | PH033 | PH032 |
| | | | | Start Depth | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| | | | | End Depth | 3 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 4 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 U | 29 | 6.8 J Z | 190 U | 1900 U | 7.3 J Z | 14 J Z | 19 U | 180 U |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 19 U | 18 U | 190 U | 1900 U | 19 U | 18 U | 19 U | 180 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 17 U | 180 U | 1.7 U | 0.36 J Z | 1.7 U | 17 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 0.74 J Z | 3.7 | 1.2 J Z | 8.3 J Z | 180 U | 1.0 J Z | 3.8 | 1.7 U | 11 J Z |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 19 U | 18 U | 190 U | 1900 U | 19 U | 18 U | 19 U | 180 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.7 U | 2 | 1.7 U | 35 | 180 U | 1.7 U | 1.2 J Z | 1.7 U | 9.5 J Z |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 U | 18 U | 17 U | 80 J Z | 1800 U | 18 U | 17 U | 18 U | 170 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.7 U | 1.3 J Z | 1.7 U | 17 U | 180 U | 1.7 U | 0.90 J Z | 1.7 U | 17 U |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.7 U | 3.7 | 1.2 J Z | 68 | 180 U | 1.2 J Z | 3.1 | 1.7 U | 18 |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 0.72 J Z | 4.3 | 1.2 J Z | 17 U | 180 U | 1.3 J Z | 3.5 | 1.7 U | 9.1 J Z |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.7 U | 1.7 | 1.7 U | 17 U | 180 U | 3.8 | 1.1 J Z | 4.4 | 17 U |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 17 U | 180 U | 1.7 U | 1.7 U | 1.7 U | 17 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 0.76 J Z | 3 | 1.1 J Z | 17 U | 180 U | 0.97 J Z | 3.2 | 0.47 J Z | 23 |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.7 U | 2.2 | 1.7 U | 17 U | 180 U | 1.7 U | 1.8 | 1.7 U | 7.8 J Z |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 17 U | 180 U | 1.7 U | 1.7 U | 1.7 U | 17 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.7 U | 1.3 J Z | 1.7 U | 17 U | 180 U | 1.7 U | 1.4 J Z | 1.7 U | 17 U |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 1.7 U | 17 U | 180 U | 1.7 U | 1.7 U | 1.7 U | 17 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 17 U | 180 U | 1.7 U | 1.7 U | 1.7 U | 17 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 19 U | 18 U | 190 U | 1900 U | 19 U | 18 U | 19 U | 180 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 19 U | 18 U | 190 U | 1900 U | 19 U | 870 | 24 J Q | 180 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.7 U | 1.7 U | 0.68 J Z | 17 U | 180 U | 0.80 J Z | 3.3 | 1.7 U | 8.2 J Z |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 6.4 J Z | 18 U | 190 U | 1900 U | 19 | 18 U | 19 U | 180 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 17 U | 180 U | 1.7 U | 1.7 U | 1.7 U | 17 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 17 U | 180 U | 1.7 U | 1.7 U | 1.7 U | 17 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 17 U | 180 U | 1.7 U F | 1.6 J Z | 1.7 U | 17 U |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 17 U | 180 U | 1.7 U | 1.2 J Z | 1.7 U | 17 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-559-SA7-SB-2.0-3.0 | SL-560-SA7-SB-0.0-0.5 | SL-560-SA7-SB-3.0-4.0 | SL-561-SA7-SB-0.0-0.5 | SL-562-SA7-SB-0.0-0.5 | SL-562-SA7-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N |
| | | | | Sample Date | 04/16/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 | 04/26/2013 | 04/26/2013 |
| | | | | SDG | PH032 | PH032 | PH032 | PH032 | PH040 | PH040 |
| | | | | Start Depth | 2 | 0 | 3 | 0 | 0 | 2 |
| | | | | End Depth | 3 | 0.5 | 4 | 0.5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 78 J Z | 6.6 J Z | 20 U | 8.8 J Z | 190 U | 150 J Z |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 190 U | 19 U | 20 U | 19 U | 190 U | 190 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 17 U | 4.6 | 1.9 U | 2.3 | 17 U | 17 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 17 U | 62 | 1.2 J Z | 38 | 19 | 13 J Z |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 190 U | 19 U | 20 U | 19 U | 190 U | 190 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 17 U | 12 | 1.9 U | 1.6 J Z | 9.8 J Z | 40 |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 180 U | 25 | 19 U | 18 U | 180 U | 100 J Z |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 17 U | 13 | 1.9 U | 1.1 J Z | 7.8 J Z | 15 J Z |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 17 U | 62 | 1.3 J Z | 6.7 | 23 | 39 |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 17 U | 54 | 1.9 U | 42 | 22 | 15 J Z |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 17 U | 26 | 1.9 U | 2.9 | 7.9 J Z | 46 |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 9.2 J Z | 1.7 U | 1.9 U | 0.94 J Z | 17 U | 17 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 14 J Z | 47 | 2.2 | 11 | 16 J Z | 39 |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 17 U | 41 | 1.9 U | 2.2 | 12 J Z | 28 |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 17 U | 4.4 | 1.9 U | 1.7 U | 17 U | 17 |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 17 U | 42 | 1.9 U | 3.4 | 17 U | 7.9 J Z |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 17 U | 1.7 U | 1.9 U | 1.7 U | 17 U | 17 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 7.8 J Z | 1.7 U | 1.9 U | 1.7 U | 17 U | 17 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 190 U | 19 U | 20 U | 19 U | 190 U | 190 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 190 U | 7.4 J Z | 20 U | 33 | 190 U | 190 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 16 J Z | 8.6 | 1.9 U | 29 | 12 J Z | 17 U |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 190 U | 19 U | 20 U | 19 U | 190 U | 190 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 28 | 1.7 U | 1.9 U | 1.0 J Z | 17 U | 17 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 560 | 1.7 U | 1.9 U | 1.2 J Z | 17 U | 17 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 200 | 0.93 J Z | 1.9 U | 3.3 | 17 U | 17 U |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 690 | 0.94 J Z | 1.9 U | 1.7 | 17 U | 17 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-500-SA7-SB-0.0-0.5 | SL-501-SA7-SB-0.0-0.5 | SL-502-SA7-SB-0.0-0.5 | SL-503-SA7-SB-0.0-0.5 | SL-504-SA7-SB-0.0-0.5 | SL-504-SA7-SB-4.0-5.0 | SL-505-SA7-SB-0.0-0.5 | SL-506-SA7-SB-0.0-0.5 | SL-507-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 04/17/2013 | 04/17/2013 | 04/17/2013 | 04/22/2013 | 04/22/2013 | 04/22/2013 | 04/17/2013 | 04/25/2013 | 04/24/2013 |
| | | | | SDG | PH033 | PH033 | PH033 | PH036 | PH036 | PH036 | PH033 | PH039 | PH039 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 17 U | 18 | 11 J S, Z | 41 | 8.3 J S, Z | 44 | 17 U | 17 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 33 U | 33 U | 24 J Z | 16 J S, Z | 57 | 13 J S, Z | 33 U | 34 UJ E | 34 UJ E |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 33 U | 33 U | 34 U | 34 U | 34 U | 35 U | 33 U | 34 UJ E | 34 UJ E |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 33 U | 33 U | 34 U | 34 U | 34 U | 35 U | 33 U | 34 UJ E | 34 UJ E |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | Sample Name | SL-508-SA7-SB-0.0-0.5 | SL-509-SA7-SB-0.0-0.5 | SL-510-SA7-SB-0.0-0.5 | SL-810-SA7-SB-0.0-0.5 | SL-511-SA7-SB-0.0-0.5 | SL-512-SA7-SB-0.0-0.5 | SL-513-SA7-SB-0.0-0.5 | SL-913-SA7-SB-0.0-0.5 | SL-514-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Type | N | N | N | FD | N | N | N | FD | N |
| | | Sample Date | 04/25/2013 | 04/25/2013 | 04/22/2013 | 04/22/2013 | 04/19/2013 | 04/23/2013 | 06/04/2013 | 06/04/2013 | 06/06/2013 |
| | | SDG | PH039 | PH039 | PH036 | PH036 | PH035 | PH037 | PH046 | PH046 | PH049 |
| | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 17 U | 18 U | 17 U | 7.8 J Z | 17 U | 17 U | 17 U | 17 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 110 J S | 100 | 14 J FD, Z | 25 J FD, S | 13 J Z | 17 U | 13 J Z | 13 J Z | 52 |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 49 J S, E | 57 J E | 17 J FD, Z | 32 J FD, S, Z | 34 | 34 U | 33 UJ FD | 17 J FD, Z | 180 |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 33 UJ E | 34 UJ E | 34 U | 34 U | 34 U | 34 U | 33 U | 34 U | 33 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 33 UJ E | 34 UJ E | 34 U | 34 U | 34 U | 34 U | 33 U | 34 U | 33 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-515-SA7-SB-0.0-0.5 | SL-516-SA7-SB-0.0-0.5 | SL-517-SA7-SB-0.0-0.5 | SL-518-SA7-SB-0.0-0.5 | SL-519-SA7-SB-0.0-0.5 | SL-819-SA7-SB-0.0-0.5 | SL-519-SA7-SB-2.0-3.0 | SL-520-SA7-SB-0.0-0.5 | SL-521-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | | | Sample Date | 06/06/2013 | 06/04/2013 | 04/22/2013 | 04/19/2013 | 04/25/2013 | 04/25/2013 | 04/25/2013 | 04/19/2013 | 04/15/2013 |
| | | | | SDG | PH049 | PH046 | PH036 | PH035 | PH039 | PH039 | PH039 | PH035 | PH031 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 18 U | 280 J S | 87 U | 17 U | 17 U | 17 U | 5.0 J Z | 17 U | |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 18 U | 87 U | 430 | 7.0 J Z | 6.1 J Z | 17 U | 17 U | 6.7 J Z | |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 18 U | 87 U | 87 U | 17 U | 17 U | 17 U | 17 U | 17 U | |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 18 U | 87 U | 87 U | 17 U | 17 U | 17 U | 17 U | 17 U | |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 33 U | 34 U | 250 J S | 110 J Z | 33 UJ E | 34 UJ E | 34 UJ E | 24 J Z | 17 J Z | |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 18 U | 87 U | 87 U | 17 U | 17 U | 17 U | 17 U | 17 U | |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 33 U | 34 U | 170 U | 170 U | 33 UJ E | 34 UJ E | 34 UJ E | 33 U | 33 U | |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 18 U | 87 U | 87 U | 17 U | 17 U | 17 U | 17 U | 17 U | |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 18 U | 87 U | 87 U | 17 U | 17 U | 17 U | 17 U | 17 U | |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 18 U | 87 U | 87 U | 17 U | 17 U | 17 U | 17 U | 17 U | |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 18 U | 87 U | 87 U | 17 U | 17 U | 17 U | 17 U | 17 U | |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 33 U | 34 U | 170 U | 170 U | 33 UJ E | 34 UJ E | 34 UJ E | 33 U | 33 U | |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-522-SA7-SB-0.0-0.5 | SL-524-SA7-SB-0.0-0.5 | SL-524-SA7-SB-1.0-2.0 | SL-924-SA7-SB-1.0-2.0 | SL-525-SA7-SB-0.0-0.5 | SL-525-SA7-SB-4.0-5.0 | SL-525-SA7-SB-6.5-7.5 | SL-525-SA7-SB-9.5-10.5 | SL-526-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | FD | N | N | N | N | N |
| | | | Sample Date | 04/15/2013 | 06/04/2013 | 06/04/2013 | 06/04/2013 | 04/23/2013 | 06/03/2013 | 04/24/2013 | 06/03/2013 | 04/23/2013 |
| | | | SDG | PH031 | PH046 | PH046 | PH046 | PH037 | PH045 | PH038 | PH045 | PH037 |
| | | | Start Depth | 0 | 0 | 1 | 1 | 0 | 4 | 6.5 | 9.5 | 0 |
| | | | End Depth | 0.5 | 0.5 | 2 | 2 | 0.5 | 5 | 7.5 | 10.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 9.5 J Z | 18 U | 18 U | 19 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 18 U | 18 U | 18 U | 47 | 18 U | 14 J Z | 18 U | 19 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 34 U | 36 U | 36 U | 36 U | 34 U | 34 U | 34 U | 34 U | 36 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 34 U | 36 U | 36 U | 36 U | 34 U | 34 U | 34 U | 34 U | 36 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 34 U | 36 U | 36 U | 36 U | 34 U | 34 U | 34 U | 34 U | 36 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-526-SA7-SB-3.5-4.5 | SL-526-SA7-SB-9.0-10.0 | SL-527-SA7-SB-0.0-0.5 | SL-527-SA7-SB-2.5-3.5 | SL-528-SA7-SB-0.0-0.5 | SL-529-SA7-SB-0.0-0.5 | SL-530-SA7-SB-0.0-0.5 | SL-531-SA7-SB-0.0-0.5 | SL-532-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 04/23/2013 | 06/03/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/18/2013 | 04/18/2013 | 04/18/2013 |
| | | | | SDG | PH037 | PH045 | PH038 | PH038 | PH038 | PH038 | PH034 | PH034 | PH034 |
| | | | | Start Depth | 3.5 | 9 | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 4.5 | 10 | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 18 U | 18 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 18 U | 18 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 18 U | 18 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 18 U | 18 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 35 U | 36 U | 34 U | 34 U | 34 U | 35 U | 34 U | 34 U | 34 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 18 U | 18 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 35 U | 36 U | 34 U | 34 U | 34 U | 35 U | 34 U | 34 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 18 U | 18 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 18 U | 18 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 18 U | 18 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 18 U | 18 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 35 U | 36 U | 34 U | 34 U | 34 U | 35 U | 34 U | 34 U | 34 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-532-SA7-SB-3.0-4.0 | SL-533-SA7-SB-0.0-0.5 | SL-533-SA7-SB-2.5-3.5 | SL-534-SA7-SB-0.0-0.5 | SL-534-SA7-SB-5.5-6.5 | SL-535-SA7-SB-0.0-0.5 | SL-535-SA7-SB-4.0-5.0 | SL-535-SA7-SB-9.0-10.0 | SL-536-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/03/2013 | 04/18/2013 | 06/03/2013 | 04/12/2013 | 04/15/2013 | 04/12/2013 | 04/12/2013 | 04/12/2013 | 04/11/2013 |
| | | | SDG | PH045 | PH034 | PH045 | PH030 | PH031 | PH030 | PH030 | PH030 | PH029 |
| | | | Start Depth | 3 | 0 | 2.5 | 0 | 5.5 | 0 | 4 | 9 | 0 |
| | | | End Depth | 4 | 0.5 | 3.5 | 0.5 | 6.5 | 0.5 | 5 | 10 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 18 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 18 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 18 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 18 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 34 U | 34 U | 34 U | 34 U | 34 U | 33 U | 34 U | 34 U | 33 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 18 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 34 U | 34 U | 34 U | 34 U | 34 U | 33 U | 34 U | 34 U | 33 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 18 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 18 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 18 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 18 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 34 U | 34 U | 34 U | 34 U | 34 U | 33 U | 34 U | 34 U | 33 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-536-SA7-SB-3.0-4.0 | SL-836-SA7-SB-3.0-4.0 | SL-537-SA7-SB-0.0-0.5 | SL-538-SA7-SB-0.0-0.5 | SL-539-SA7-SB-0.0-0.5 | SL-540-SA7-SB-0.0-0.5 | SL-840-SA7-SB-0.0-0.5 | SL-541-SA7-SB-0.0-0.5 | SL-541-SA7-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | FD | N | N | N | N | FD | N | N |
| | | | | Sample Date | 04/12/2013 | 04/12/2013 | 04/15/2013 | 04/15/2013 | 04/08/2013 | 04/09/2013 | 04/09/2013 | 10/02/2013 | 10/02/2013 |
| | | | | SDG | PH030 | PH030 | PH031 | PH031 | PH027 | PH027 | PH027 | PH121 | PH121 |
| | | | | Start Depth | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | | | End Depth | 4 | 4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 17 U | 11 J S, Z | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 17 U | 17 U | 17 U | 37 | 18 U | 17 U | 18 U | 17 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 33 U | 33 U | 33 U | 33 U | 23 J Z | 34 U | 34 U | 35 U | 34 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 33 U | 33 U | 33 U | 33 U | 34 U | 34 U | 34 U | 35 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 18 U | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 33 U | 33 U | 33 U | 33 U | 34 U | 34 U | 34 U | 35 U | 34 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-542-SA7-SB-0.0-0.5 | SL-543A-SA7-SB-0.0-0.5 | SL-543B-SA7-SB-0.0-0.5 | SL-543C-SA7-SB-0.0-0.5 | SL-543D-SA7-SB-0.0-0.5 | SL-544-SA7-SB-0.0-0.5 | SL-545A-SA7-SB-0.0-0.5 | SL-545B-SA7-SB-0.0-0.5 | SL-545C-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 04/09/2013 | 04/25/2013 | 04/25/2013 | 04/25/2013 | 04/25/2013 | 04/09/2013 | 06/03/2013 | 06/03/2013 | 06/03/2013 |
| | | | | SDG | PH027 | PH040 | PH040 | PH040 | PH040 | PH027 | PH046 | PH046 | PH046 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 34 U | 33 UJ E | 33 UJ E | 33 UJ E | 33 UJ E | 34 U | 34 U | 35 U | 34 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 34 U | 33 UJ E | 33 UJ E | 33 UJ E | 33 UJ E | 34 U | 34 U | 35 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 34 U | 33 UJ E | 33 UJ E | 33 UJ E | 33 UJ E | 34 U | 34 U | 35 U | 34 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-547-SA7-SB-0.0-0.5 | SL-548-SA7-SB-0.0-0.5 | SL-549-SA7-SB-0.0-0.5 | SL-551-SA7-SB-0.0-0.5 | SL-551-SA7-SB-2.0-3.0 | SL-552-SA7-SB-0.0-0.5 | SL-553-SA7-SB-0.0-0.5 | SL-554-SA7-SB-0.0-0.5 | SL-555-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 04/09/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/11/2013 | 04/11/2013 | 04/11/2013 |
| | | | | SDG | PH028 | PH028 | PH028 | PH028 | PH028 | PH028 | PH029 | PH029 | PH029 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 34 U | 34 U | 34 U | 34 U | 34 U | 34 U | 33 U | 34 U | 35 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 34 U | 34 U | 34 U | 34 U | 34 U | 34 U | 33 U | 34 U | 35 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 34 U | 34 U | 34 U | 34 U | 34 U | 34 U | 33 U | 34 U | 35 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-557-SA7-SB-0.0-0.5 | SL-558-SA7-SB-0.0-0.5 | SL-558-SA7-SB-3.0-4.0 | SL-559-SA7-SB-0.0-0.5 | SL-559-SA7-SB-2.0-3.0 | SL-560-SA7-SB-0.0-0.5 | SL-560-SA7-SB-3.0-4.0 | SL-561-SA7-SB-0.0-0.5 | SL-562-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/17/2013 | 04/16/2013 | 04/17/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 | 04/26/2013 |
| | | | SDG | PH033 | PH032 | PH033 | PH032 | PH032 | PH032 | PH032 | PH032 | PH040 |
| | | | Start Depth | 0 | 0 | 3 | 0 | 2 | 0 | 3 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 4 | 0.5 | 3 | 0.5 | 4 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 19 U | 17 U | 17 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 17 U | 17 U | 13 J Z | 12 J Z | 18 U | 19 U | 17 U | 17 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 19 U | 17 U | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 19 U | 17 U | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 34 U | 33 U | 34 U | 17 J Z | 15 J Z | 34 U | 36 U | 34 U | 34 UJ E |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 19 U | 17 U | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 34 U | 33 U | 34 U | 34 U | 34 U | 34 U | 36 U | 34 U | 34 UJ E |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 19 U | 17 U | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 19 U | 17 U | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 19 U | 17 U | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 19 U | 17 U | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 34 U | 33 U | 34 U | 34 U | 34 U | 34 U | 36 U | 34 U | 34 UJ E |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | |
|---|---|---|---|---|
| | | | Sample Name | SL-562-SA7-SB-2.0-3.0 |
| | | | Sample Type | N |
| | | | Sample Date | 04/26/2013 |
| | | | SDG | PH040 |
| | | | Start Depth | 2 |
| | | | End Depth | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 33 UJ E |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 33 UJ E |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 33 UJ E |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | Sample Name | SL-503-SA7-SB-0.0-0.5 | SL-504-SA7-SB-0.0-0.5 | SL-504-SA7-SB-4.0-5.0 | SL-510-SA7-SB-0.0-0.5 | SL-810-SA7-SB-0.0-0.5 | SL-511-SA7-SB-0.0-0.5 | SL-513-SA7-SB-0.0-0.5 | SL-913-SA7-SB-0.0-0.5 | SL-515-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Type | N | N | N | N | FD | N | N | FD | N |
| | | Sample Date | 04/22/2013 | 04/22/2013 | 04/22/2013 | 04/22/2013 | 04/22/2013 | 04/19/2013 | 06/04/2013 | 06/04/2013 | 06/06/2013 |
| | | SDG | PH036 | PH036 | PH036 | PH036 | PH036 | PH035 | PH046 | PH046 | PH049 |
| | | Start Depth | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | End Depth | 0.5 | 0.5 | 5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8081B | 1024-57-3 | Heptachlor Epoxide | µg/kg | 0.85 U | 0.86 U | 0.88 U | 0.86 U | 0.86 U | 0.87 U | 0.85 U | 0.84 U | 0.84 U |
| 8081B | 1031-07-8 | Endosulfan Sulfate | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8081B | 2385-85-5 | Mirex | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 0.63 J Z | 0.89 J Z | 1.7 U |
| 8081B | 309-00-2 | Aldrin | µg/kg | 0.85 U | 0.86 U | 0.88 U | 0.86 U | 0.86 U | 0.87 U | 0.85 U | 0.84 U | 0.84 U |
| 8081B | 319-84-6 | Alpha-Bhc | µg/kg | 0.85 U | 0.86 U | 0.88 U | 0.86 U | 0.86 U | 0.87 U | 0.85 U | 0.84 U | 0.84 U |
| 8081B | 319-85-7 | Beta-Bhc | µg/kg | 1.9 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 1.9 U | 1.9 U | 1.9 UJ L |
| 8081B | 319-86-8 | Delta-Bhc | µg/kg | 0.85 U | 0.86 U | 0.88 U | 0.86 U | 0.86 U | 0.87 U | 0.85 U | 0.84 U | 0.84 U |
| 8081B | 33213-65-9 | Endosulfan II | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8081B | 50-29-3 | 4,4'-DDT | µg/kg | 0.83 J Z | 5.1 U | 4 | 0.72 J FD, Z | 1.8 UJ FD | 6.5 | 7.0 J Q | 6.3 | 1.7 U |
| 8081B | 53494-70-5 | Endrin Ketone | µg/kg | 1.8 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.8 U | 1.8 U | 1.8 U |
| 8081B | 57-74-9 | Chlordane | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U | 17 U | 17 U |
| 8081B | 58-89-9 | Gamma-Bhc (Lindane) | µg/kg | 0.85 U | 0.86 U | 0.88 U | 0.86 U | 0.86 U | 0.87 U | 0.85 U | 0.84 U | 0.84 U |
| 8081B | 60-57-1 | Dieldrin | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8081B | 72-20-8 | Endrin | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8081B | 72-43-5 | Methoxychlor | µg/kg | 6.9 U | 6.9 U | 7.1 U | 7.0 U | 6.9 U | 7.0 U | 6.8 U | 6.8 U | 6.8 U |
| 8081B | 72-54-8 | 4,4'-DDD | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8081B | 72-55-9 | 4,4'-DDE | µg/kg | 1.7 U | 1.9 U | 1.8 U | 0.67 J FD, Z | 1.4 J FD, Z | 2.7 | 0.53 J FD, Z | 1.8 UJ FD | 1.7 U |
| 8081B | 7421-93-4 | Endrin Aldehyde | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8081B | 76-44-8 | Heptachlor | µg/kg | 0.85 U | 0.86 U | 0.88 U | 0.86 U | 0.86 U | 0.18 J Z | 0.85 U | 0.84 U | 0.84 U |
| 8081B | 8001-35-2 | Technical Toxaphene | µg/kg | 34 U | 34 U | 35 U | 34 U | 34 U | 35 U | 34 U | 34 U | 33 U |
| 8081B | 959-98-8 | Endosulfan I | µg/kg | 0.85 U | 0.86 U | 0.88 U | 0.86 U | 0.86 U | 0.87 U | 0.85 U | 0.84 U | 0.84 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | |
|---|---|---|---|---|---|
| | | | Sample Name | SL-521-SA7-SB-0.0-0.5 | SL-522-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N |
| | | | Sample Date | 04/15/2013 | 04/15/2013 |
| | | | SDG | PH031 | PH031 |
| | | | Start Depth | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | |
| 8081B | 1024-57-3 | Heptachlor Epoxide | µg/kg | 0.85 U | 0.86 U |
| 8081B | 1031-07-8 | Endosulfan Sulfate | µg/kg | 1.7 U | 1.8 U |
| 8081B | 2385-85-5 | Mirex | µg/kg | 1.7 U | 1.8 U |
| 8081B | 309-00-2 | Aldrin | µg/kg | 0.85 U | 0.86 U |
| 8081B | 319-84-6 | Alpha-Bhc | µg/kg | 0.85 U | 0.86 U |
| 8081B | 319-85-7 | Beta-Bhc | µg/kg | 1.9 U | 2.0 U |
| 8081B | 319-86-8 | Delta-Bhc | µg/kg | 0.85 U | 0.86 U |
| 8081B | 33213-65-9 | Endosulfan II | µg/kg | 1.7 U | 1.8 U |
| 8081B | 50-29-3 | 4,4'-DDT | µg/kg | 0.62 J Z, *# | 1.7 J Z |
| 8081B | 53494-70-5 | Endrin Ketone | µg/kg | 1.8 U | 1.9 U |
| 8081B | 57-74-9 | Chlordane | µg/kg | 17 U | 18 U |
| 8081B | 58-89-9 | Gamma-Bhc (Lindane) | µg/kg | 0.85 U | 0.86 U |
| 8081B | 60-57-1 | Dieldrin | µg/kg | 1.7 U | 1.8 U |
| 8081B | 72-20-8 | Endrin | µg/kg | 1.7 U | 1.8 U |
| 8081B | 72-43-5 | Methoxychlor | µg/kg | 6.8 U | 7.0 U |
| 8081B | 72-54-8 | 4,4'-DDD | µg/kg | 1.7 U | 1.8 U |
| 8081B | 72-55-9 | 4,4'-DDE | µg/kg | 0.80 J Z | 1.5 J Z |
| 8081B | 7421-93-4 | Endrin Aldehyde | µg/kg | 1.7 U | 1.8 U |
| 8081B | 76-44-8 | Heptachlor | µg/kg | 0.85 U | 0.86 U |
| 8081B | 8001-35-2 | Technical Toxaphene | µg/kg | 34 U | 34 U |
| 8081B | 959-98-8 | Endosulfan I | µg/kg | 0.85 U | 0.86 R |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-500-SA7-SB-0.0-0.5 | SL-501-SA7-SB-0.0-0.5 | SL-502-SA7-SB-0.0-0.5 | SL-503-SA7-SB-0.0-0.5 | SL-504-SA7-SB-0.0-0.5 | SL-504-SA7-SB-4.0-5.0 | SL-505-SA7-SB-0.0-0.5 | SL-506-SA7-SB-0.0-0.5 | SL-507-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/17/2013 | 04/17/2013 | 04/17/2013 | 04/22/2013 | 04/22/2013 | 04/22/2013 | 04/17/2013 | 04/25/2013 | 04/24/2013 |
| | | | SDG | PH033 | PH033 | PH033 | PH036 | PH036 | PH036 | PH033 | PH039 | PH039 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 7.28 | 6.95 | 7.02 | 7.88 | 7.96 | 7.33 | 7.2 | 6.23 | 7.01 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-508-SA7-SB-0.0-0.5 | SL-509-SA7-SB-0.0-0.5 | SL-510-SA7-SB-0.0-0.5 | SL-810-SA7-SB-0.0-0.5 | SL-511-SA7-SB-0.0-0.5 | SL-512-SA7-SB-0.0-0.5 | SL-513-SA7-SB-0.0-0.5 | SL-913-SA7-SB-0.0-0.5 | SL-514-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | FD | N | N | N | FD | N |
| | | | Sample Date | 04/25/2013 | 04/25/2013 | 04/22/2013 | 04/22/2013 | 04/19/2013 | 04/23/2013 | 06/04/2013 | 06/04/2013 | 06/06/2013 |
| | | | SDG | PH039 | PH039 | PH036 | PH036 | PH035 | PH037 | PH046 | PH046 | PH049 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 7.98 | 7.76 | 6.77 | 6.68 | 7.34 | 7.24 | 6.68 | 6.72 | 7.18 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-515-SA7-SB-0.0-0.5 | SL-516-SA7-SB-0.0-0.5 | SL-517-SA7-SB-0.0-0.5 | SL-518-SA7-SB-0.0-0.5 | SL-519-SA7-SB-0.0-0.5 | SL-819-SA7-SB-0.0-0.5 | SL-519-SA7-SB-2.0-3.0 | SL-520-SA7-SB-0.0-0.5 | SL-521-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | | Sample Date | 06/06/2013 | 06/04/2013 | 04/22/2013 | 04/19/2013 | 04/25/2013 | 04/25/2013 | 04/25/2013 | 04/19/2013 | 04/15/2013 |
| | | | SDG | PH049 | PH046 | PH036 | PH035 | PH039 | PH039 | PH039 | PH035 | PH031 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 8.32 | 8.14 | 7.67 | 7.78 | 7.32 | 7.59 | 7.59 | 7.81 | 6.85 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-522-SA7-SB-0.0-0.5 | SL-524-SA7-SB-0.0-0.5 | SL-524-SA7-SB-1.0-2.0 | SL-924-SA7-SB-1.0-2.0 | SL-525-SA7-SB-0.0-0.5 | SL-525-SA7-SB-4.0-5.0 | SL-525-SA7-SB-6.5-7.5 | SL-525-SA7-SB-9.5-10.5 | SL-526-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | FD | N | N | N | N | N |
| | | | Sample Date | 04/15/2013 | 06/04/2013 | 06/04/2013 | 06/04/2013 | 04/23/2013 | 06/03/2013 | 04/24/2013 | 06/03/2013 | 04/23/2013 |
| | | | SDG | PH031 | PH046 | PH046 | PH046 | PH037 | PH045 | PH038 | PH045 | PH037 |
| | | | Start Depth | 0 | 0 | 1 | 1 | 0 | 4 | 6.5 | 9.5 | 0 |
| | | | End Depth | 0.5 | 0.5 | 2 | 2 | 0.5 | 5 | 7.5 | 10.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 6.84 | 8.25 | 8.18 | 8.3 | 6.66 | 7.14 | 7.06 | 7.11 | 7.26 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-526-SA7-SB-3.5-4.5 | SL-526-SA7-SB-9.0-10.0 | SL-527-SA7-SB-0.0-0.5 | SL-527-SA7-SB-2.5-3.5 | SL-528-SA7-SB-0.0-0.5 | SL-529-SA7-SB-0.0-0.5 | SL-530-SA7-SB-0.0-0.5 | SL-531-SA7-SB-0.0-0.5 | SL-532-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/23/2013 | 06/03/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/18/2013 | 04/18/2013 | 04/18/2013 |
| | | | SDG | PH037 | PH045 | PH038 | PH038 | PH038 | PH038 | PH034 | PH034 | PH034 |
| | | | Start Depth | 3.5 | 9 | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 4.5 | 10 | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 6.78 | 6.98 | 6.54 | 6.4 | 6.63 | 6.06 | 7.38 | 6.85 | 7.11 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-532-SA7-SB-3.0-4.0 | SL-533-SA7-SB-0.0-0.5 | SL-533-SA7-SB-2.5-3.5 | SL-534-SA7-SB-0.0-0.5 | SL-534-SA7-SB-5.5-6.5 | SL-535-SA7-SB-0.0-0.5 | SL-535-SA7-SB-4.0-5.0 | SL-535-SA7-SB-9.0-10.0 | SL-536-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/03/2013 | 04/18/2013 | 06/03/2013 | 04/12/2013 | 04/15/2013 | 04/12/2013 | 04/12/2013 | 04/12/2013 | 04/11/2013 |
| | | | SDG | PH045 | PH034 | PH045 | PH030 | PH031 | PH030 | PH030 | PH030 | PH029 |
| | | | Start Depth | 3 | 0 | 2.5 | 0 | 5.5 | 0 | 4 | 9 | 0 |
| | | | End Depth | 4 | 0.5 | 3.5 | 0.5 | 6.5 | 0.5 | 5 | 10 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 7.06 | 6.99 | 6.49 | 7.58 | 7.09 | 7.53 | 7.4 | 7.45 | 7.42 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-536-SA7-SB-3.0-4.0 | SL-836-SA7-SB-3.0-4.0 | SL-537-SA7-SB-0.0-0.5 | SL-538-SA7-SB-0.0-0.5 | SL-539-SA7-SB-0.0-0.5 | SL-541-SA7-SB-0.0-0.5 | SL-541-SA7-SB-2.0-3.0 | SL-542-SA7-SB-0.0-0.5 | SL-544-SA7-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | FD | N | N | N | N | N | N | N |
| | | | Sample Date | 04/12/2013 | 04/12/2013 | 04/15/2013 | 04/15/2013 | 04/08/2013 | 10/02/2013 | 10/02/2013 | 04/09/2013 | 04/09/2013 |
| | | | SDG | PH030 | PH030 | PH031 | PH031 | PH027 | PH121 | PH121 | PH027 | PH027 |
| | | | Start Depth | 3 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | End Depth | 4 | 4 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 7.71 | 7.92 | 7.43 | 7.5 | 7.59 | 8.06 | 8.27 | 8.34 | 7.67 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-547-SA7-SB-0.0-0.5 | SL-548-SA7-SB-0.0-0.5 | SL-549-SA7-SB-0.0-0.5 | SL-551-SA7-SB-0.0-0.5 | SL-551-SA7-SB-2.0-3.0 | SL-552-SA7-SB-0.0-0.5 | SL-553-SA7-SB-0.0-0.5 | SL-554-SA7-SB-0.0-0.5 | SL-555-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/09/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/11/2013 | 04/11/2013 | 04/11/2013 |
| | | | SDG | PH028 | PH028 | PH028 | PH028 | PH028 | PH028 | PH029 | PH029 | PH029 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 5.94 | 7.49 | 7.71 | 7.74 | 7.45 | 7.33 | 7.9 | 7.18 | 7.79 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-557-SA7-SB-0.0-0.5 | SL-558-SA7-SB-0.0-0.5 | SL-558-SA7-SB-3.0-4.0 | SL-559-SA7-SB-0.0-0.5 | SL-559-SA7-SB-2.0-3.0 | SL-560-SA7-SB-0.0-0.5 | SL-560-SA7-SB-3.0-4.0 | SL-561-SA7-SB-0.0-0.5 | SL-562-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/17/2013 | 04/16/2013 | 04/17/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 | 04/26/2013 |
| | | | SDG | PH033 | PH032 | PH033 | PH032 | PH032 | PH032 | PH032 | PH032 | PH040 |
| | | | Start Depth | 0 | 0 | 3 | 0 | 2 | 0 | 3 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 4 | 0.5 | 3 | 0.5 | 4 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 6.76 | 7.39 | 7.43 | 6.48 | 7.87 | 7.94 | 7.92 | 7.06 | 7.34 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | |
|---|---|---|---|---|
| | | | Sample Name | SL-562-SA7-SB-2.0-3.0 |
| | | | Sample Type | N |
| | | | Sample Date | 04/26/2013 |
| | | | SDG | PH040 |
| | | | Start Depth | 2 |
| | | | End Depth | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | |
| 9045M | pH | pH | pH | 8.12 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-500-SA7-SB-0.0-0.5 | SL-501-SA7-SB-0.0-0.5 | SL-502-SA7-SB-0.0-0.5 | SL-503-SA7-SB-0.0-0.5 | SL-504-SA7-SB-0.0-0.5 | SL-504-SA7-SB-4.0-5.0 | SL-505-SA7-SB-0.0-0.5 | SL-506-SA7-SB-0.0-0.5 | SL-507-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/17/2013 | 04/17/2013 | 04/17/2013 | 04/22/2013 | 04/22/2013 | 04/22/2013 | 04/17/2013 | 04/25/2013 | 04/24/2013 |
| | | | SDG | PH033 | PH033 | PH033 | PH036 | PH036 | PH036 | PH033 | PH039 | PH039 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.1 U | 5.1 U | 5.2 U | 5.1 U | 26 U | 5.3 U | 5.1 U | 5.2 U | 5.2 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.1 U | 5.1 U | 2.1 J Z | 2.3 J Z | 26 U | 4.7 J Z | 2.3 J Z | 2.8 J Z | 5.2 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 16 | 7.5 | 11 | 13 | 77 | 57 | 19 | 20 | 9.1 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 39 | 27 | 27 | 48 J L | 230 J L | 77 J L | 98 | 40 J L | 23 J L |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.1 U | 5.1 U | 5.2 U | 5.1 U | 26 U | 5.3 U | 5.1 U | 5.2 U | 5.2 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-508-SA7-SB-0.0-0.5 | SL-509-SA7-SB-0.0-0.5 | SL-510-SA7-SB-0.0-0.5 | SL-810-SA7-SB-0.0-0.5 | SL-511-SA7-SB-0.0-0.5 | SL-512-SA7-SB-0.0-0.5 | SL-513-SA7-SB-0.0-0.5 | SL-913-SA7-SB-0.0-0.5 | SL-514-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | FD | N | N | N | FD | N |
| | | | Sample Date | 04/25/2013 | 04/25/2013 | 04/22/2013 | 04/22/2013 | 04/19/2013 | 04/23/2013 | 06/04/2013 | 06/04/2013 | 06/06/2013 |
| | | | SDG | PH039 | PH039 | PH036 | PH036 | PH035 | PH037 | PH046 | PH046 | PH049 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.1 U | 26 U | 5.2 U | 5.2 U | 5.2 U | 5.1 U | 25 U | 50 U | 10 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.1 U | 26 U | 5.2 U | 5.2 U | 3.5 J Z | 5.1 U | 25 U | 50 U | 10 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 25 | 52 | 6.9 J FD, Q | 13 J FD | 28 | 7.8 | 100 | 160 | 46 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 42 J L | 140 J L | 21 J FD, L | 39 J FD, L | 66 J L | 29 J L | 160 J FD | 350 J FD | 100 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.1 U | 26 U | 5.2 U | 5.2 U | 5.2 U | 5.1 U | 25 U | 50 U | 10 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-515-SA7-SB-0.0-0.5 | SL-516-SA7-SB-0.0-0.5 | SL-517-SA7-SB-0.0-0.5 | SL-518-SA7-SB-0.0-0.5 | SL-519-SA7-SB-0.0-0.5 | SL-819-SA7-SB-0.0-0.5 | SL-519-SA7-SB-2.0-3.0 | SL-520-SA7-SB-0.0-0.5 | SL-521-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | | Sample Date | 06/06/2013 | 06/04/2013 | 04/22/2013 | 04/19/2013 | 04/25/2013 | 04/25/2013 | 04/25/2013 | 04/19/2013 | 04/15/2013 |
| | | | SDG | PH049 | PH046 | PH036 | PH035 | PH039 | PH039 | PH039 | PH035 | PH031 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 2.5 J FD, Q, Z | 5.2 UJ FD | 5.2 U | 5.1 U | 5.1 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 14 | 14 | 9.2 | 5.1 U | 5.1 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 5.1 U | 3.4 J Z | 9.5 | 6.2 | 41 | 56 | 40 | 10 | 7 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 10 U | 4.8 J Z | 29 J L | 35 J L | 95 J L | 79 J L | 51 J L | 21 J L | 14 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 3.0 J FD, Q, Z | 5.2 UJ FD | 5.2 U | 5.1 U | 5.1 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-522-SA7-SB-0.0-0.5 | SL-524-SA7-SB-0.0-0.5 | SL-524-SA7-SB-1.0-2.0 | SL-924-SA7-SB-1.0-2.0 | SL-525-SA7-SB-0.0-0.5 | SL-525-SA7-SB-4.0-5.0 | SL-525-SA7-SB-6.5-7.5 | SL-525-SA7-SB-9.5-10.5 | SL-526-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | FD | N | N | N | N | N |
| | | | Sample Date | 04/15/2013 | 06/04/2013 | 06/04/2013 | 06/04/2013 | 04/23/2013 | 06/03/2013 | 04/24/2013 | 06/03/2013 | 04/23/2013 |
| | | | SDG | PH031 | PH046 | PH046 | PH046 | PH037 | PH045 | PH038 | PH045 | PH037 |
| | | | Start Depth | 0 | 0 | 1 | 1 | 0 | 4 | 6.5 | 9.5 | 0 |
| | | | End Depth | 0.5 | 0.5 | 2 | 2 | 0.5 | 5 | 7.5 | 10.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.2 U | 11 U | 5.4 U | 5.4 U | 26 U | 5.2 U | 5.3 U | 5.2 U | 5.5 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 2.2 J Z | 11 U | 5.4 U | 5.4 U | 26 U | 5.2 U | 4.4 J Z | 5.2 U | 5.5 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 16 | 28 | 12 J Q | 14 | 23 J Z | 7.8 | 59 | 5.2 U | 15 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 32 | 120 | 23 | 36 | 72 J L | 11 | 81 J L | 5.8 J Z | 27 J L |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.2 U | 11 U | 5.4 U | 5.4 U | 26 U | 5.2 U | 5.3 U | 5.2 U | 5.5 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-526-SA7-SB-3.5-4.5 | SL-526-SA7-SB-9.0-10.0 | SL-527-SA7-SB-0.0-0.5 | SL-527-SA7-SB-2.5-3.5 | SL-528-SA7-SB-0.0-0.5 | SL-529-SA7-SB-0.0-0.5 | SL-530-SA7-SB-0.0-0.5 | SL-531-SA7-SB-0.0-0.5 | SL-532-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/23/2013 | 06/03/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/24/2013 | 04/18/2013 | 04/18/2013 | 04/18/2013 |
| | | | SDG | PH037 | PH045 | PH038 | PH038 | PH038 | PH038 | PH034 | PH034 | PH034 |
| | | | Start Depth | 3.5 | 9 | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 4.5 | 10 | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.4 U | 5.4 U | 5.2 U | 5.2 U | 5.1 U | 5.2 U | 5.1 U | 5.1 U | 5.1 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.4 U | 5.4 U | 5.2 U | 5.2 U | 5.1 U | 5.2 U | 5.1 U | 4.9 J Z | 5.1 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 9.2 | 5.4 U | 5.6 | 3.1 J Z | 3.0 J Z | 5.0 J Z | 15 | 25 | 14 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 24 J L | 11 U | 7.8 J L, Z | 8.8 J L, Z | 8.3 J L, Z | 11 J L | 44 J L | 84 J L | 40 J L |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.4 U | 5.4 U | 5.2 U | 5.2 U | 5.1 U | 5.2 U | 5.1 U | 5.1 U | 5.1 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-532-SA7-SB-3.0-4.0 | SL-533-SA7-SB-0.0-0.5 | SL-533-SA7-SB-2.5-3.5 | SL-534-SA7-SB-0.0-0.5 | SL-534-SA7-SB-5.5-6.5 | SL-535-SA7-SB-0.0-0.5 | SL-535-SA7-SB-4.0-5.0 | SL-535-SA7-SB-9.0-10.0 | SL-536-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/03/2013 | 04/18/2013 | 06/03/2013 | 04/12/2013 | 04/15/2013 | 04/12/2013 | 04/12/2013 | 04/12/2013 | 04/11/2013 |
| | | | SDG | PH045 | PH034 | PH045 | PH030 | PH031 | PH030 | PH030 | PH030 | PH029 |
| | | | Start Depth | 3 | 0 | 2.5 | 0 | 5.5 | 0 | 4 | 9 | 0 |
| | | | End Depth | 4 | 0.5 | 3.5 | 0.5 | 6.5 | 0.5 | 5 | 10 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.2 U | 5.2 U | 5.2 U | 5.2 U | 5.2 U | 5.1 U | 5.2 U | 5.2 U | 5.1 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.2 U | 5.2 U | 5.2 U | 3.6 J Z | 2.8 J Z | 3.5 J Z | 5.2 U | 5.2 U | 2.2 J Z |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 6.5 | 9.7 | 2.6 J Z | 13 | 8.1 J Q | 13 | 5.2 U | 5.2 U | 18 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 15 | 26 J L | 5.6 J Z | 32 | 12 J Q | 28 | 10 U | 10 U | 55 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.2 U | 5.2 U | 5.2 U | 5.2 U | 5.2 U | 5.1 U | 5.2 U | 5.2 U | 5.1 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-536-SA7-SB-3.0-4.0 | SL-836-SA7-SB-3.0-4.0 | SL-537-SA7-SB-0.0-0.5 | SL-538-SA7-SB-0.0-0.5 | SL-539-SA7-SB-0.0-0.5 | SL-540-SA7-SB-0.0-0.5 | SL-840-SA7-SB-0.0-0.5 | SL-541-SA7-SB-0.0-0.5 | SL-541-SA7-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | FD | N | N | N | N | FD | N | N |
| | | | Sample Date | 04/12/2013 | 04/12/2013 | 04/15/2013 | 04/15/2013 | 04/08/2013 | 04/09/2013 | 04/09/2013 | 10/02/2013 | 10/02/2013 |
| | | | SDG | PH030 | PH030 | PH031 | PH031 | PH027 | PH027 | PH027 | PH121 | PH121 |
| | | | Start Depth | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | | End Depth | 4 | 4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 51 U | 5.1 U | 5.1 U | 5.3 U | 5.1 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 51 U | 3.0 J Q, Z | 4.3 J Z | 5.3 U | 5.1 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 6.7 J FD, Q | 5.1 UJ FD | 6 | 18 | 140 | 4.9 J Z | 7 | 4.5 J Z | 3.0 J Z |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 14 J FD, Q | 10 UJ FD | 12 | 34 | 700 | 17 J FD, Q | 46 J FD | 18 | 13 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 51 U | 5.1 U | 5.1 U | 5.3 U | 5.1 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-542-SA7-SB-0.0-0.5 | SL-544-SA7-SB-0.0-0.5 | SL-547-SA7-SB-0.0-0.5 | SL-548-SA7-SB-0.0-0.5 | SL-549-SA7-SB-0.0-0.5 | SL-551-SA7-SB-0.0-0.5 | SL-551-SA7-SB-2.0-3.0 | SL-552-SA7-SB-0.0-0.5 | SL-553-SA7-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/09/2013 | 04/09/2013 | 04/09/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/10/2013 | 04/11/2013 |
| | | | SDG | PH027 | PH027 | PH028 | PH028 | PH028 | PH028 | PH028 | PH028 | PH029 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 5.2 U | 5.2 U | 5.2 U | 5.1 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 3.5 J Z | 5.4 | 5.1 U | 2.2 J Z | 5.1 U | 5.2 U | 2.3 J Z | 2.2 J Z | 5.1 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 7.6 | 11 | 4.7 J Z | 16 | 10 | 13 | 15 | 4.6 J Z | 11 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 53 | 54 | 9.6 J Z | 39 | 33 | 29 | 48 | 11 | 16 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 5.2 U | 5.2 U | 5.2 U | 5.1 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-554-SA7-SB-0.0-0.5 | SL-555-SA7-SB-0.0-0.5 | SL-557-SA7-SB-0.0-0.5 | SL-558-SA7-SB-0.0-0.5 | SL-558-SA7-SB-3.0-4.0 | SL-559-SA7-SB-0.0-0.5 | SL-559-SA7-SB-2.0-3.0 | SL-560-SA7-SB-0.0-0.5 | SL-560-SA7-SB-3.0-4.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 04/11/2013 | 04/11/2013 | 04/17/2013 | 04/16/2013 | 04/17/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 | 04/16/2013 |
| | | | SDG | PH029 | PH029 | PH033 | PH032 | PH033 | PH032 | PH032 | PH032 | PH032 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 3 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 4 | 0.5 | 3 | 0.5 | 4 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 520 U | 1100 U | 5.2 U | 5.1 U | 5.2 U | 100 U | 110 U | 5.3 U | 5.6 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 520 U | 1100 U | 5.2 U | 5.1 U | 5.2 U | 100 U | 110 U | 3.0 J Z | 5.6 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 1500 | 2100 | 17 | 28 | 5.2 U | 140 | 84 J Z | 22 | 10 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 4100 | 5100 | 28 | 36 | 10 U | 440 | 420 | 72 | 27 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 520 U | 1100 U | 5.2 U | 5.1 U | 5.2 U | 100 U | 110 U | 5.3 U | 5.6 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Sample Name | SL-561-SA7-SB-0.0-0.5 | SL-562-SA7-SB-0.0-0.5 | SL-562-SA7-SB-2.0-3.0 |
| | | | Sample Type | N | N | N |
| | | | Sample Date | 04/16/2013 | 04/26/2013 | 04/26/2013 |
| | | | SDG | PH032 | PH040 | PH040 |
| | | | Start Depth | 0 | 0 | 2 |
| | | | End Depth | 0.5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 26 U | 26 U | 26 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 11 J Z | 26 U | 26 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 52 | 48 | 82 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 230 | 130 J L | 220 J L |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 26 U | 26 U | 26 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-504-SA7-SB-4.0-5.0 | SL-519-SA7-SB-2.0-3.0 | SL-524-SA7-SB-1.0-2.0 | SL-924-SA7-SB-1.0-2.0 | SL-525-SA7-SB-4.0-5.0 | SL-525-SA7-SB-6.5-7.5 | SL-525-SA7-SB-9.5-10.5 | SL-526-SA7-SB-3.5-4.5 |
| | | | Sample Type | N | N | N | FD | N | N | N | N |
| | | | Sample Date | 04/22/2013 | 04/25/2013 | 06/04/2013 | 06/04/2013 | 06/03/2013 | 04/24/2013 | 06/03/2013 | 04/23/2013 |
| | | | SDG | PH036 | PH039 | PH046 | PH046 | PH045 | PH038 | PH045 | PH037 |
| | | | Start Depth | 4 | 2 | 1 | 1 | 4 | 6.5 | 9.5 | 3.5 |
| | | | End Depth | 5 | 3 | 2 | 2 | 5 | 7.5 | 10.5 | 4.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1 U | 1.4 | 1 U | 1.0 U | 1.1 U | 1.2 U | 1 U | 1.6 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-526-SA7-SB-9.0-10.0 | SL-527-SA7-SB-2.5-3.5 | SL-532-SA7-SB-3.0-4.0 | SL-533-SA7-SB-2.5-3.5 | SL-534-SA7-SB-5.5-6.5 | SL-535-SA7-SB-4.0-5.0 | SL-535-SA7-SB-9.0-10.0 | SL-536-SA7-SB-3.0-4.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/03/2013 | 04/24/2013 | 06/03/2013 | 06/03/2013 | 04/15/2013 | 04/12/2013 | 04/12/2013 | 04/12/2013 |
| | | | SDG | PH045 | PH038 | PH045 | PH045 | PH031 | PH030 | PH030 | PH030 |
| | | | Start Depth | 9 | 2.5 | 3 | 2.5 | 5.5 | 4 | 9 | 3 |
| | | | End Depth | 10 | 3.5 | 4 | 3.5 | 6.5 | 5 | 10 | 4 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1.1 U | 0.3 J Z | 1.1 U | 1.1 U | 1.1 U | 1.1 U | 1.1 U | 1.0 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-836-SA7-SB-3.0-4.0 | SL-541-SA7-SB-2.0-3.0 | SL-551-SA7-SB-2.0-3.0 | SL-558-SA7-SB-3.0-4.0 | SL-559-SA7-SB-2.0-3.0 | SL-560-SA7-SB-3.0-4.0 | SL-562-SA7-SB-2.0-3.0 |
| | | | Sample Type | FD | N | N | N | N | N | N |
| | | | Sample Date | 04/12/2013 | 10/02/2013 | 04/10/2013 | 04/17/2013 | 04/16/2013 | 04/16/2013 | 04/26/2013 |
| | | | SDG | PH030 | PH121 | PH028 | PH033 | PH032 | PH032 | PH040 |
| | | | Start Depth | 3 | 2 | 2 | 3 | 2 | 3 | 2 |
| | | | End Depth | 4 | 3 | 3 | 4 | 3 | 4 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1.0 U | 0.9 U | 1.1 U | 1.1 U | 1.1 U | 1.2 U | 1.2 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-545-NBZ-SB-0.0-0.5 | SL-845-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|
| | | | Sample Type | N | FD |
| | | | Sample Date | 12/04/2013 | 12/04/2013 |
| | | | SDG | PH139 | PH139 |
| | | | Start Depth | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | |
| 9012B | 57-12-5 | Cyanide | mg/kg | 0.52 U | 0.53 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-505-NBZ-SB-0.0-0.5 | | SL-508-NBZ-SB-0.0-0.5 | | SL-508-NBZ-SB-4.0-5.0 | | SL-509-NBZ-SB-0.0-0.5 | | SL-509-NBZ-SB-2.5-3.5 | | SL-809-NBZ-SB-2.5-3.5 | | SL-510-NBZ-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | FD | | N | |
| | | | Sample Date | 12/13/2013 | | 12/04/2013 | | 12/04/2013 | | 12/03/2013 | | 12/03/2013 | | 12/03/2013 | | 12/03/2013 | |
| | | | SDG | PH151 | | PH139 | | PH139 | | PH138 | | PH138 | | PH138 | | PH138 | |
| | | | Start Depth | 0 | | 0 | | 4 | | 0 | | 2.5 | | 2.5 | | 0 | |
| | | | End Depth | 0.5 | | 0.5 | | 5 | | 0.5 | | 3.5 | | 3.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.0807 | J-EMPC J (Z) | 1.1 | J-EMPC U (B) | 1.1 | U | 0.996 | J-EMPC U (B) | 1.04 | U | 1.03 | U | 1.03 | U (B) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.419 | J (Z) | 5.51 | J-EMPC U (B) | 5.5 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 5.17 | J-EMPC U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 24 | | 11 | U (B) | 11 | U (B) | 9.96 | U (B) | 10.4 | UJ (B, FD) | 10.3 | J-EMPC UJ (B, FD) | 10.3 | U (B) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 3.44 | J (Z) | 5.51 | U (B) | 5.5 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 5.18 | UJ (B, FD) | 5.17 | J-EMPC UJ (B, FD) | 5.17 | J-EMPC U (B) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 1.79 | J (Z) | 11 | U (B) | 11 | U (B) | 9.96 | J-EMPC U (B) | 10.4 | J-EMPC U (B) | 10.3 | J-EMPC U (B) | 10.3 | J-EMPC U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.24 | U (B) | 5.51 | J-EMPC U (B) | 5.5 | U | 4.98 | U | 5.18 | J-EMPC UJ (B, FD) | 5.17 | J-EMPC UJ (B, FD) | 5.17 | U |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.24 | J-EMPC U (B) | 5.51 | U | 5.5 | U | 4.98 | U | 5.18 | UJ (FD) | 0.107 | J-EMPC J (FD, Z) | 0.0784 | J-EMPC J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.44 | J-EMPC J (Z) | 1.1 | J-EMPC U (B) | 1.1 | J-EMPC U (B) | 0.996 | U | 1.04 | U | 1.03 | U | 0.081 | J-EMPC J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.24 | J-EMPC U (B) | 5.51 | U (B) | 5.5 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 5.18 | J-EMPC UJ (B, FD) | 5.17 | J-EMPC UJ (B, FD) | 5.17 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 0.608 | J (Z) | 5.51 | J-EMPC U (B) | 5.5 | J-EMPC U (B) | 4.98 | U | 5.18 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 5.17 | J-EMPC U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.718 | J (Z) | 5.51 | U (B) | 5.5 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 5.17 | U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.24 | J-EMPC U (B) | 5.51 | U (B) | 5.5 | U | 4.98 | J-EMPC U (B) | 5.18 | UJ (FD) | 5.17 | UJ (B, FD) | 5.17 | U |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.394 | J (Z) | 5.51 | J-EMPC U (B) | 5.5 | U (B) | 4.98 | J-EMPC U (B) | 5.18 | J-EMPC UJ (B, FD) | 5.17 | J-EMPC UJ (B, FD) | 5.17 | J-EMPC U (B) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 0.272 | J-EMPC J (Z) | 5.51 | U (B) | 5.5 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 5.18 | UJ (FD) | 5.17 | UJ (B, FD) | 5.17 | J-EMPC U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 1.08 | J (Z) | 5.51 | U (B) | 5.5 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 5.18 | UJ (B, FD) | 5.17 | J-EMPC UJ (B, FD) | 5.17 | J-EMPC U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.24 | U (B) | 5.51 | J-EMPC U (B) | 5.5 | J-EMPC U (B) | 0.831 | J (Z) | 5.18 | J-EMPC U (B) | 5.17 | U (B) | 5.17 | U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.24 | U (B) | 5.51 | J-EMPC U (B) | 5.5 | J-EMPC U (B) | 4.98 | U (B) | 5.18 | UJ (FD) | 5.17 | J-EMPC UJ (B, FD) | 5.17 | J-EMPC U (B) |

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-510-NBZ-SB-4.0-5.0 | | SL-511-NBZ-SB-0.0-0.5 | | SL-511-NBZ-SB-2.5-3.5 | | SL-512-NBZ-SB-0.0-0.5 | | SL-516-NBZ-SB-0.0-0.5 | | SL-516-NBZ-SB-4.0-5.0 | | SL-517-NBZ-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 12/03/2013 | | 12/04/2013 | | 12/04/2013 | | 12/06/2013 | | 12/09/2013 | | 12/09/2013 | | 12/16/2013 | |
| | | | SDG | PH138 | | PH139 | | PH139 | | PH141 | | PH142 | | PH142 | | PH155 | |
| | | | Start Depth | 4 | | 0 | | 2.5 | | 0 | | 0 | | 4 | | 0 | |
| | | | End Depth | 5 | | 0.5 | | 3.5 | | 0.5 | | 0.5 | | 5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.06 | U | 1 | U | 1.01 | U | 0.999 | U | 1.03 | U | 1.02 | U | 0.0989 | J-EMPC J (Z) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.31 | U | 5.01 | J-EMPC U (B) | 5.07 | U (B) | 5 | J-EMPC U (B) | 0.14 | J-EMPC J (Z) | 0.0337 | J-EMPC J (Z) | 5.07 | U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 10.6 | U (B) | 12.4 | | 10.1 | U (B) | 8.5 | J (Z) | 10.3 | | 10.2 | U (B) | 6.05 | J (Z) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 5.31 | U (B) | 2.23 | J (Z) | 5.07 | U (B) | 5 | U (B) | 1.52 | J (Z) | 5.1 | J-EMPC U (B) | 0.913 | J (Z) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 10.6 | J-EMPC U (B) | 10 | J-EMPC U (B) | 10.1 | J-EMPC U (B) | 9.99 | U (B) | 0.775 | J (Z) | 10.2 | J-EMPC U (B) | 10.1 | U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.31 | J-EMPC U (B) | 5.01 | U (B) | 5.07 | J-EMPC U (B) | 5 | J-EMPC U (B) | 5.15 | U | 5.1 | U | 5.07 | J-EMPC U (B) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.31 | U | 5.01 | J-EMPC U (B) | 5.07 | J-EMPC U (B) | 5 | J-EMPC U (B) | 5.15 | U | 5.1 | J-EMPC U (B) | 5.07 | J-EMPC U (B) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.06 | U | 1 | J-EMPC U (B) | 1.01 | J-EMPC U (B) | 0.999 | J-EMPC U (B) | 0.115 | J-EMPC J (Z) | 1.02 | U | 0.147 | J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.31 | U (B) | 5.01 | J-EMPC U (B) | 5.07 | J-EMPC U (B) | 5 | J-EMPC U (B) | 5.15 | J-EMPC U (B) | 5.1 | J-EMPC U (B) | 5.07 | U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.31 | J-EMPC U (B) | 5.01 | U (B) | 5.07 | J-EMPC U (B) | 5 | J-EMPC U (B) | 0.3 | J-EMPC J (Z) | 5.1 | U | 0.369 | J (Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.31 | J-EMPC U (B) | 5.01 | J-EMPC U (B) | 5.07 | U (B) | 5 | U (B) | 0.231 | J-EMPC J (Z) | 5.1 | J-EMPC U (B) | 0.408 | J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.31 | U | 5.01 | U (B) | 5.07 | U (B) | 5 | U (B) | 5.15 | U (B) | 5.1 | U | 5.07 | U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.31 | J-EMPC U (B) | 5.01 | U (B) | 5.07 | J-EMPC U (B) | 5 | J-EMPC U (B) | 0.144 | J (Z) | 5.1 | U | 5.07 | U (B) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.31 | U (B) | 5.01 | U (B) | 5.07 | J-EMPC U (B) | 5 | U (B) | 0.153 | J (Z) | 5.1 | U | 5.07 | J-EMPC U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.31 | J-EMPC U (B) | 5.01 | U (B) | 5.07 | U (B) | 5 | U (B) | 0.411 | J (Z) | 5.1 | J-EMPC U (B) | 5.07 | U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.31 | J-EMPC U (B) | 5.01 | U (B) | 5.07 | U (B) | 5 | U (B) | 0.156 | J-EMPC J (Z) | 5.1 | J-EMPC U (B) | 5.07 | J-EMPC U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.31 | J-EMPC U (B) | 5.01 | J-EMPC U (B) | 5.07 | J-EMPC U (B) | 5 | J-EMPC U (B) | 5.15 | U (B) | 5.1 | J-EMPC U (B) | 5.07 | U (B) |

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-517-NBZ-SB-2.0-3.0 | | SL-518-NBZ-SB-0.0-0.5 | | SL-519-NBZ-SB-0.0-0.5 | | SL-520-NBZ-SB-0.0-0.5 | | SL-521-NBZ-SB-0.0-0.5 | | SL-527-NBZ-SB-0.0-0.5 | | SL-528-NBZ-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 12/16/2013 | | 12/16/2013 | | 12/16/2013 | | 12/16/2013 | | 12/13/2013 | | 12/05/2013 | | 12/05/2013 | |
| | | | SDG | PH155 | | PH155 | | PH155 | | PH155 | | PH151 | | PH140 | | PH140 | |
| | | | Start Depth | 2 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| | | | End Depth | 3 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.0455 | J-EMPC J (Z) | 1.04 | U | 1.03 | U | 0.997 | U | 1.02 | U | 1.12 | J-EMPC U (B) | 1.01 | J-EMPC U (B) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.28 | J-EMPC U (B) | 0.297 | J-EMPC J (Z) | 0.258 | J (Z) | 0.578 | J (Z) | 0.286 | J-EMPC J (Z) | 5.61 | U (B) | 5.04 | U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 10.6 | U (B) | 13.6 | | 10 | J (Z) | 9.9 | J (Z) | 15.6 | | 157 | | 22.5 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 5.28 | J-EMPC U (B) | 2.12 | J (Z) | 1.45 | J (Z) | 1.27 | J (Z) | 2.19 | J (Z) | 20.1 | | 2.55 | J (Z) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 10.6 | J-EMPC U (B) | 0.95 | J (Z) | 0.824 | J (Z) | 9.97 | J-EMPC U (B) | 1.1 | J (Z) | 5.93 | J (Z) | 10.1 | U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.28 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | 4.99 | U (B) | 5.11 | J-EMPC U (B) | 5.61 | U (B) | 5.04 | J-EMPC U (B) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.28 | U (B) | 5.18 | J-EMPC U (B) | 5.13 | U | 4.99 | J-EMPC U (B) | 5.11 | U | 5.61 | J-EMPC U (B) | 5.04 | J-EMPC U (B) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.0363 | J-EMPC J (Z) | 0.151 | J (Z) | 0.0786 | J-EMPC J (Z) | 0.102 | J (Z) | 0.161 | J-EMPC J (Z) | 0.347 | J (Z) | 1.01 | J-EMPC U (B) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.28 | U (B) | 5.18 | U (B) | 5.13 | J-EMPC U (B) | 4.99 | J-EMPC U (B) | 5.11 | J-EMPC U (B) | 5.61 | U (B) | 5.04 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.28 | U (B) | 0.38 | J (Z) | 5.13 | J-EMPC U (B) | 4.99 | J-EMPC U (B) | 5.11 | J-EMPC U (B) | 5.61 | U (B) | 5.04 | J-EMPC U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.28 | J-EMPC U (B) | 5.18 | U (B) | 5.13 | J-EMPC U (B) | 4.99 | J-EMPC U (B) | 5.11 | J-EMPC U (B) | 5.61 | U (B) | 5.04 | J-EMPC U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.28 | J-EMPC U (B) | 5.18 | U (B) | 5.13 | U (B) | 4.99 | J-EMPC U (B) | 5.11 | J-EMPC U (B) | 5.61 | U (B) | 5.04 | J-EMPC U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.28 | U (B) | 5.18 | U (B) | 5.13 | U (B) | 0.355 | J (Z) | 5.11 | U (B) | 1.27 | J (Z) | 5.04 | U (B) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.28 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 5.13 | U (B) | 4.99 | J-EMPC U (B) | 5.11 | J-EMPC U (B) | 5.61 | U (B) | 5.04 | J-EMPC U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.28 | J-EMPC U (B) | 0.605 | J (Z) | 5.13 | U (B) | 4.99 | J-EMPC U (B) | 0.625 | J (Z) | 3.33 | J (Z) | 5.04 | J-EMPC U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.28 | J-EMPC U (B) | 5.18 | U (B) | 5.13 | J-EMPC U (B) | 4.99 | J-EMPC U (B) | 5.11 | J-EMPC U (B) | 5.61 | U (B) | 5.04 | U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.28 | J-EMPC U (B) | 5.18 | U (B) | 5.13 | J-EMPC U (B) | 4.99 | U (B) | 5.11 | U (B) | 5.61 | U (B) | 5.04 | U |

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-529-NBZ-SB-0.0-0.5 | | SL-537-NBZ-SB-0.0-0.5 | | SL-538-NBZ-SB-0.0-0.5 | | SL-539-NBZ-SB-0.0-0.5 | | SL-540-NBZ-SB-0.0-0.5 | | SL-840-NBZ-SB-0.0-0.5 | | SL-541-NBZ-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | FD | | N | |
| | | | Sample Date | 12/05/2013 | | 12/06/2013 | | 12/06/2013 | | 12/12/2013 | | 12/11/2013 | | 12/11/2013 | | 12/11/2013 | |
| | | | SDG | PH140 | | PH141 | | PH141 | | PH148 | | PH148 | | PH148 | | PH148 | |
| | | | Start Depth | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| | | | End Depth | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.05 | J-EMPC U (B) | 0.996 | J-EMPC U (B) | 0.972 | U | 1.03 | U | 1.18 | J-EMPC UJ (B, FD) | 1.16 | UJ (FD) | 1.01 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.27 | U (B) | 4.98 | J-EMPC U (B) | 4.86 | U (B) | 0.297 | J (Z) | 0.583 | J (FD, Z) | 1.18 | J (FD, Z) | 0.878 | J-EMPC J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 51.8 | | 19.3 | | 6.81 | J (Z) | 33.8 | | 288 | J (FD) | 856 | J (FD) | 468 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 8.87 | | 2.71 | J (Z) | 4.86 | U (B) | 3.9 | J (Z) | 36.2 | J (FD) | 90.2 | J (FD) | 58.3 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 10.5 | U (B) | 9.96 | U (B) | 9.72 | U (B) | 2.03 | J (Z) | 21.2 | | 35.2 | | 38.3 | |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.27 | J-EMPC U (B) | 4.98 | U (B) | 4.86 | J-EMPC U (B) | 0.151 | J (Z) | 0.35 | J (FD, Z) | 0.665 | J-EMPC J (FD, Z) | 0.343 | J-EMPC J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.27 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 4.86 | J-EMPC U (B) | 0.129 | J-EMPC J (Z) | 5.9 | J-EMPC U (B) | 0.215 | J-EMPC J (Z) | 0.304 | J-EMPC J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.05 | U (B) | 0.996 | J-EMPC U (B) | 0.972 | U | 0.246 | J-EMPC J (Z) | 1.18 | U (B) | 0.466 | J (Z) | 0.134 | J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.27 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 4.86 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 0.654 | J (FD, Z) | 1.18 | J-EMPC J (FD, Z) | 1.22 | J (Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.27 | U (B) | 4.98 | U (B) | 4.86 | J-EMPC U (B) | 0.43 | J (Z) | 0.58 | J (Z) | 0.59 | J (Z) | 0.325 | J-EMPC J (Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.27 | J-EMPC U (B) | 4.98 | U (B) | 4.86 | J-EMPC U (B) | 5.17 | U (B) | 0.785 | J (Z) | 1.21 | J (Z) | 0.316 | J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.27 | U (B) | 4.98 | U (B) | 4.86 | U (B) | 0.169 | J-EMPC J (Z) | 0.49 | J (Z) | 0.563 | J (Z) | 0.419 | J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.27 | U (B) | 4.98 | U (B) | 4.86 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 1.75 | J (FD, Z) | 3.07 | J (FD, Z) | 2.78 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.27 | J-EMPC U (B) | 4.98 | U (B) | 4.86 | J-EMPC U (B) | 5.17 | U (B) | 0.575 | J (Z) | 0.787 | J (Z) | 0.577 | J (Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.27 | U (B) | 4.98 | U (B) | 4.86 | U (B) | 1.01 | J-EMPC J (Z) | 8.53 | J (FD) | 14.5 | J (FD) | 14.5 | |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.27 | J-EMPC U (B) | 4.98 | U (B) | 4.86 | U (B) | 5.17 | J-EMPC U (B) | 0.337 | J-EMPC J (Z) | 0.501 | J (Z) | 0.426 | J (Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.27 | U (B) | 4.98 | J-EMPC U (B) | 4.86 | J-EMPC U (B) | 5.17 | U (B) | 5.9 | J-EMPC U (B) | 5.8 | J-EMPC U (B) | 0.207 | J-EMPC J (Z) |

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

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-542-NBZ-SB-0.0-0.5 | | SL-544-NBZ-SB-0.0-0.5 | | SL-844-NBZ-SB-0.0-0.5 | | SL-545-NBZ-SB-0.0-0.5 | | SL-845-NBZ-SB-0.0-0.5 | | SL-548-NBZ-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | FD | | N | | FD | | N | |
| | | | Sample Date | 12/11/2013 | | 12/12/2013 | | 12/12/2013 | | 12/04/2013 | | 12/04/2013 | | 12/04/2013 | |
| | | | SDG | PH148 | | PH148 | | PH148 | | PH139 | | PH139 | | PH139 | |
| | | | Start Depth | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| | | | End Depth | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.07 | U | 0.993 | UJ (FD) | 0.11 | J-EMPC J (FD, Z) | 1.03 | U (B) | 1.05 | J-EMPC U (B) | 0.994 | J-EMPC U (B) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.799 | J (Z) | 0.429 | J (Z) | 0.472 | J-EMPC J (Z) | 5.17 | U (B) | 5.27 | U (B) | 4.97 | J-EMPC U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 453 | | 43.6 | | 26.9 | | 142 | | 106 | | 9.94 | U (B) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 44.8 | | 4.41 | J (Z) | 3.2 | J (Z) | 17.3 | | 13.2 | | 4.97 | U (B) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 28.7 | | 2.24 | J (Z) | 2.03 | J (Z) | 8.97 | J (Z) | 8.17 | J (Z) | 9.94 | J-EMPC U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.404 | J-EMPC J (Z) | 0.133 | J-EMPC J (Z) | 0.157 | J-EMPC J (Z) | 5.17 | U (B) | 5.27 | U (B) | 4.97 | J-EMPC U (B) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.151 | J-EMPC J (Z) | 0.126 | J-EMPC J (FD, Z) | 0.328 | J-EMPC J (FD, Z) | 5.17 | J-EMPC UJ (B, FD) | 5.27 | J-EMPC UJ (B, FD) | 4.97 | J-EMPC U (B) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.127 | J-EMPC J (Z) | 0.126 | J (Z) | 0.202 | J-EMPC J (Z) | 0.622 | J-EMPC J (Z) | 0.487 | J-EMPC J (Z) | 0.994 | J-EMPC U (B) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 0.93 | J (Z) | 4.96 | UJ (B, FD) | 4.96 | J-EMPC UJ (B, FD) | 5.17 | J-EMPC U (B) | 5.27 | U (B) | 4.97 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 0.345 | J-EMPC J (Z) | 4.96 | U (B) | 0.395 | J-EMPC J (Z) | 5.17 | U (B) | 5.27 | U (B) | 4.97 | J-EMPC U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.402 | J (Z) | 4.96 | U (B) | 0.288 | J-EMPC J (Z) | 5.17 | U (B) | 1.13 | J (Z) | 4.97 | U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.382 | J (Z) | 0.214 | J-EMPC J (Z) | 0.22 | J (Z) | 5.17 | U (B) | 5.27 | U (B) | 4.97 | J-EMPC U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 2.03 | J (Z) | 0.474 | J (Z) | 0.391 | J (Z) | 1.04 | J (Z) | 1.1 | J (Z) | 4.97 | J-EMPC U (B) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 0.626 | J (Z) | 4.96 | U (B) | 0.301 | J (Z) | 5.17 | U (B) | 5.27 | U (B) | 4.97 | J-EMPC U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 10.8 | | 1.99 | J (FD, Z) | 0.851 | J (FD, Z) | 3.75 | J (Z) | 4.26 | J (Z) | 4.97 | U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 0.366 | J-EMPC J (Z) | 4.96 | U (B) | 4.96 | U (B) | 5.17 | U (B) | 5.27 | J-EMPC U (B) | 4.97 | J-EMPC U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.34 | J-EMPC U (B) | 4.96 | J-EMPC UJ (B, FD) | 0.258 | J-EMPC J (FD, Z) | 5.17 | UJ (B, FD) | 5.27 | UJ (B, FD) | 4.97 | U (B) |

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

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-525-NBZ-SB-0.0-0.5 | SL-525-NBZ-SB-4.0-5.0 | SL-825-NBZ-SB-4.0-5.0 | SL-526-NBZ-SB-0.0-0.5 | SL-526-NBZ-SB-2.5-3.5 | SL-533-NBZ-SB-0.0-0.5 | SL-540-NBZ-SB-0.0-0.5 | SL-840-NBZ-SB-0.0-0.5 | SL-541-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | FD | N | N | N | N | FD | N |
| | | | Sample Date | 12/05/2013 | 12/05/2013 | 12/05/2013 | 12/05/2013 | 12/05/2013 | 12/03/2013 | 12/11/2013 | 12/11/2013 | 12/11/2013 |
| | | | SDG | PH140 | PH140 | PH140 | PH140 | PH140 | PH138 | PH148 | PH148 | PH148 |
| | | | Start Depth | 0 | 4 | 4 | 0 | 2.5 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 5 | 5 | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8151A | 120-36-5 | Dichlorprop | µg/kg | 17 U | 17 U | 17 U | 17 U | 17 U | 17 U | 20 U | 20 U | 18 U |
| 8151A | 1918-00-9 | Dicamba | µg/kg | 12 U | 12 U | 12 U | 12 U | 12 U | 12 U | 14 U | 14 U | 12 U |
| 8151A | 75-99-0 | 2,2-Dichlor-Propionic Acid | µg/kg | 110 U | 200 U | 92 U | 91 U | 92 U | 91 U | 110 U | 110 U | 93 U |
| 8151A | 88-85-7 | Dinitrobutyl Phenol | µg/kg | 24 U | 24 U | 25 U | 24 U | 24 U | 24 U | 28 U | 28 U | 25 U |
| 8151A | 93-65-2 | MCPP | µg/kg | 2500 U | 2500 U | 2600 U | 2500 U | 2600 U | 2500 U | 2900 U | 3000 U | 1200 J Z |
| 8151A | 93-72-1 | Silvex (2,4,5-TP) | µg/kg | 1.4 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 0.98 J FD, Z | 2.0 UJ FD | 1.8 U |
| 8151A | 93-76-5 | 2,4,5-T | µg/kg | 1.7 | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 2.0 UJ FD | 2.2 J FD | 2.1 |
| 8151A | 94-74-6 | MCPA | µg/kg | 2500 U | 2500 U | 2600 U | 2500 U | 2600 U | 2500 U | 2900 U | 3000 U | 2600 U |
| 8151A | 94-75-7 | 2,4-D | µg/kg | 37 U | 37 U | 37 U | 37 U | 37 U | 37 U | 42 U | 43 U | 37 U |
| 8151A | 94-82-6 | 2,4-DB | µg/kg | 30 U | 17 U | 17 U | 24 J L | 22 J L | 27 U | 20 U | 20 U | 18 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Sample Name | SL-542-NBZ-SB-0.0-0.5 | SL-556-NBZ-SB-0.0-0.5 | SL-556-NBZ-SB-4.0-5.0 |
| | | | Sample Type | N | N | N |
| | | | Sample Date | 12/11/2013 | 12/06/2013 | 12/06/2013 |
| | | | SDG | PH148 | PH141 | PH141 |
| | | | Start Depth | 0 | 0 | 4 |
| | | | End Depth | 0.5 | 0.5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | |
| 8151A | 120-36-5 | Dichlorprop | µg/kg | 18 U | 17 U | 17 U |
| 8151A | 1918-00-9 | Dicamba | µg/kg | 13 U | 12 U | 12 U |
| 8151A | 75-99-0 | 2,2-Dichlor-Propionic Acid | µg/kg | 96 U | 92 U | 100 U |
| 8151A | 88-85-7 | Dinitrobutyl Phenol | µg/kg | 26 U | 25 U | 25 U |
| 8151A | 93-65-2 | MCPP | µg/kg | 1300 J Z | 2600 U | 2600 U |
| 8151A | 93-72-1 | Silvex (2,4,5-TP) | µg/kg | 1.8 U | 0.97 J Z | 1.7 U |
| 8151A | 93-76-5 | 2,4,5-T | µg/kg | 1.8 U | 2.0 | 1.7 U |
| 8151A | 94-74-6 | MCPA | µg/kg | 2700 U | 2600 U | 2600 U |
| 8151A | 94-75-7 | 2,4-D | µg/kg | 38 U | 37 U | 37 U |
| 8151A | 94-82-6 | 2,4-DB | µg/kg | 18 U | 26 U | 17 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-501-NBZ-SB-0.0-0.5 | SL-505-NBZ-SB-0.0-0.5 | SL-511-NBZ-SB-0.0-0.5 | SL-511-NBZ-SB-2.5-3.5 | SL-512-NBZ-SB-0.0-0.5 | SL-516-NBZ-SB-0.0-0.5 | SL-516-NBZ-SB-4.0-5.0 | SL-517-NBZ-SB-0.0-0.5 | SL-517-NBZ-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 12/06/2013 | 12/13/2013 | 12/04/2013 | 12/04/2013 | 12/06/2013 | 12/09/2013 | 12/09/2013 | 12/16/2013 | 12/16/2013 |
| | | | SDG | PH141 | PH151 | PH139 | PH139 | PH141 | PH142 | PH142 | PH155 | PH155 |
| | | | Start Depth | 0 | 0 | 0 | 2.5 | 0 | 0 | 4 | 0 | 2 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 3.5 | 0.5 | 0.5 | 5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0129 J Z | 0.0362 | 0.0195 | 0.0140 J Z | 0.0167 U | 0.0162 J Z | 0.0166 U | 0.0196 | 0.0144 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-518-NBZ-SB-0.0-0.5 | SL-519-NBZ-SB-0.0-0.5 | SL-520-NBZ-SB-0.0-0.5 | SL-521-NBZ-SB-0.0-0.5 | SL-544-NBZ-SB-0.0-0.5 | SL-844-NBZ-SB-0.0-0.5 | SL-545-NBZ-SB-0.0-0.5 | SL-845-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | FD | N | FD |
| | | | Sample Date | 12/16/2013 | 12/16/2013 | 12/16/2013 | 12/13/2013 | 12/12/2013 | 12/12/2013 | 12/04/2013 | 12/04/2013 |
| | | | SDG | PH155 | PH155 | PH155 | PH151 | PH148 | PH148 | PH139 | PH139 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0126 J Z | 0.0165 U | 0.0168 U | 0.0148 J Z | 0.0109 J Z | 0.0096 J Z | 0.182 | 0.284 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-501-NBZ-SB-0.0-0.5 | SL-505-NBZ-SB-0.0-0.5 | SL-511-NBZ-SB-0.0-0.5 | SL-511-NBZ-SB-2.5-3.5 | SL-512-NBZ-SB-0.0-0.5 | SL-516-NBZ-SB-0.0-0.5 | SL-516-NBZ-SB-4.0-5.0 | SL-517-NBZ-SB-0.0-0.5 | SL-517-NBZ-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 12/06/2013 | 12/13/2013 | 12/04/2013 | 12/04/2013 | 12/06/2013 | 12/09/2013 | 12/09/2013 | 12/16/2013 | 12/16/2013 |
| | | | | SDG | PH141 | PH151 | PH139 | PH139 | PH141 | PH142 | PH142 | PH155 | PH155 |
| | | | | Start Depth | 0 | 0 | 0 | 2.5 | 0 | 0 | 4 | 0 | 2 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 3.5 | 0.5 | 0.5 | 5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 13400 | 12900 | 21300 | 23500 | 11700 | 15700 | 13400 | 26000 | 23100 |
| 6010C | 7439-89-6 | Iron | mg/kg | 21500 | 21800 | 29000 | 35200 | 18200 | 23500 | 17900 | 38300 | 36700 |
| 6010C | 7439-92-1 | Lead | mg/kg | 10.7 | 17.3 | 19.7 | 15.5 | 7.30 | 11.8 | 5.65 | 19.2 | 18.1 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 29.0 | 28.2 | 43.2 | 45.9 | 29.1 | 29.5 | 27.4 | 42.1 | 41.3 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 5500 | 4520 | 5580 | 5680 | 4720 | 5340 | 4480 | 8270 | 7910 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 330 | 333 | 496 | 370 | 257 | 348 | 237 | 348 | 372 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 1.97 U F, B | 2.07 U F | 2.09 U F, B | 2.05 U F, B | 1.98 U | 2.07 U | 2.06 U | 2.06 U F | 2.11 U |
| 6010C | 7440-02-0 | Nickel | mg/kg | 11.2 | 12.4 | 17.1 | 15.8 | 9.40 | 12.9 | 7.91 | 21.4 | 21.5 |
| 6010C | 7440-09-7 | Potassium | mg/kg | 3520 | 3710 | 5660 | 4010 | 3290 | 4550 | 2490 | 4530 | 3490 |
| 6010C | 7440-23-5 | Sodium | mg/kg | 84.2 J Z | 68.6 J Z | 99.6 J Z | 106 | 64.2 J Z | 71.7 J Z | 58.9 J Z | 97.6 J Z | 131 |
| 6010C | 7440-31-5 | Tin | mg/kg | 9.87 U B | 10.4 U B | 10.4 U B | 10.2 U B | 9.91 U B | 10.4 U B | 10.3 U B | 10.3 U B | 10.6 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1180 | 818 | 1340 | 1330 | 1110 | 1170 | 994 | 1250 | 1030 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 3.95 U | 1.34 J Q, Z | 4.18 UJ Q | 4.09 UJ Q | 3.96 U | 4.15 UJ Q | 4.13 UJ Q | 2.22 J Q, Z | 2.25 J Q, Z |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 3.19 J Z | 5.14 | 6.05 | 28.0 | 19.7 | 4.19 | 2.81 J Z | 10.2 | 9.97 |
| 6010C | 7440-39-3 | Barium | mg/kg | 87.6 | 89.4 | 129 | 106 | 61.3 | 90.6 | 56.3 | 123 | 112 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.496 J Z | 0.570 J Z | 0.950 J Z | 1.18 | 0.514 J Z | 0.658 J Z | 0.577 J Z | 1.18 | 1.17 |
| 6010C | 7440-42-8 | Boron | mg/kg | 9.87 U | 8.32 J Z | 10.4 U | 10.2 U | 9.91 U | 2.00 J Z | 1.24 J Z | 9.81 J Z | 7.71 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.425 J Z | 1.04 U | 0.489 J Z | 0.354 J Z | 0.372 J Z | 0.430 J Z | 0.303 J Z | 1.03 U | 1.06 U |
| 6010C | 7440-47-3 | Chromium | mg/kg | 17.8 | 17.0 | 21.5 | 21.1 | 14.9 | 20.6 | 13.6 | 32.6 | 30.0 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 5.64 | 6.00 | 8.18 | 7.85 | 4.67 | 6.89 | 4.53 | 9.94 | 11.3 |
| 6010C | 7440-50-8 | Copper | mg/kg | 3.26 | 12.6 | 7.76 | 8.84 | 1.74 J Z | 6.04 | 1.31 J Z | 25.2 | 24.2 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 36.4 | 33.6 | 43.3 | 47.0 | 29.3 | 37.8 | 28.2 | 64.9 | 56.3 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 60.9 | 73.8 | 84.5 | 82.1 | 52.9 | 69.8 | 44.2 | 108 | 103 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 0.897 J Z | 2.09 J Z | 2.33 J Z | 1.34 J Z | 1.48 J Z | 2.35 J Z | 3.65 J Z | 4.64 J Z | 4.14 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | 2460 | 5940 | 4400 | 3030 | 1980 | 3780 | 2200 | 5140 | 4070 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 472 | 510 J Q | 557 | 359 | 458 | 565 | 280 | 595 J Q | 500 J Q |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0322 J Z | 0.0674 J Z | 0.0824 J Z | 0.0769 J Z | 0.198 U | 0.0598 J Z | 0.206 U | 0.106 J Z | 0.0914 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 14.7 | 23.3 | 31.0 J Q | 23.3 J Q | 8.81 | 18.9 J Q | 10.7 J Q | 29.9 | 22.0 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.238 | 0.307 | 0.369 | 0.378 | 0.227 | 0.297 | 0.218 | 0.440 | 0.429 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.104 J Z | 0.427 | 0.402 J Z | 0.402 J Z | 0.396 U | 0.184 J Z | 0.413 U | 0.312 J Z | 0.305 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-518-NBZ-SB-0.0-0.5 | SL-519-NBZ-SB-0.0-0.5 | SL-520-NBZ-SB-0.0-0.5 | SL-521-NBZ-SB-0.0-0.5 | SL-544-NBZ-SB-0.0-0.5 | SL-844-NBZ-SB-0.0-0.5 | SL-545-NBZ-SB-0.0-0.5 | SL-845-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | FD | N | FD |
| | | | Sample Date | 12/16/2013 | 12/16/2013 | 12/16/2013 | 12/13/2013 | 12/12/2013 | 12/12/2013 | 12/04/2013 | 12/04/2013 |
| | | | SDG | PH155 | PH155 | PH155 | PH151 | PH148 | PH148 | PH139 | PH139 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 14700 | 12500 | 8940 | 14000 | 9680 | 9880 | 12100 | 11800 |
| 6010C | 7439-89-6 | Iron | mg/kg | 24200 | 20200 | 14800 | 22900 | 17600 | 17800 | 18500 | 18000 |
| 6010C | 7439-92-1 | Lead | mg/kg | 13.3 | 11.5 | 9.28 | 13.7 | 6.86 | 8.44 | 14.8 | 15.1 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 23.8 | 16.9 | 10.5 | 25.2 | 25.5 | 26.1 | 22.7 | 22.0 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 5520 | 5350 | 3970 | 5690 | 3920 | 3960 | 4240 | 4070 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 293 | 246 | 185 | 332 | 276 | 273 | 283 | 273 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 2.01 U F | 1.96 U F | 1.99 U F | 2.01 U F | 2.00 U F | 1.99 U F | 2.12 UJ F, FD, B | 2.08 UJ F, FD, B |
| 6010C | 7440-02-0 | Nickel | mg/kg | 13.7 | 9.63 | 6.88 | 14.4 | 8.13 | 7.68 | 10.7 | 10.3 |
| 6010C | 7440-09-7 | Potassium | mg/kg | 4210 | 3580 | 2750 | 4130 | 2770 | 2820 | 3490 | 3070 |
| 6010C | 7440-23-5 | Sodium | mg/kg | 60.7 J Z | 71.2 J Z | 58.3 J Z | 65.8 J Z | 53.9 J Z | 57.6 J Z | 78.3 J Z | 92.1 J Z |
| 6010C | 7440-31-5 | Tin | mg/kg | 10.1 U B | 9.80 U B | 9.95 U B | 10.0 U B | 9.98 U B | 9.93 U B | 10.6 U B | 10.4 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 942 | 812 | 647 | 896 | 871 | 959 | 1010 | 1010 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 1.73 J Q, Z | 1.46 J Q, Z | 1.15 J Q, Z | 1.50 J Q, Z | 3.99 UJ FD, Q | 1.22 J FD, Q, Z | 4.24 UJ Q | 4.15 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 6.49 | 5.76 | 4.88 | 5.36 | 2.84 J Z | 3.75 J Z | 3.24 J Z | 2.90 J Z |
| 6010C | 7440-39-3 | Barium | mg/kg | 77.7 | 64.6 | 48.0 | 74.8 | 65.1 | 63.9 | 71.5 | 77.1 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.675 J Z | 0.579 J Z | 0.393 J Z | 0.660 J Z | 0.359 J Z | 0.382 J Z | 0.477 J Z | 0.466 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 6.14 J Z | 5.54 J Z | 5.50 J Z | 8.25 J Z | 8.30 J FD, Z | 4.20 J FD, Z | 4.79 J Z | 5.57 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 1.01 U | 0.980 U | 0.995 U | 1.00 U | 0.464 J FD, Z | 0.993 UJ FD | 0.447 J Z | 0.466 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 20.2 | 15.9 | 10.9 | 21.1 | 13.8 | 13.5 | 16.7 | 17.7 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 7.03 | 6.05 | 5.23 | 6.83 | 4.46 | 4.20 | 4.80 | 4.62 |
| 6010C | 7440-50-8 | Copper | mg/kg | 14.8 | 11.6 | 8.38 | 12.5 | 3.80 J FD | 6.43 J FD | 4.81 | 4.80 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 40.1 | 35.8 | 27.7 | 38.2 | 27.3 | 28.4 | 31.2 | 29.6 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 67.7 | 52.6 | 39.9 | 67.1 | 51.6 | 53.6 | 57.2 | 63.6 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 2.88 J Z | 2.03 J Z | 1.80 J Z | 3.07 J Z | 0.877 J FD, Z | 4.96 UJ FD | 1.66 J Z | 2.00 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | 3730 | 3240 | 3060 | 6130 | 2090 | 2070 | 5070 | 5200 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 497 J Q | 447 J Q | 332 J Q | 508 J Q | 385 J Q | 321 J Q | 431 | 372 |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0584 J Z | 0.0429 J Z | 0.199 U | 0.0775 J Z | 0.0426 J Z | 0.0450 J Z | 0.201 J Z | 0.233 |
| 6020A | 7440-24-6 | Strontium | mg/kg | 24.5 | 24.6 | 17.9 | 28.7 | 9.84 | 10.2 | 25.3 J Q | 29.2 J Q |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.322 | 0.301 | 0.231 | 0.285 | 0.218 | 0.233 | 0.213 | 0.208 U B |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.227 J Z | 0.181 J Z | 0.153 J Z | 0.150 J Z | 0.284 J Z | 0.459 | 0.203 J Z | 0.189 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-501-NBZ-SB-0.0-0.5 | SL-502-NBZ-SB-0.0-0.5 | SL-502-NBZ-SB-4.0-5.0 | SL-503-NBZ-SB-0.0-0.5 | SL-503-NBZ-SB-2.0-3.0 | SL-504-NBZ-SB-0.0-0.5 | SL-804-NBZ-SB-0.0-0.5 | SL-505-NBZ-SB-0.0-0.5 | SL-506-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | FD | N | N |
| | | | Sample Date | 12/06/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/13/2013 | 12/04/2013 |
| | | | SDG | PH141 | PH138 | PH138 | PH138 | PH138 | PH138 | PH138 | PH151 | PH139 |
| | | | Start Depth | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 5 | 0.5 | 3 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 1.6 | 7.2 | 9.4 | 3.8 | 2.0 | 2.2 | 1.9 | 4.5 | 4.4 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-507-NBZ-SB-0.0-0.5 | SL-507-NBZ-SB-3.5-4.5 | SL-508-NBZ-SB-0.0-0.5 | SL-508-NBZ-SB-4.0-5.0 | SL-509-NBZ-SB-0.0-0.5 | SL-509-NBZ-SB-2.5-3.5 | SL-809-NBZ-SB-2.5-3.5 | SL-510-NBZ-SB-0.0-0.5 | SL-510-NBZ-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | N | FD | N | N |
| | | | Sample Date | 12/04/2013 | 12/04/2013 | 12/04/2013 | 12/04/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 |
| | | | SDG | PH139 | PH139 | PH139 | PH139 | PH138 | PH138 | PH138 | PH138 | PH138 |
| | | | Start Depth | 0 | 3.5 | 0 | 4 | 0 | 2.5 | 2.5 | 0 | 4 |
| | | | End Depth | 0.5 | 4.5 | 0.5 | 5 | 0.5 | 3.5 | 3.5 | 0.5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 4.5 | 6.4 | 9.4 | 10.0 | 2.4 | 4.5 | 5.4 | 4.6 | 8.3 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-511-NBZ-SB-0.0-0.5 | SL-511-NBZ-SB-2.5-3.5 | SL-512-NBZ-SB-0.0-0.5 | SL-513-NBZ-SB-0.0-0.5 | SL-514-NBZ-SB-0.0-0.5 | SL-515-NBZ-SB-0.0-0.5 | SL-516-NBZ-SB-0.0-0.5 | SL-516-NBZ-SB-4.0-5.0 | SL-517-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 12/04/2013 | 12/04/2013 | 12/06/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/16/2013 |
| | | | SDG | PH139 | PH139 | PH141 | PH142 | PH142 | PH142 | PH142 | PH142 | PH155 |
| | | | Start Depth | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |
| | | | End Depth | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 4.2 | 5.1 | 2.0 | 6.6 | 8.0 | 9.2 | 6.4 | 3.1 | 4.1 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-517-NBZ-SB-2.0-3.0 | SL-518-NBZ-SB-0.0-0.5 | SL-519-NBZ-SB-0.0-0.5 | SL-520-NBZ-SB-0.0-0.5 | SL-521-NBZ-SB-0.0-0.5 | SL-522-NBZ-SB-0.0-0.5 | SL-522-NBZ-SB-2.5-3.5 | SL-523-NBZ-SB-0.0-0.5 | SL-524-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 12/16/2013 | 12/16/2013 | 12/16/2013 | 12/16/2013 | 12/13/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 |
| | | | SDG | PH155 | PH155 | PH155 | PH155 | PH151 | PH142 | PH142 | PH142 | PH142 |
| | | | Start Depth | 2 | 0 | 0 | 0 | 0 | 0 | 2.5 | 0 | 0 |
| | | | End Depth | 3 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 6.3 | 3.5 | 2.8 | 1.5 | 4.2 | 4.3 | 4.8 | 4.5 | 4.6 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-824-NBZ-SB-0.0-0.5 | SL-525-NBZ-SB-0.0-0.5 | SL-525-NBZ-SB-4.0-5.0 | SL-825-NBZ-SB-4.0-5.0 | SL-526-NBZ-SB-0.0-0.5 | SL-526-NBZ-SB-2.5-3.5 | SL-527-NBZ-SB-0.0-0.5 | SL-528-NBZ-SB-0.0-0.5 | SL-529-NBZ-SB-0.0-0.5 |
| | | | Sample Type | FD | N | N | FD | N | N | N | N | N |
| | | | Sample Date | 12/09/2013 | 12/05/2013 | 12/05/2013 | 12/05/2013 | 12/05/2013 | 12/05/2013 | 12/05/2013 | 12/05/2013 | 12/05/2013 |
| | | | SDG | PH142 | PH140 | PH140 | PH140 | PH140 | PH140 | PH140 | PH140 | PH140 |
| | | | Start Depth | 0 | 0 | 4 | 4 | 0 | 2.5 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 5 | 5 | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 5.4 | 2.0 | 2.6 | 2.6 | 3.2 | 3.3 | 11.1 | 5.2 | 7.2 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-530-NBZ-SB-0.0-0.5 | SL-531-NBZ-SB-0.0-0.5 | SL-532-NBZ-SB-0.0-0.5 | SL-533-NBZ-SB-0.0-0.5 | SL-534-NBZ-SB-0.0-0.5 | SL-535-NBZ-SB-0.0-0.5 | SL-537-NBZ-SB-0.0-0.5 | SL-538-NBZ-SB-0.0-0.5 | SL-539-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/06/2013 | 12/06/2013 | 12/06/2013 | 12/06/2013 | 12/12/2013 |
| | | | SDG | PH138 | PH138 | PH138 | PH138 | PH141 | PH141 | PH141 | PH141 | PH148 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 2.6 | 2.1 | 2.7 | 2.1 | 2.2 | 16.0 | 3.0 | 1.6 | 5.5 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-540-NBZ-SB-0.0-0.5 | SL-840-NBZ-SB-0.0-0.5 | SL-541-NBZ-SB-0.0-0.5 | SL-542-NBZ-SB-0.0-0.5 | SL-543-NBZ-SB-0.0-0.5 | SL-544-NBZ-SB-0.0-0.5 | SL-844-NBZ-SB-0.0-0.5 | SL-545-NBZ-SB-0.0-0.5 | SL-845-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | FD | N | N | N | N | FD | N | FD |
| | | | Sample Date | 12/11/2013 | 12/11/2013 | 12/11/2013 | 12/11/2013 | 12/12/2013 | 12/12/2013 | 12/12/2013 | 12/04/2013 | 12/04/2013 |
| | | | SDG | PH148 | PH148 | PH148 | PH148 | PH148 | PH148 | PH148 | PH139 | PH139 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 15.2 | 15.3 | 3.7 | 6.4 | 4.0 | 3.7 | 2.2 | 7.5 | 5.6 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-546-NBZ-SB-0.0-0.5 | SL-547-NBZ-SB-0.0-0.5 | SL-548-NBZ-SB-0.0-0.5 | SL-549-NBZ-SB-0.0-0.5 | SL-551-NBZ-SB-0.0-0.5 | SL-552-NBZ-SB-0.0-0.5 | SL-552-NBZ-SB-2.0-3.0 | SL-553-NBZ-SB-0.0-0.5 | SL-554-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 12/04/2013 | 12/04/2013 | 12/04/2013 | 12/04/2013 | 12/17/2013 | 12/10/2013 | 12/10/2013 | 12/10/2013 | 12/10/2013 |
| | | | SDG | PH139 | PH139 | PH139 | PH139 | PH157 | PH146 | PH146 | PH143 | PH143 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 3.1 | 5.4 | 3.3 | 1.9 | 3.1 | 3.0 | 2.6 | 6.9 | 1.2 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-555-NBZ-SB-0.0-0.5 | SL-556-NBZ-SB-0.0-0.5 | SL-556-NBZ-SB-4.0-5.0 | SL-557-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N |
| | | | Sample Date | 12/10/2013 | 12/06/2013 | 12/06/2013 | 12/13/2013 |
| | | | SDG | PH143 | PH141 | PH141 | PH151 |
| | | | Start Depth | 0 | 0 | 4 | 0 |
| | | | End Depth | 0.5 | 0.5 | 5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | |
| 160.3M | MOIST | Moisture | % | 4.7 | 3.4 | 3.6 | 3.6 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-522-NBZ-SB-0.0-0.5 | SL-522-NBZ-SB-2.5-3.5 | SL-523-NBZ-SB-0.0-0.5 | SL-524-NBZ-SB-0.0-0.5 | SL-824-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | FD |
| | | | Sample Date | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 |
| | | | SDG | PH142 | PH142 | PH142 | PH142 | PH142 |
| | | | Start Depth | 0 | 2.5 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | |
| 300.0 | 14797-55-8 | Nitrate | mg/kg | 3.2 J Q | 0.61 J Q, Z | 8.6 J Q | 0.70 J FD, Q, Z | 5.8 J FD, Q |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-505-NBZ-SB-0.0-0.5 | SL-508-NBZ-SB-0.0-0.5 | SL-508-NBZ-SB-4.0-5.0 | SL-509-NBZ-SB-0.0-0.5 | SL-509-NBZ-SB-2.5-3.5 | SL-809-NBZ-SB-2.5-3.5 | SL-510-NBZ-SB-0.0-0.5 | SL-510-NBZ-SB-4.0-5.0 | SL-511-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | | Sample Date | 12/13/2013 | 12/04/2013 | 12/04/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/04/2013 |
| | | | SDG | PH151 | PH139 | PH139 | PH138 | PH138 | PH138 | PH138 | PH138 | PH139 |
| | | | Start Depth | 0 | 0 | 4 | 0 | 2.5 | 2.5 | 0 | 4 | 0 |
| | | | End Depth | 0.5 | 0.5 | 5 | 0.5 | 3.5 | 3.5 | 0.5 | 5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 8.4 J Z | 7.6 J Z | 20 U | 18 U | 19 U | 19 U | 19 U | 20 U | 19 U |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 20 U | 20 U | 18 U | 19 U | 19 U | 19 U | 20 U | 19 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 0.84 J Z | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 3.5 | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.4 J L, Z |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 20 U | 20 U | 18 U | 19 U | 19 U | 19 U | 20 U | 19 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.3 J Z | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 U | 19 U | 19 U | 17 U | 18 U | 18 U | 18 U | 19 U | 18 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 0.93 J Z | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 0.70 J Z |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 4.0 | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 2.3 |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 4.0 | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.4 J Z |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.1 J Z | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 0.71 J Z |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 4.1 | 1.8 U | 0.48 J Z | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 2.7 |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.3 J Z | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.4 J Z | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 20 U | 20 U | 18 U | 19 U | 19 U | 19 U | 20 U | 19 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 20 U | 20 U | 18 U | 19 U | 19 U | 19 U | 20 U | 19 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 6.2 | 1.2 J Z | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.4 J Z |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 20 U | 20 U | 18 U | 19 U | 19 U | 19 U | 20 U | 19 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 5.6 | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.1 J Z |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 20 | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 2.6 |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 7.9 | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.9 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-511-NBZ-SB-2.5-3.5 | SL-512-NBZ-SB-0.0-0.5 | SL-516-NBZ-SB-0.0-0.5 | SL-516-NBZ-SB-4.0-5.0 | SL-517-NBZ-SB-0.0-0.5 | SL-517-NBZ-SB-2.0-3.0 | SL-518-NBZ-SB-0.0-0.5 | SL-519-NBZ-SB-0.0-0.5 | SL-520-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 12/04/2013 | 12/06/2013 | 12/09/2013 | 12/09/2013 | 12/16/2013 | 12/16/2013 | 12/16/2013 | 12/16/2013 | 12/16/2013 |
| | | | | SDG | PH139 | PH141 | PH142 | PH142 | PH155 | PH155 | PH155 | PH155 | PH155 |
| | | | | Start Depth | 2.5 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 |
| | | | | End Depth | 3.5 | 0.5 | 0.5 | 5 | 0.5 | 3 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 U | 18 U | 19 U | 19 U | 18 U | 19 U | 18 U | 18 U | 18 U |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 18 U | 19 U | 19 U | 18 U | 19 U | 18 U | 18 U | 18 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 1.8 U | 0.74 J Z | 2.4 | 1.7 U | 1.1 J Z | 1.7 U | 1.7 U | 0.68 J Z | 1.3 J Z |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 18 U | 19 U | 19 U | 18 U | 19 U | 18 U | 18 U | 18 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.8 U | 1.7 U | 1.0 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 U | 17 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.8 U | 1.7 U | 0.82 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.8 U | 0.88 J Z | 3.3 | 1.7 U | 1.2 J Z | 1.7 U | 1.3 J Z | 0.97 J Z | 1.5 J Z |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.8 U | 0.77 J Z | 2.3 | 1.7 U | 1.0 J Z | 1.7 U | 1.7 U | 0.70 J Z | 1.3 J Z |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.8 U | 1.7 U | 1.0 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.8 U | 0.68 J Z | 2.8 | 1.7 U | 1.6 J Z | 0.44 J Z | 1.0 J Z | 1.0 J Z | 1.3 J Z |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.8 U | 1.7 U | 1.2 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 0.68 J Z |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.8 U | 1.7 U | 1.1 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 18 U | 19 U | 19 U | 18 U | 19 U | 18 U | 18 U | 18 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 18 U | 19 U | 19 U | 18 U | 19 U | 18 U | 18 U | 18 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.8 U | 1.7 U | 1.7 J Z | 1.7 U | 1.3 J Z | 1.7 U | 1.7 U | 1.7 U | 0.95 J Z |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 18 U | 19 U | 19 U | 18 U | 19 U | 13 J Z | 18 U | 18 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.8 U | 1.7 U | 1.1 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.8 U | 1.7 U | 2.4 | 1.4 J Z | 1.8 | 1.7 U | 1.7 U | 0.82 J Z | 1.3 J Z |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.8 U | 1.7 U | 1.1 J Z | 1.7 U | 0.99 J Z | 1.7 U | 1.7 U | 1.7 U | 1.7 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-521-NBZ-SB-0.0-0.5 | SL-522-NBZ-SB-0.0-0.5 | SL-522-NBZ-SB-2.5-3.5 | SL-523-NBZ-SB-0.0-0.5 | SL-524-NBZ-SB-0.0-0.5 | SL-824-NBZ-SB-0.0-0.5 | SL-527-NBZ-SB-0.0-0.5 | SL-528-NBZ-SB-0.0-0.5 | SL-529-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | | Sample Date | 12/13/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/05/2013 | 12/05/2013 | 12/05/2013 |
| | | | SDG | PH151 | PH142 | PH142 | PH142 | PH142 | PH142 | PH140 | PH140 | PH140 |
| | | | Start Depth | 0 | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 11 J Z | 19 U | 19 U | 19 | 19 UJ FD | 31 J FD | 64 J Z | 21 | 19 U |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 100 U | 19 U | 19 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 UJ FD | 0.37 J FD, Z | 9.3 U | 1.7 U | 1.8 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 2.1 | 1.4 J Z | 1.7 U | 2.5 | 1.4 J FD, Z | 4.7 J FD | 6.0 J Z | 0.92 J Z | 1.4 J Z |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 100 U | 19 U | 19 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.7 U | 0.93 J Z | 1.7 U | 1.1 J Z | 1.7 UJ FD | 1.6 J FD, Z | 9.3 U | 1.7 U | 1.8 U |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 95 U | 18 U | 18 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.7 U | 0.77 J Z | 1.7 U | 0.79 J Z | 1.7 UJ FD | 1.1 J FD, Z | 9.3 U | 1.7 U | 1.8 U |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.8 | 1.8 | 1.7 U | 3.4 | 2.0 J FD | 5.7 J FD | 4.2 J Z | 0.82 J Z | 1.6 J Z |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.8 | 1.3 J Z | 1.7 U | 2.5 | 1.3 J FD, Z | 4.1 J FD | 6.9 J Z | 1.2 J Z | 1.7 J Z |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 0.87 J Z | 1.7 UJ FD | 1.7 J FD, Z | 9.3 U | 1.7 U | 1.8 U |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 9.3 U | 1.7 U | 1.8 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 2.1 | 2.0 | 1.7 U | 3.0 | 2.4 J FD | 5.4 J FD | 5.6 J Z | 1.6 J Z | 1.9 |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 0.90 J Z | 1.7 U | 1.7 U | 1.4 J Z | 1.7 UJ FD | 2.2 J FD | 9.3 U | 1.7 U | 1.8 U |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 9.3 U | 1.7 U | 1.8 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 0.75 J Z | 1.7 U | 1.7 U | 1.0 J Z | 1.7 UJ FD | 1.7 J FD, Z | 9.3 U | 1.7 U | 1.8 U |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 9.3 U | 1.7 U | 1.8 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 9.3 U | 1.7 U | 1.8 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 100 U | 19 U | 19 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 100 U | 19 U | 19 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.5 J Z | 1.1 J Z | 1.7 U | 1.7 | 2.1 | 3.3 | 9.6 | 0.86 J Z | 2.4 |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 28 | 19 U | 19 U | 7.6 J Z | 19 UJ FD | 12 J FD, Z | 100 U | 19 U | 19 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 UJ FD | 0.97 J FD, Z | 9.3 U | 1.7 U | 1.8 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 0.79 J Z | 1.7 U | 1.7 U | 1.1 J Z | 1.7 UJ FD | 1.2 J FD, Z | 9.3 U | 1.7 U | 1.2 J Z |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 2.7 | 0.78 J Z | 1.7 U | 2.1 | 1.7 | 2.3 | 13 | 0.71 J Z | 5.4 |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.2 J Z | 1.7 U | 1.7 U | 1.6 J Z | 0.87 J Z | 1.4 J Z | 4.7 J Z | 1.7 U | 1.8 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-538-NBZ-SB-0.0-0.5 | SL-539-NBZ-SB-0.0-0.5 | SL-540-NBZ-SB-0.0-0.5 | SL-840-NBZ-SB-0.0-0.5 | SL-541-NBZ-SB-0.0-0.5 | SL-542-NBZ-SB-0.0-0.5 | SL-543-NBZ-SB-0.0-0.5 | SL-544-NBZ-SB-0.0-0.5 | SL-844-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | FD | N | N | N | N | FD |
| | | | | Sample Date | 12/06/2013 | 12/12/2013 | 12/11/2013 | 12/11/2013 | 12/11/2013 | 12/11/2013 | 12/12/2013 | 12/12/2013 | 12/12/2013 |
| | | | | SDG | PH141 | PH148 | PH148 | PH148 | PH148 | PH148 | PH148 | PH148 | PH148 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 18 U | 13 J Z | 15 J Z | 13 J Z | 19 U | 8.1 J Z | 190 U | 18 U | 18 U | |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 18 U | 19 U | 21 U | 21 U | 19 U | 19 U | 190 U | 18 U | 18 U | |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 0.38 J Z | 0.53 J Z | 0.46 J Z | 1.7 U | 1.8 U | 17 U | 1.7 U | 1.7 U | |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 0.88 J Z | 2.6 | 3.2 | 2.8 | 0.74 J Z | 2.3 | 17 U | 2.0 J FD | 0.67 J FD, Z | |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 18 U | 19 U | 21 U | 21 U | 19 U | 19 U | 190 U | 18 U | 18 U | |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.7 U | 0.85 J Z | 1.1 J Z | 1.3 J Z | 1.7 U | 1.2 J Z | 17 U | 1.7 U | 1.7 U | |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 17 U | 18 U | 20 U | 20 U | 18 U | 18 U | 180 U | 17 U | 17 U | |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.7 U | 1.7 U | 2.0 UJ FD | 0.85 J FD, Z | 1.7 U | 1.8 U | 17 U | 1.7 U | 1.7 U | |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 0.78 J Z | 2.6 | 3.7 | 3.3 | 1.7 U | 3.8 | 17 U | 2.5 J FD | 0.73 J FD, Z | |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 0.72 J Z | 2.8 | 2.9 | 3.1 | 0.85 J Z | 2.4 | 17 U | 2.1 J FD | 1.7 UJ FD | |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.7 U | 0.86 J Z | 1.2 J Z | 1.2 J Z | 1.7 U | 1.4 J Z | 17 U | 1.0 J FD, Z | 1.7 UJ FD | |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.7 U | 2.0 U | 1.9 U | 1.7 U | 1.8 U | 17 U | 1.7 U | 1.7 U | |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 0.71 J Z | 2.7 | 3.5 | 3.3 | 0.81 J Z | 4.2 | 8.1 J Z | 2.1 J FD | 0.81 J FD, Z | |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.7 U | 1.4 J Z | 1.5 J Z | 1.4 J Z | 1.7 U | 1.7 J Z | 17 U | 1.2 J FD, Z | 1.7 UJ FD | |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.7 U | 2.0 U | 1.9 U | 1.7 U | 1.8 U | 17 U | 1.7 U | 1.7 U | |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.7 U | 0.80 J Z | 1.2 J Z | 1.2 J Z | 1.7 U | 1.0 J Z | 17 U | 1.2 J FD, Z | 1.7 UJ FD | |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 2.0 U | 1.9 U | 1.7 U | 1.8 U | 17 U | 1.7 U | 1.7 U | |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 2.0 U | 1.9 U | 1.7 U | 1.8 U | 17 U | 1.7 U | 1.7 U | |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 18 U | 19 U | 21 U | 21 U | 19 U | 19 U | 190 U | 18 U | 18 U | |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 18 U | 19 U | 21 U | 21 U | 19 U | 19 U | 190 U | 18 U | 18 U | |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.7 U | 1.8 | 2.9 | 2.9 | 0.87 J Z | 2.4 | 17 U | 1.5 J FD, Z | 0.80 J FD, Z | |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 18 U | 19 U | 21 U | 21 U | 19 U | 19 U | 190 U | 18 U | 18 U | |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.7 U | 2.0 UJ FD | 5.5 J FD | 1.7 U | 16 | 17 U | 1.7 U | 1.7 U | |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 2.4 J FD | 1.9 UJ FD | 0.74 J Z | 0.85 J Z | 17 U | 0.72 J FD, Z | 1.7 UJ FD | |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.7 U | 2.3 | 5.3 | 3.8 | 1.8 | 3.5 | 17 U | 1.7 | 1.1 J Z | |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 2.9 J FD | 1.5 J FD, Z | 0.93 J Z | 1.8 | 17 U | 0.85 J FD, Z | 1.7 UJ FD | |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-545-NBZ-SB-0.0-0.5 | SL-845-NBZ-SB-0.0-0.5 | SL-551-NBZ-SB-0.0-0.5 | SL-552-NBZ-SB-0.0-0.5 | SL-552-NBZ-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | FD | N | N | N |
| | | | | Sample Date | 12/04/2013 | 12/04/2013 | 12/17/2013 | 12/10/2013 | 12/10/2013 |
| | | | | SDG | PH139 | PH139 | PH157 | PH146 | PH146 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 2 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 190 U | 190 U | 20 | 74 J Z | 16 J Z |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 190 U | 190 U | 18 U | 180 U | 18 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 18 U | 18 U | 1.7 U | 17 U | 1.7 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 18 U | 18 U | 2.0 | 17 U | 0.73 J Z |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 190 U | 190 U | 18 U | 180 U | 18 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 18 U | 18 U | 0.88 J Z | 17 U | 1.7 U |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 180 U | 180 U | 17 U | 170 U | 17 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 18 U | 18 U | 1.7 U | 17 U | 1.7 U |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 15 J FD, Z | 18 UJ FD | 2.4 | 17 U | 0.96 J Z |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 18 U | 18 U | 2.2 | 17 U | 0.75 J Z |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 18 U | 18 U | 0.88 J Z | 17 U | 1.7 U |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 18 U | 18 U | 1.7 U | 17 U | 1.7 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 20 J FD | 6.9 J FD, Z | 2.7 | 8.2 J Z | 1.3 J Z |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 18 U | 18 U | 0.96 J Z | 17 U | 1.7 U |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 18 U | 18 U | 1.7 U | 17 U | 1.7 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 18 U | 18 U | 1.3 J Z | 17 U | 0.76 J Z |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 18 U | 18 U | 1.7 U | 17 U | 1.7 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 18 U | 18 U | 1.7 U | 17 U | 1.7 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 190 U | 190 U | 18 U | 180 U | 18 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 190 U | 190 U | 18 U | 180 U | 18 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 18 U | 18 U | 1.5 J Z | 8.2 J Z | 0.75 J Z |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 190 U | 190 U | 13 J Z | 180 U | 58 |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 18 U | 18 U | 1.7 U | 17 U | 1.7 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 18 U | 18 U | 0.86 J Z | 17 U | 1.7 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 12 J FD, Z | 18 UJ FD | 2.1 | 21 | 2.6 |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 18 U | 18 U | 1.1 J Z | 6.8 J Z | 0.88 J Z |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-508-NBZ-SB-0.0-0.5 | SL-508-NBZ-SB-4.0-5.0 | SL-509-NBZ-SB-0.0-0.5 | SL-509-NBZ-SB-2.5-3.5 | SL-809-NBZ-SB-2.5-3.5 | SL-510-NBZ-SB-0.0-0.5 | SL-510-NBZ-SB-4.0-5.0 | SL-527-NBZ-SB-0.0-0.5 | SL-528-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | FD | N | N | N | N |
| | | | Sample Date | 12/04/2013 | 12/04/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/05/2013 | 12/05/2013 |
| | | | SDG | PH139 | PH139 | PH138 | PH138 | PH138 | PH138 | PH138 | PH140 | PH140 |
| | | | Start Depth | 0 | 4 | 0 | 2.5 | 2.5 | 0 | 4 | 0 | 0 |
| | | | End Depth | 0.5 | 5 | 0.5 | 3.5 | 3.5 | 0.5 | 5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 19 U | 19 U | 17 U | 18 U | 18 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 19 U | 19 U | 17 U | 18 U | 18 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 19 U | 19 U | 17 U | 18 U | 18 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 19 U | 19 U | 17 U | 18 U | 18 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 36 U | 37 U | 34 U | 35 U | 35 U | 35 U | 36 U | 37 U | 35 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 19 U | 19 U | 17 U | 18 U | 18 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 36 U | 37 U | 34 U | 35 U | 35 U | 35 U | 36 U | 37 U | 35 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 19 U | 19 U | 17 U | 18 U | 18 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 19 U | 19 U | 17 U | 18 U | 18 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 19 U | 19 U | 17 U | 18 U | 18 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 19 U | 19 U | 17 U | 18 U | 18 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 36 U | 37 U | 34 U | 35 U | 35 U | 35 U | 36 U | 37 U | 35 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-529-NBZ-SB-0.0-0.5 | SL-545-NBZ-SB-0.0-0.5 | SL-845-NBZ-SB-0.0-0.5 | SL-548-NBZ-SB-0.0-0.5 | SL-553-NBZ-SB-0.0-0.5 | SL-554-NBZ-SB-0.0-0.5 | SL-555-NBZ-SB-0.0-0.5 | SL-557-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | FD | N | N | N | N | N |
| | | | | Sample Date | 12/05/2013 | 12/04/2013 | 12/04/2013 | 12/04/2013 | 12/10/2013 | 12/10/2013 | 12/10/2013 | 12/13/2013 |
| | | | | SDG | PH140 | PH139 | PH139 | PH139 | PH143 | PH143 | PH143 | PH151 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U | 18 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U | 18 U | 18 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U | 18 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U | 18 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 35 U | 36 U | 35 U | 34 U | 35 U | 33 U | 35 U | 34 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U | 18 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 35 U | 36 U | 35 U | 34 U | 35 U | 33 U | 35 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U | 18 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U | 18 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U | 18 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U | 18 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 35 U | 36 U | 35 U | 34 U | 35 U | 33 U | 35 U | 34 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-502-NBZ-SB-0.0-0.5 | SL-502-NBZ-SB-4.0-5.0 | SL-503-NBZ-SB-0.0-0.5 | SL-503-NBZ-SB-2.0-3.0 | SL-504-NBZ-SB-0.0-0.5 | SL-804-NBZ-SB-0.0-0.5 | SL-506-NBZ-SB-0.0-0.5 | SL-507-NBZ-SB-0.0-0.5 | SL-507-NBZ-SB-3.5-4.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | | | Sample Date | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/04/2013 | 12/04/2013 | 12/04/2013 |
| | | | | SDG | PH138 | PH138 | PH138 | PH138 | PH138 | PH138 | PH139 | PH139 | PH139 |
| | | | | Start Depth | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 3.5 |
| | | | | End Depth | 0.5 | 5 | 0.5 | 3 | 0.5 | 0.5 | 0.5 | 0.5 | 4.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8081B | 1024-57-3 | Heptachlor Epoxide | µg/kg | 0.89 U | 0.92 U | 0.85 U | 0.85 U | 0.84 U | 0.83 U | 0.87 U | 0.86 U | 0.88 U |
| 8081B | 1031-07-8 | Endosulfan Sulfate | µg/kg | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U |
| 8081B | 2385-85-5 | Mirex | µg/kg | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U |
| 8081B | 309-00-2 | Aldrin | µg/kg | 0.89 U | 0.92 U | 0.85 U | 0.85 U | 0.84 U | 0.83 U | 0.87 U | 0.86 U | 0.88 U |
| 8081B | 319-84-6 | Alpha-Bhc | µg/kg | 0.89 U | 0.92 U | 0.85 U | 0.85 U | 0.84 U | 0.83 U | 0.87 U | 0.86 U | 0.88 U |
| 8081B | 319-85-7 | Beta-Bhc | µg/kg | 2.0 U | 2.1 U | 2.0 U | 1.9 U | 1.9 U | 1.9 U | 2.0 U | 2.0 U | 2.0 U |
| 8081B | 319-86-8 | Delta-Bhc | µg/kg | 0.89 U | 0.92 U | 0.85 U | 0.85 U | 0.84 U | 0.83 U | 0.87 U | 0.86 U | 0.88 U |
| 8081B | 33213-65-9 | Endosulfan II | µg/kg | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U |
| 8081B | 50-29-3 | 4,4'-DDT | µg/kg | 1.8 U | 1.9 U | 0.37 J Z | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 0.43 J Z | 1.8 U |
| 8081B | 53494-70-5 | Endrin Ketone | µg/kg | 1.9 U | 2.0 U | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 1.9 U |
| 8081B | 57-74-9 | Chlordane | µg/kg | 18 U | 19 U | 17 U | 17 U | 17 U | 17 U | 18 U | 18 U | 18 U |
| 8081B | 58-89-9 | Gamma-Bhc (Lindane) | µg/kg | 0.89 U | 0.92 U | 0.85 U | 0.85 U | 0.84 U | 0.83 U | 0.87 U | 0.86 U | 0.88 U |
| 8081B | 60-57-1 | Dieldrin | µg/kg | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U |
| 8081B | 72-20-8 | Endrin | µg/kg | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U |
| 8081B | 72-43-5 | Methoxychlor | µg/kg | 7.2 U | 7.4 U | 6.9 U | 6.8 U | 6.8 U | 6.7 U | 7.0 U | 6.9 U | 7.1 U |
| 8081B | 72-54-8 | 4,4'-DDD | µg/kg | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U |
| 8081B | 72-55-9 | 4,4'-DDE | µg/kg | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 0.63 J Z | 1.8 U |
| 8081B | 7421-93-4 | Endrin Aldehyde | µg/kg | 1.8 U | 1.9 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U |
| 8081B | 76-44-8 | Heptachlor | µg/kg | 0.89 U | 0.92 U | 0.85 U | 0.85 U | 0.84 U | 0.83 U | 0.87 U | 0.86 U | 0.88 U |
| 8081B | 8001-35-2 | Technical Toxaphene | µg/kg | 36 U | 36 U | 34 U | 34 U | 33 U | 33 U | 34 U | 34 U | 35 U |
| 8081B | 959-98-8 | Endosulfan I | µg/kg | 0.89 U | 0.92 U | 0.85 U | 0.85 U | 0.84 U | 0.83 U | 0.87 U | 0.86 U | 0.88 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-508-NBZ-SB-0.0-0.5 | SL-508-NBZ-SB-4.0-5.0 | SL-509-NBZ-SB-0.0-0.5 | SL-509-NBZ-SB-2.5-3.5 | SL-809-NBZ-SB-2.5-3.5 | SL-510-NBZ-SB-0.0-0.5 | SL-510-NBZ-SB-4.0-5.0 | SL-514-NBZ-SB-0.0-0.5 | SL-515-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | FD | N | N | N | N |
| | | | | Sample Date | 12/04/2013 | 12/04/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/09/2013 | 12/09/2013 |
| | | | | SDG | PH139 | PH139 | PH138 | PH138 | PH138 | PH138 | PH138 | PH142 | PH142 |
| | | | | Start Depth | 0 | 4 | 0 | 2.5 | 2.5 | 0 | 4 | 0 | 0 |
| | | | | End Depth | 0.5 | 5 | 0.5 | 3.5 | 3.5 | 0.5 | 5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8081B | 1024-57-3 | Heptachlor Epoxide | µg/kg | 0.91 U | 0.92 U | 0.85 U | 0.87 U | 0.88 U | 0.87 U | 0.91 U | 0.90 U | 0.91 U |
| 8081B | 1031-07-8 | Endosulfan Sulfate | µg/kg | 1.9 U | 1.9 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.9 U |
| 8081B | 2385-85-5 | Mirex | µg/kg | 1.9 U | 1.9 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.9 U |
| 8081B | 309-00-2 | Aldrin | µg/kg | 0.91 U | 0.92 U | 0.85 U | 0.87 U | 0.88 U | 0.87 U | 0.91 U | 0.90 U | 0.91 U |
| 8081B | 319-84-6 | Alpha-Bhc | µg/kg | 0.91 U | 0.92 U | 0.85 U | 0.87 U | 0.88 U | 0.87 U | 0.91 U | 0.90 U | 0.91 U |
| 8081B | 319-85-7 | Beta-Bhc | µg/kg | 2.1 U | 2.1 U | 1.9 U | 2.0 U | 2.0 U | 2.0 U | 2.1 U | 2.1 U | 2.1 U |
| 8081B | 319-86-8 | Delta-Bhc | µg/kg | 0.91 U | 0.92 U | 0.85 U | 0.87 U | 0.88 U | 0.87 U | 0.91 U | 0.90 U | 0.91 U |
| 8081B | 33213-65-9 | Endosulfan II | µg/kg | 1.9 U | 1.9 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.9 UJ C |
| 8081B | 50-29-3 | 4,4'-DDT | µg/kg | 1.9 U | 1.9 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 0.61 J Z, *# | 1.2 J Z |
| 8081B | 53494-70-5 | Endrin Ketone | µg/kg | 2.0 U | 2.0 U | 1.8 U | 1.9 U | 1.9 U | 1.9 U | 2.0 U | 2.0 U | 2.0 U |
| 8081B | 57-74-9 | Chlordane | µg/kg | 19 U | 19 U | 17 U | 18 U | 18 U | 18 U | 19 U | 18 U | 19 U |
| 8081B | 58-89-9 | Gamma-Bhc (Lindane) | µg/kg | 0.91 U | 0.92 U | 0.85 U | 0.87 U | 0.88 U | 0.87 U | 0.91 U | 0.90 U | 0.91 U |
| 8081B | 60-57-1 | Dieldrin | µg/kg | 1.9 U | 1.9 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.9 U |
| 8081B | 72-20-8 | Endrin | µg/kg | 1.9 U | 1.9 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.9 U |
| 8081B | 72-43-5 | Methoxychlor | µg/kg | 7.4 U | 7.4 U | 6.9 U | 7.0 U | 7.1 U | 7.0 U | 7.3 U | 7.3 U | 7.4 U |
| 8081B | 72-54-8 | 4,4'-DDD | µg/kg | 1.9 U | 1.9 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.9 U |
| 8081B | 72-55-9 | 4,4'-DDE | µg/kg | 1.9 U | 1.9 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 0.85 J Z | 1.0 J Z, *# |
| 8081B | 7421-93-4 | Endrin Aldehyde | µg/kg | 1.9 U | 1.9 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 0.50 J Z | 1.9 U |
| 8081B | 76-44-8 | Heptachlor | µg/kg | 0.91 U | 0.92 U | 0.85 U | 0.87 U | 0.88 U | 0.87 U | 0.91 U | 0.90 U | 0.91 U |
| 8081B | 8001-35-2 | Technical Toxaphene | µg/kg | 36 U | 36 U | 34 U | 35 U | 35 U | 35 U | 36 U | 36 U | 36 U |
| 8081B | 959-98-8 | Endosulfan I | µg/kg | 0.91 U | 0.92 U | 0.85 U | 0.87 U | 0.88 U | 0.87 U | 0.91 U | 0.42 J Z | 0.91 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-526-NBZ-SB-0.0-0.5 | SL-526-NBZ-SB-2.5-3.5 | SL-527-NBZ-SB-0.0-0.5 | SL-528-NBZ-SB-0.0-0.5 | SL-529-NBZ-SB-0.0-0.5 | SL-530-NBZ-SB-0.0-0.5 | SL-531-NBZ-SB-0.0-0.5 | SL-532-NBZ-SB-0.0-0.5 | SL-537-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 12/05/2013 | 12/05/2013 | 12/05/2013 | 12/05/2013 | 12/05/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/06/2013 |
| | | | | SDG | PH140 | PH140 | PH140 | PH140 | PH140 | PH138 | PH138 | PH138 | PH141 |
| | | | | Start Depth | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8081B | 1024-57-3 | Heptachlor Epoxide | µg/kg | 0.86 U | 0.86 U | 0.93 U | 0.88 U | 0.89 U | 0.84 U | 0.84 U | 0.85 U | 0.86 U |
| 8081B | 1031-07-8 | Endosulfan Sulfate | µg/kg | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U |
| 8081B | 2385-85-5 | Mirex | µg/kg | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U |
| 8081B | 309-00-2 | Aldrin | µg/kg | 0.86 U | 0.86 U | 0.93 U | 0.88 U | 0.89 U | 0.84 U | 0.84 U | 0.85 U | 0.86 U |
| 8081B | 319-84-6 | Alpha-Bhc | µg/kg | 0.86 U | 0.86 U | 0.93 U | 0.88 U | 0.89 U | 0.84 U | 0.84 U | 0.85 U | 0.86 U |
| 8081B | 319-85-7 | Beta-Bhc | µg/kg | 2.0 U | 2.0 U | 2.1 U | 2.0 U | 2.0 U | 1.9 U | 1.9 U | 2.0 U | 2.0 U |
| 8081B | 319-86-8 | Delta-Bhc | µg/kg | 0.86 U | 0.86 U | 0.93 U | 0.88 U | 0.89 U | 0.84 U | 0.84 U | 0.85 U | 0.86 U |
| 8081B | 33213-65-9 | Endosulfan II | µg/kg | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U |
| 8081B | 50-29-3 | 4,4'-DDT | µg/kg | 0.78 J Z | 1.8 U | 1.0 J Z | 1.3 J Z | 0.91 J Z | 1.7 U | 1.7 U | 1.0 J Z | 0.86 J Z |
| 8081B | 53494-70-5 | Endrin Ketone | µg/kg | 1.9 U | 1.9 U | 2.0 U | 1.9 U | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8081B | 57-74-9 | Chlordane | µg/kg | 18 U | 18 U | 19 U | 18 U | 18 U | 17 U | 17 U | 17 U | 18 U |
| 8081B | 58-89-9 | Gamma-Bhc (Lindane) | µg/kg | 0.86 U | 0.86 U | 0.93 U | 0.32 J Z | 0.89 U | 0.84 U | 0.84 U | 0.85 U | 0.86 U |
| 8081B | 60-57-1 | Dieldrin | µg/kg | 1.8 U | 1.8 U | 1.9 U | 0.52 J Z | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.9 U |
| 8081B | 72-20-8 | Endrin | µg/kg | 1.8 U | 1.8 U | 1.9 U | 0.41 J Z | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U |
| 8081B | 72-43-5 | Methoxychlor | µg/kg | 6.9 U | 6.9 U | 7.5 U | 7.1 U | 7.2 U | 6.8 U | 6.8 U | 6.9 U | 6.9 U |
| 8081B | 72-54-8 | 4,4'-DDD | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U |
| 8081B | 72-55-9 | 4,4'-DDE | µg/kg | 0.65 J Z | 1.8 U | 1.1 J Z | 2.1 | 1.6 J Z | 1.7 U | 1.7 U | 1.7 U | 0.89 J Z |
| 8081B | 7421-93-4 | Endrin Aldehyde | µg/kg | 1.8 U | 1.8 U | 0.98 J Z | 0.71 J Z | 0.36 J Z | 1.7 U | 1.7 U | 1.7 U | 1.8 U |
| 8081B | 76-44-8 | Heptachlor | µg/kg | 0.86 U | 0.86 U | 0.93 U | 0.88 U | 0.89 U | 0.84 U | 0.84 U | 0.85 U | 0.86 U |
| 8081B | 8001-35-2 | Technical Toxaphene | µg/kg | 34 U | 34 U | 39 U | 38 U | 36 U | 33 U | 33 U | 34 U | 34 U |
| 8081B | 959-98-8 | Endosulfan I | µg/kg | 0.86 U | 0.86 U | 0.92 J Z | 0.88 U | 0.89 U | 0.84 U | 0.84 U | 0.85 U | 0.86 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-538-NBZ-SB-0.0-0.5 | SL-539-NBZ-SB-0.0-0.5 | SL-540-NBZ-SB-0.0-0.5 | SL-840-NBZ-SB-0.0-0.5 | SL-541-NBZ-SB-0.0-0.5 | SL-542-NBZ-SB-0.0-0.5 | SL-544-NBZ-SB-0.0-0.5 | SL-844-NBZ-SB-0.0-0.5 | SL-556-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | FD | N | N | N | FD | N |
| | | | Sample Date | 12/06/2013 | 12/12/2013 | 12/11/2013 | 12/11/2013 | 12/11/2013 | 12/11/2013 | 12/12/2013 | 12/12/2013 | 12/06/2013 |
| | | | SDG | PH141 | PH148 | PH148 | PH148 | PH148 | PH148 | PH148 | PH148 | PH141 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8081B | 1024-57-3 | Heptachlor Epoxide | µg/kg | 0.84 U | 0.87 U | 0.97 U | 0.97 U | 0.86 U | 0.93 U | 0.86 U | 0.85 U | 0.86 U |
| 8081B | 1031-07-8 | Endosulfan Sulfate | µg/kg | 1.7 U | 1.8 U | 2.0 U | 2.0 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.8 U |
| 8081B | 2385-85-5 | Mirex | µg/kg | 1.7 U | 1.8 U | 2.0 U | 2.0 U | 0.62 J Z | 1.8 U | 1.8 U | 1.7 U | 1.8 U |
| 8081B | 309-00-2 | Aldrin | µg/kg | 0.84 U | 0.87 U | 0.97 U | 0.97 U | 0.86 U | 0.88 U | 0.86 U | 0.85 U | 0.86 U |
| 8081B | 319-84-6 | Alpha-Bhc | µg/kg | 0.84 U | 0.87 U | 0.97 U | 0.97 U | 0.86 U | 0.88 U | 0.86 U | 0.85 U | 0.86 U |
| 8081B | 319-85-7 | Beta-Bhc | µg/kg | 1.9 U | 2.0 U | 2.2 U | 2.2 U | 2.0 U | 2.0 U | 2.0 U | 1.9 U | 2.0 U |
| 8081B | 319-86-8 | Delta-Bhc | µg/kg | 0.84 U | 0.87 U | 0.97 U | 0.97 U | 0.86 U | 0.74 J Z | 0.86 U | 0.85 U | 0.86 U |
| 8081B | 33213-65-9 | Endosulfan II | µg/kg | 1.7 U | 1.8 U | 2.0 U | 2.0 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.8 U |
| 8081B | 50-29-3 | 4,4'-DDT | µg/kg | 1.7 U | 1.6 J Z | 2.0 | 1.3 J Z | 1.8 U | 2.3 | 0.90 J FD, Z | 0.49 J FD, Z | 2.6 |
| 8081B | 53494-70-5 | Endrin Ketone | µg/kg | 1.8 U | 1.9 U | 2.1 U | 2.1 U | 1.9 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U |
| 8081B | 57-74-9 | Chlordane | µg/kg | 17 U | 18 U | 20 U | 20 U | 18 U | 18 U | 18 U | 17 U | 18 U |
| 8081B | 58-89-9 | Gamma-Bhc (Lindane) | µg/kg | 0.84 U | 0.87 U | 0.97 U | 0.97 U | 0.86 U | 0.88 U | 0.86 U | 0.85 U | 0.86 U |
| 8081B | 60-57-1 | Dieldrin | µg/kg | 1.7 U | 0.43 J Z | 0.56 J FD, Z | 2.0 UJ FD | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.8 U |
| 8081B | 72-20-8 | Endrin | µg/kg | 1.7 U | 0.39 J Z | 0.46 J FD, Z | 2.0 UJ FD | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.8 U |
| 8081B | 72-43-5 | Methoxychlor | µg/kg | 6.8 U | 7.0 U | 7.8 U | 7.9 U | 6.9 U | 7.1 U | 7.0 U | 6.9 U | 6.9 U |
| 8081B | 72-54-8 | 4,4'-DDD | µg/kg | 1.7 U | 1.8 U | 2.0 U | 2.0 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 1.8 U |
| 8081B | 72-55-9 | 4,4'-DDE | µg/kg | 1.7 U | 1.5 J Z | 2.0 U | 2.0 U | 1.8 U | 1.2 J Z | 0.64 J Z | 0.40 J Z | 2.7 |
| 8081B | 7421-93-4 | Endrin Aldehyde | µg/kg | 1.7 U | 0.55 J Z | 2.0 U | 2.0 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U | 0.40 J Z |
| 8081B | 76-44-8 | Heptachlor | µg/kg | 0.84 U | 0.87 U | 0.54 J FD, Z | 0.29 J FD, Z | 0.86 U | 0.88 U | 0.86 U | 0.85 U | 0.86 U |
| 8081B | 8001-35-2 | Technical Toxaphene | µg/kg | 34 U | 35 U | 39 U | 39 U | 34 U | 35 U | 34 U | 34 U | 34 U |
| 8081B | 959-98-8 | Endosulfan I | µg/kg | 0.84 U | 0.87 U | 0.97 U | 0.97 U | 0.86 U | 0.88 U | 0.86 U | 0.85 U | 0.86 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | |
|---|---|---|---|---|
| | | | Sample Name | SL-556-NBZ-SB-4.0-5.0 |
| | | | Sample Type | N |
| | | | Sample Date | 12/06/2013 |
| | | | SDG | PH141 |
| | | | Start Depth | 4 |
| | | | End Depth | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | |
| 8081B | 1024-57-3 | Heptachlor Epoxide | µg/kg | 0.86 U |
| 8081B | 1031-07-8 | Endosulfan Sulfate | µg/kg | 1.8 U |
| 8081B | 2385-85-5 | Mirex | µg/kg | 1.8 U |
| 8081B | 309-00-2 | Aldrin | µg/kg | 0.86 U |
| 8081B | 319-84-6 | Alpha-Bhc | µg/kg | 0.86 U |
| 8081B | 319-85-7 | Beta-Bhc | µg/kg | 2.0 U |
| 8081B | 319-86-8 | Delta-Bhc | µg/kg | 0.86 U |
| 8081B | 33213-65-9 | Endosulfan II | µg/kg | 1.8 U |
| 8081B | 50-29-3 | 4,4'-DDT | µg/kg | 1.8 U |
| 8081B | 53494-70-5 | Endrin Ketone | µg/kg | 1.9 U |
| 8081B | 57-74-9 | Chlordane | µg/kg | 18 U |
| 8081B | 58-89-9 | Gamma-Bhc (Lindane) | µg/kg | 0.86 U |
| 8081B | 60-57-1 | Dieldrin | µg/kg | 1.8 U |
| 8081B | 72-20-8 | Endrin | µg/kg | 1.8 U |
| 8081B | 72-43-5 | Methoxychlor | µg/kg | 7.0 U |
| 8081B | 72-54-8 | 4,4'-DDD | µg/kg | 1.8 U |
| 8081B | 72-55-9 | 4,4'-DDE | µg/kg | 1.8 U |
| 8081B | 7421-93-4 | Endrin Aldehyde | µg/kg | 1.8 U |
| 8081B | 76-44-8 | Heptachlor | µg/kg | 0.86 U |
| 8081B | 8001-35-2 | Technical Toxaphene | µg/kg | 34 U |
| 8081B | 959-98-8 | Endosulfan I | µg/kg | 0.86 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-501-NBZ-SB-0.0-0.5 | SL-505-NBZ-SB-0.0-0.5 | SL-508-NBZ-SB-0.0-0.5 | SL-508-NBZ-SB-4.0-5.0 | SL-509-NBZ-SB-0.0-0.5 | SL-509-NBZ-SB-2.5-3.5 | SL-809-NBZ-SB-2.5-3.5 | SL-510-NBZ-SB-0.0-0.5 | SL-510-NBZ-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | N | FD | N | N |
| | | | Sample Date | 12/06/2013 | 12/13/2013 | 12/04/2013 | 12/04/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 |
| | | | SDG | PH141 | PH151 | PH139 | PH139 | PH138 | PH138 | PH138 | PH138 | PH138 |
| | | | Start Depth | 0 | 0 | 0 | 4 | 0 | 2.5 | 2.5 | 0 | 4 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 5 | 0.5 | 3.5 | 3.5 | 0.5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 6.98 | 6.93 | 6.93 | 7.06 | 7.23 | 7.60 | 7.65 | 7.93 | 8.04 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-511-NBZ-SB-0.0-0.5 | SL-511-NBZ-SB-2.5-3.5 | SL-516-NBZ-SB-0.0-0.5 | SL-516-NBZ-SB-4.0-5.0 | SL-517-NBZ-SB-0.0-0.5 | SL-517-NBZ-SB-2.0-3.0 | SL-518-NBZ-SB-0.0-0.5 | SL-519-NBZ-SB-0.0-0.5 | SL-520-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 12/04/2013 | 12/04/2013 | 12/09/2013 | 12/09/2013 | 12/16/2013 | 12/16/2013 | 12/16/2013 | 12/16/2013 | 12/16/2013 |
| | | | SDG | PH139 | PH139 | PH142 | PH142 | PH155 | PH155 | PH155 | PH155 | PH155 |
| | | | Start Depth | 0 | 2.5 | 0 | 4 | 0 | 2 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 3.5 | 0.5 | 5 | 0.5 | 3 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 6.53 | 6.72 | 6.87 | 7.09 | 6.50 | 6.91 | 6.32 | 6.56 | 7.17 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-521-NBZ-SB-0.0-0.5 | SL-544-NBZ-SB-0.0-0.5 | SL-844-NBZ-SB-0.0-0.5 | SL-545-NBZ-SB-0.0-0.5 | SL-845-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | FD | N | FD |
| | | | Sample Date | 12/13/2013 | 12/12/2013 | 12/12/2013 | 12/04/2013 | 12/04/2013 |
| | | | SDG | PH151 | PH148 | PH148 | PH139 | PH139 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | |
| 9045M | pH | pH | pH | 7.68 | 6.47 | 6.41 | 6.97 | 7.06 |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-502-NBZ-SB-0.0-0.5 | SL-502-NBZ-SB-4.0-5.0 | SL-503-NBZ-SB-0.0-0.5 | SL-503-NBZ-SB-2.0-3.0 | SL-504-NBZ-SB-0.0-0.5 | SL-804-NBZ-SB-0.0-0.5 | SL-505-NBZ-SB-0.0-0.5 | SL-506-NBZ-SB-0.0-0.5 | SL-507-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | | Sample Date | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/13/2013 | 12/04/2013 | 12/04/2013 |
| | | | SDG | PH138 | PH138 | PH138 | PH138 | PH138 | PH138 | PH151 | PH139 | PH139 |
| | | | Start Depth | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 5 | 0.5 | 3 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.4 U | 5.5 U | 5.2 U | 5.1 U | 5.1 U | 5.1 U | 26 U | 5.2 U | 5.2 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.4 U | 5.5 U | 5.2 U | 5.1 U | 5.1 U | 5.1 U | 15 J Z | 5.2 U | 5.2 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 5.4 U | 5.5 U | 6.5 | 5.1 U | 5.1 U | 5.1 U | 67 | 4.3 J Z | 5.7 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 11 U | 11 U | 24 | 10 U | 10 U | 10 U | 230 | 13 | 13 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.4 U | 5.5 U | 5.2 U | 5.1 U | 5.1 U | 5.1 U | 26 U | 5.2 U | 5.2 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | Sample Name | SL-507-NBZ-SB-3.5-4.5 | SL-508-NBZ-SB-0.0-0.5 | SL-508-NBZ-SB-4.0-5.0 | SL-509-NBZ-SB-0.0-0.5 | SL-509-NBZ-SB-2.5-3.5 | SL-809-NBZ-SB-2.5-3.5 | SL-510-NBZ-SB-0.0-0.5 | SL-510-NBZ-SB-4.0-5.0 | SL-511-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | | | Sample Date | 12/04/2013 | 12/04/2013 | 12/04/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/04/2013 |
| | | | | SDG | PH139 | PH139 | PH139 | PH138 | PH138 | PH138 | PH138 | PH138 | PH139 |
| | | | | Start Depth | 3.5 | 0 | 4 | 0 | 2.5 | 2.5 | 0 | 4 | 0 |
| | | | | End Depth | 4.5 | 0.5 | 5 | 0.5 | 3.5 | 3.5 | 0.5 | 5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.3 U | 5.5 U | 5.5 U | 5.1 U | 5.2 U | 5.3 U | 5.2 U | 5.5 U | 5.2 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.3 U | 5.5 U | 5.5 U | 5.1 U | 5.2 U | 5.3 U | 5.2 U | 5.5 U | 5.9 |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 3.3 J Z | 3.2 J Z | 3.2 J Z | 5.1 U | 5.2 U | 5.3 U | 5.2 U | 5.5 U | 23 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 8.3 J Z | 7.9 J Z | 8.2 J Z | 10 U | 10 U | 11 U | 10 U | 11 U | 59 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.3 U | 5.5 U | 5.5 U | 5.1 U | 5.2 U | 5.3 U | 5.2 U | 5.5 U | 5.2 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | Sample Name | SL-511-NBZ-SB-2.5-3.5 | SL-512-NBZ-SB-0.0-0.5 | SL-513-NBZ-SB-0.0-0.5 | SL-516-NBZ-SB-0.0-0.5 | SL-516-NBZ-SB-4.0-5.0 | SL-517-NBZ-SB-0.0-0.5 | SL-517-NBZ-SB-2.0-3.0 | SL-518-NBZ-SB-0.0-0.5 | SL-519-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 12/04/2013 | 12/06/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/16/2013 | 12/16/2013 | 12/16/2013 | 12/16/2013 |
| | | | SDG | PH139 | PH141 | PH142 | PH142 | PH142 | PH155 | PH155 | PH155 | PH155 |
| | | | Start Depth | 2.5 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 0 |
| | | | End Depth | 3.5 | 0.5 | 0.5 | 0.5 | 5 | 0.5 | 3 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.3 U | 5.1 U | 11 U | 5.3 U | 5.1 U | 5.2 U | 5.3 U | 26 U | 5.1 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.3 U | 2.4 J Z | 12 | 5.3 U | 5.1 U | 2.1 J Z | 5.3 U | 26 U | 2.8 J Z |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 3.5 J Z | 12 | 47 | 14 | 5.1 U | 11 | 5.0 J Z | 59 | 18 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 8.9 J Z | 38 | 120 | 21 | 10 U | 31 | 9.3 J Z | 110 | 42 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.3 U | 5.1 U | 11 U | 5.3 U | 5.1 U | 5.2 U | 5.3 U | 14 J Z | 5.1 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-520-NBZ-SB-0.0-0.5 | SL-521-NBZ-SB-0.0-0.5 | SL-522-NBZ-SB-0.0-0.5 | SL-522-NBZ-SB-2.5-3.5 | SL-523-NBZ-SB-0.0-0.5 | SL-524-NBZ-SB-0.0-0.5 | SL-824-NBZ-SB-0.0-0.5 | SL-525-NBZ-SB-0.0-0.5 | SL-525-NBZ-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | N | FD | N | N |
| | | | Sample Date | 12/16/2013 | 12/13/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/09/2013 | 12/05/2013 | 12/05/2013 |
| | | | SDG | PH155 | PH151 | PH142 | PH142 | PH142 | PH142 | PH142 | PH140 | PH140 |
| | | | Start Depth | 0 | 0 | 0 | 2.5 | 0 | 0 | 0 | 0 | 4 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 | 0.5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.0 U | 5.2 U | 5.2 U | 5.2 U | 5.2 U | 10 U | 5.2 U | 5.1 U | 5.1 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 2.1 J Z | 4.2 J Z | 2.7 J Z | 5.2 U | 3.3 J Z | 8.4 J FD, Q, Z | 2.2 J FD, Z | 2.5 J Z | 5.1 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 11 | 27 | 23 | 5.2 U | 36 | 58 J FD | 28 J FD | 18 | 5.1 U |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 23 | 57 | 43 | 10 U | 72 | 120 J FD | 50 J FD | 20 | 10 U |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.0 U | 5.2 U | 5.2 U | 5.2 U | 5.2 U | 10 U | 5.2 U | 5.1 U | 5.1 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-825-NBZ-SB-4.0-5.0 | SL-526-NBZ-SB-0.0-0.5 | SL-526-NBZ-SB-2.5-3.5 | SL-530-NBZ-SB-0.0-0.5 | SL-531-NBZ-SB-0.0-0.5 | SL-532-NBZ-SB-0.0-0.5 | SL-533-NBZ-SB-0.0-0.5 | SL-534-NBZ-SB-0.0-0.5 | SL-535-NBZ-SB-0.0-0.5 |
| | | | Sample Type | FD | N | N | N | N | N | N | N | N |
| | | | Sample Date | 12/05/2013 | 12/05/2013 | 12/05/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/06/2013 | 12/06/2013 |
| | | | SDG | PH140 | PH140 | PH140 | PH138 | PH138 | PH138 | PH138 | PH141 | PH141 |
| | | | Start Depth | 4 | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 5 | 0.5 | 3.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.1 U | 26 U | 5.2 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 6.0 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.1 U | 13 J Z | 5.2 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 2.5 J Z | 7.0 |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 5.1 U | 110 | 8.4 | 5.1 U | 5.1 U | 5.1 U | 2.8 J Z | 18 | 36 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 10 U | 210 | 14 | 4.2 J Z | 7.9 J Z | 10 U | 6.4 J Z | 42 | 85 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.1 U | 26 U | 5.2 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 5.1 U | 6.0 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-537-NBZ-SB-0.0-0.5 | SL-538-NBZ-SB-0.0-0.5 | SL-539-NBZ-SB-0.0-0.5 | SL-543-NBZ-SB-0.0-0.5 | SL-544-NBZ-SB-0.0-0.5 | SL-844-NBZ-SB-0.0-0.5 | SL-545-NBZ-SB-0.0-0.5 | SL-845-NBZ-SB-0.0-0.5 | SL-546-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | FD | N | FD | N |
| | | | Sample Date | 12/06/2013 | 12/06/2013 | 12/12/2013 | 12/12/2013 | 12/12/2013 | 12/12/2013 | 12/04/2013 | 12/04/2013 | 12/04/2013 |
| | | | SDG | PH141 | PH141 | PH148 | PH148 | PH148 | PH148 | PH139 | PH139 | PH139 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 10 U | 5.1 U | 26 U | 26 U | 5.1 U | 5.1 U | 27 U | 26 U | 26 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 8.1 J Z | 2.2 J Z | 21 J Z | 26 U | 5.1 U | 5.1 U | 35 | 33 | 11 J Z |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 43 | 11 | 120 | 72 | 15 J FD | 6.8 J FD | 150 | 200 | 76 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 140 | 19 | 240 | 170 | 30 J Q | 20 | 370 | 460 | 250 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 10 U | 5.1 U | 26 U | 26 U | 5.1 U | 5.1 U | 27 U | 26 U | 26 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-547-NBZ-SB-0.0-0.5 | SL-548-NBZ-SB-0.0-0.5 | SL-549-NBZ-SB-0.0-0.5 | SL-556-NBZ-SB-0.0-0.5 | SL-556-NBZ-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N |
| | | | Sample Date | 12/04/2013 | 12/04/2013 | 12/04/2013 | 12/06/2013 | 12/06/2013 |
| | | | SDG | PH139 | PH139 | PH139 | PH141 | PH141 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 4 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 11 U | 5.2 U | 5.1 U | 26 U | 5.2 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 10 J Z | 5.2 U | 5.1 U | 28 | 5.2 |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 62 | 5.2 U | 13 | 180 | 30 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 150 | 10 U | 24 | 490 | 74 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 11 U | 5.2 U | 5.1 U | 26 U | 5.2 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-502-NBZ-SB-4.0-5.0 | SL-503-NBZ-SB-2.0-3.0 | SL-507-NBZ-SB-3.5-4.5 | SL-508-NBZ-SB-4.0-5.0 | SL-509-NBZ-SB-2.5-3.5 | SL-809-NBZ-SB-2.5-3.5 | SL-510-NBZ-SB-4.0-5.0 | SL-511-NBZ-SB-2.5-3.5 | SL-516-NBZ-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | FD | N | N | N |
| | | | Sample Date | 12/03/2013 | 12/03/2013 | 12/04/2013 | 12/04/2013 | 12/03/2013 | 12/03/2013 | 12/03/2013 | 12/04/2013 | 12/09/2013 |
| | | | SDG | PH138 | PH138 | PH139 | PH139 | PH138 | PH138 | PH138 | PH139 | PH142 |
| | | | Start Depth | 4 | 2 | 3.5 | 4 | 2.5 | 2.5 | 4 | 2.5 | 4 |
| | | | End Depth | 5 | 3 | 4.5 | 5 | 3.5 | 3.5 | 5 | 3.5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1.1 U | 1.0 U | 0.6 J Z | 1 U | 1.1 U | 1.1 U | 1.1 U | 0.3 J Z | 1.0 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Sample Name | SL-517-NBZ-SB-2.0-3.0 | SL-522-NBZ-SB-2.5-3.5 | SL-556-NBZ-SB-4.0-5.0 |
| | | | Sample Type | N | N | N |
| | | | Sample Date | 12/16/2013 | 12/09/2013 | 12/06/2013 |
| | | | SDG | PH155 | PH142 | PH141 |
| | | | Start Depth | 2 | 2.5 | 4 |
| | | | End Depth | 3 | 3.5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1.0 U | 1.1 U | 1.0 U |

U-Compound not detected above reporting limit
J-Result is an estimated value
R-Result is rejected if R qualifier is in first position. If R qualifier is after another qualifier, result is not rejected but qualified as estimated during validation

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

eurofins | Lancaster Laboratories

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

# Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

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

May 06, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/10/2013
Group Number: 1381875
SDG: PH027
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| SL-539-SA7-SB-0.0-0.5 Soil | 7016766 |
| SL-542-SA7-SB-0.0-0.5 Soil | 7016767 |
| SL-540-SA7-SB-0.0-0.5 Soil | 7016768 |
| SL-540-SA7-SB-0.0-0.5MS Soil | 7016769 |
| SL-540-SA7-SB-0.0-0.5MSD Soil | 7016770 |
| SL-540-SA7-SB-0.0-0.5DUP Soil | 7016771 |
| SL-840-SA7-SB-0.0-0.5 Soil | 7016772 |
| SL-544-SA7-SB-0.0-0.5 Soil | 7016773 |
| SL-546-SA7-SB-0.0-0.5 Soil | 7016774 |

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

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

REVISED

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

REVISED

**Sample Description:** SL-539-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7016766**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/08/2013 12:45

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

539-- SDG#: PH027-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Anthracene | 120-12-7 | 6.0 | J | 17 | 3.4 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 11 | J | 17 | 6.8 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 170 | U | 170 | 34 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Chrysene | 218-01-9 | 22 | | 17 | 3.4 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 180 | U | 180 | 61 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 82 | | 17 | 6.8 | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | U | 17 | 6.8 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.8 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Naphthalene | 91-20-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 180 | U | 180 | 61 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 63 | | 17 | 6.8 | 10 |
| 12969 | Pyrene | 129-00-0 | 64 | | 17 | 6.8 | 10 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 23 | J | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 37 | | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 51 | U | 51 | 20 | 10 |
| 12952 | EFH (C15-C20) | n.a. | 51 | U | 51 | 20 | 10 |
| 12952 | EFH (C21-C30) | n.a. | 140 | | 51 | 20 | 10 |
| 12952 | EFH (C30-C40) | n.a. | 700 | | 100 | 41 | 10 |
| 12952 | EFH (C8-C11) | n.a. | 51 | U | 51 | 20 | 10 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

REVISED

**Sample Description: SL-539-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016766**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/08/2013 12:45

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

539-- SDG#: PH027-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,100 | | 41.0 | 7.90 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.10 | U | 4.10 | 0.512 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.15 | | 4.10 | 0.338 | 1 |
| 06946 | Barium | 7440-39-3 | 72.8 | | 1.02 | 0.0338 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.480 | J | 1.02 | 0.0686 | 1 |
| 07914 | Boron | 7440-42-8 | 4.32 | J | 10.2 | 0.850 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.161 | J | 1.02 | 0.0338 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,360 | | 20.5 | 4.12 | 1 |
| 06951 | Chromium | 7440-47-3 | 14.6 | | 3.07 | 0.0902 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.98 | | 1.02 | 0.0922 | 1 |
| 06953 | Copper | 7440-50-8 | 6.64 | | 2.05 | 0.184 | 1 |
| 01654 | Iron | 7439-89-6 | 18,100 | | 41.0 | 3.89 | 1 |
| 06955 | Lead | 7439-92-1 | 5.70 | | 3.07 | 0.482 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.9 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,370 | | 10.2 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 253 | | 1.02 | 0.0850 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.05 | U | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.54 | | 2.05 | 0.113 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 396 | | 10.2 | 0.523 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,290 | | 102 | 13.8 | 1 |
| 01667 | Sodium | 7440-23-5 | 66.5 | J | 102 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 2.66 | J | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,030 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 29.3 | | 1.02 | 0.113 | 1 |
| 06972 | Zinc | 7440-66-6 | 66.4 | | 4.10 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.12 | U | 5.12 | 0.850 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.410 | U | 0.410 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0585 | J | 0.205 | 0.0205 | 2 |
| 06144 | Strontium | 7440-24-6 | 13.9 | | 0.410 | 0.0348 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.255 | | 0.205 | 0.0307 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0202 | U | 0.0202 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.59 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

REVISED

**Sample Description: SL-539-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016766**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/08/2013 12:45

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

539-- SDG#: PH027-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0932 | J | 0.998 | 0.0389 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.615 | JBQ | 4.99 | 0.0804 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.72 | JB | 4.99 | 0.0596 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 4.86 | JB | 4.99 | 0.0611 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 2.77 | JB | 4.99 | 0.0570 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 158 | B | 4.99 | 0.0782 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,740 | B | 9.98 | 0.0518 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.730 | J | 0.998 | 0.0830 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 3.51 | JB | 4.99 | 0.0476 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.783 | JB | 4.99 | 0.0430 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 2.00 | JB | 4.99 | 0.0488 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.24 | JB | 4.99 | 0.0483 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.745 | J | 4.99 | 0.0501 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 1.28 | JB | 4.99 | 0.0480 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 26.5 | B | 4.99 | 0.0297 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 2.65 | JB | 4.99 | 0.0339 | 1 |
| 11031 | OCDF | 39001-02-0 | 50.9 | B | 9.98 | 0.0256 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 4.38 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 77 | 25 - 164 |
| 13C12-12378-PeCDD | 81 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 91 | 23 - 140 |
| 13C12-OCDD | 111 | 17 - 157 |
| 13C12-2378-TCDF | 74 | 24 - 169 |
| 13C12-12378-PeCDF | 80 | 24 - 185 |
| 13C12-23478-PeCDF | 81 | 21 - 178 |
| 13C12-123478-HxCDF | 86 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 85 | 28 - 136 |
| 13C12-123789-HxCDF | 88 | 29 - 147 |
| 13C12-1234678-HpCDF | 96 | 28 - 143 |
| 13C12-1234789-HpCDF | 96 | 26 - 138 |
| 13C12-OCDF | 113 | 17 - 157 |

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

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

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

REVISED

**Sample Description: SL-539-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016766**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/08/2013 12:45

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

539-- SDG#: PH027-01

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

REVISED

**Sample Description: SL-539-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016766**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/08/2013 12:45

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

539-- SDG#: PH027-01

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 04:35 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/19/2013 23:09 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131030014A | 04/16/2013 23:06 | Heather E Williams | 10 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131030014A | 04/14/2013 23:55 | Roman Kuropatkin | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13101001 | 04/12/2013 20:15 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13101001 | 04/11/2013 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 2 | 131050637003 | 04/21/2013 14:23 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:13 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:02 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:02 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:02 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:02 | David K Beck | 2 |

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

REVISED

**Sample Description: SL-539-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016766**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/08/2013 12:45

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

539-- SDG#: PH027-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:06 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13101039401A | 04/11/2013 19:40 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401A | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

REVISED

**Sample Description:** SL-542-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7016767**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 08:40

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

542-- SDG#: PH027-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 5.8 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 5.6 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 8.0 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 4.0 | J | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 3.7 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 4.4 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 7.8 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 12 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 0.71 | J | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 3.2 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 6.6 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 13 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.5 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 7.6 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 53 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

REVISED

**Sample Description: SL-542-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016767**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 08:40

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

542-- SDG#: PH027-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,400 | | 40.8 | 7.87 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.08 | U | 4.08 | 0.510 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.48 | | 4.08 | 0.337 | 1 |
| 06946 | Barium | 7440-39-3 | 70.3 | | 1.02 | 0.0337 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.527 | J | 1.02 | 0.0684 | 1 |
| 07914 | Boron | 7440-42-8 | 10.2 | U | 10.2 | 0.847 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.118 | J | 1.02 | 0.0337 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,600 | | 20.4 | 4.10 | 1 |
| 06951 | Chromium | 7440-47-3 | 15.0 | | 3.06 | 0.0898 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.04 | | 1.02 | 0.0918 | 1 |
| 06953 | Copper | 7440-50-8 | 6.05 | | 2.04 | 0.184 | 1 |
| 01654 | Iron | 7439-89-6 | 17,600 | | 40.8 | 3.88 | 1 |
| 06955 | Lead | 7439-92-1 | 4.91 | | 3.06 | 0.480 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.7 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,950 | | 10.2 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 241 | | 1.02 | 0.0847 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.04 | U | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.56 | | 2.04 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 369 | | 10.2 | 0.520 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,560 | | 102 | 13.8 | 1 |
| 01667 | Sodium | 7440-23-5 | 71.7 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.51 | J | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 932 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 30.4 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 48.8 | | 4.08 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.10 | U | 5.10 | 0.847 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.187 | J | 0.408 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.204 | U | 0.204 | 0.0204 | 2 |
| 06144 | Strontium | 7440-24-6 | 18.2 | | 0.408 | 0.0347 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.241 | | 0.204 | 0.0306 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0203 | U | 0.0203 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 8.34 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.0 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

REVISED

**Sample Description: SL-542-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016767**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 08:40

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

542-- SDG#: PH027-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0325 | JQ | 0.984 | 0.0287 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.187 | JBQ | 4.92 | 0.0341 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.365 | JB | 4.92 | 0.0412 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.986 | JB | 4.92 | 0.0418 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.602 | JB | 4.92 | 0.0404 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 35.7 | B | 4.92 | 0.0482 | 1 |
| 11031 | OCDD | 3268-87-9 | 349 | B | 9.84 | 0.0381 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.984 | U | 0.984 | 0.0309 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.161 | JBQ | 4.92 | 0.0214 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.180 | JBQ | 4.92 | 0.0199 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.270 | JB | 4.92 | 0.0287 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.347 | JB | 4.92 | 0.0270 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0737 | JQ | 4.92 | 0.0289 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.388 | JB | 4.92 | 0.0258 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 6.37 | B | 4.92 | 0.0229 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.401 | JB | 4.92 | 0.0268 | 1 |
| 11031 | OCDF | 39001-02-0 | 13.0 | B | 9.84 | 0.0225 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.829 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 74 | 25 - 164 |
| 13C12-12378-PeCDD | 83 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 94 | 23 - 140 |
| 13C12-OCDD | 107 | 17 - 157 |
| 13C12-2378-TCDF | 74 | 24 - 169 |
| 13C12-12378-PeCDF | 83 | 24 - 185 |
| 13C12-23478-PeCDF | 83 | 21 - 178 |
| 13C12-123478-HxCDF | 87 | 26 - 152 |
| 13C12-123678-HxCDF | 89 | 26 - 123 |
| 13C12-234678-HxCDF | 86 | 28 - 136 |
| 13C12-123789-HxCDF | 86 | 29 - 147 |
| 13C12-1234678-HpCDF | 102 | 28 - 143 |
| 13C12-1234789-HpCDF | 98 | 26 - 138 |
| 13C12-OCDF | 110 | 17 - 157 |

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

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

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

REVISED

**Sample Description: SL-542-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016767**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 08:40

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

542-- SDG#: PH027-02

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

REVISED

**Sample Description: SL-542-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016767**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 08:40

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

542-- SDG#: PH027-02

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 05:04 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/19/2013 23:27 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131030014A | 04/16/2013 07:41 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131030014A | 04/14/2013 23:55 | Roman Kuropatkin | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13101001 | 04/12/2013 21:12 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13101001 | 04/11/2013 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 3 | 131050637003 | 04/22/2013 14:28 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:16 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:05 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:05 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:05 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:05 | David K Beck | 2 |

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

REVISED

**Sample Description: SL-542-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016767**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 08:40

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

542-- SDG#: PH027-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:08 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13101039401A | 04/11/2013 19:40 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401A | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016768**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.74 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.4 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.98 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 6.7 | J | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.6 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 15 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.4 | J | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.83 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.77 | J | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.5 | J | 1.7 | 0.69 | 1 |
| **HPLC Organics** | **SW-846 8315A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 04173 | 25a Formaldehyde by EPA 8315A | 50-00-0 | 2,100 | U | 2,100 | 1,200 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.0 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 4.9 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 17 | | 10 | 4.1 | 1 |

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

REVISED

**Sample Description:** SL-540-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7016768**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,300 | | 41.0 | 7.89 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.10 | U | 4.10 | 0.512 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.19 | | 4.10 | 0.338 | 1 |
| 06946 | Barium | 7440-39-3 | 72.7 | | 1.02 | 0.0338 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.556 | J | 1.02 | 0.0686 | 1 |
| 07914 | Boron | 7440-42-8 | 10.2 | U | 10.2 | 0.850 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.0727 | J | 1.02 | 0.0338 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,100 | | 20.5 | 4.12 | 1 |
| 06951 | Chromium | 7440-47-3 | 15.2 | | 3.07 | 0.0901 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.28 | | 1.02 | 0.0921 | 1 |
| 06953 | Copper | 7440-50-8 | 6.71 | | 2.05 | 0.184 | 1 |
| 01654 | Iron | 7439-89-6 | 19,000 | | 41.0 | 3.89 | 1 |
| 06955 | Lead | 7439-92-1 | 5.22 | | 3.07 | 0.481 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.4 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,080 | | 10.2 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 244 | | 1.02 | 0.0850 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.672 | J | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.81 | | 2.05 | 0.113 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 399 | | 10.2 | 0.522 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,560 | | 102 | 13.8 | 1 |
| 01667 | Sodium | 7440-23-5 | 69.3 | J | 102 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 2.76 | J | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 888 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 29.8 | | 1.02 | 0.113 | 1 |
| 06972 | Zinc | 7440-66-6 | 55.8 | | 4.10 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 0.921 | J | 5.12 | 0.850 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.102 | J | 0.410 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0240 | J | 0.205 | 0.0205 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.4 | | 0.410 | 0.0348 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.223 | | 0.205 | 0.0307 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0201 | U | 0.0201 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.37 | J | 0.42 | 0.15 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.3 | | 0.10 | 0.10 | 1 |

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

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016768**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.0378 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.106 | JBQ | 5.12 | 0.0390 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.150 | JB | 5.12 | 0.0459 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.361 | JBQ | 5.12 | 0.0442 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.339 | JB | 5.12 | 0.0439 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 8.49 | B | 5.12 | 0.0372 | 1 |
| 11031 | OCDD | 3268-87-9 | 86.5 | B | 10.2 | 0.0236 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 | U | 1.02 | 0.0459 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.154 | JB | 5.12 | 0.0244 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0829 | JBQ | 5.12 | 0.0233 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.150 | JBQ | 5.12 | 0.0350 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.136 | JBQ | 5.12 | 0.0319 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0774 | JQ | 5.12 | 0.0371 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.122 | JB | 5.12 | 0.0329 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.52 | JB | 5.12 | 0.0219 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.159 | JBQ | 5.12 | 0.0288 | 1 |
| 11031 | OCDF | 39001-02-0 | 3.16 | JB | 10.2 | 0.0287 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.193 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 68 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 76 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 79 | 28 - 130 |
| 13C12-1234678-HpCDD | 87 | 23 - 140 |
| 13C12-OCDD | 104 | 17 - 157 |
| 13C12-2378-TCDF | 63 | 24 - 169 |
| 13C12-12378-PeCDF | 77 | 24 - 185 |
| 13C12-23478-PeCDF | 77 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 80 | 28 - 136 |
| 13C12-123789-HxCDF | 81 | 29 - 147 |
| 13C12-1234678-HpCDF | 102 | 28 - 143 |
| 13C12-1234789-HpCDF | 89 | 26 - 138 |
| 13C12-OCDF | 99 | 17 - 157 |

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

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

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016768**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03BKG

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016768**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03BKG

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 03:09 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 04173 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 131050002A | 04/16/2013 18:25 | James H Place | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/19/2013 23:46 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 131050002A | 04/15/2013 14:20 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131030014A | 04/16/2013 06:18 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131030014A | 04/14/2013 23:55 | Roman Kuropatkin | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13101001 | 04/12/2013 22:08 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13101001 | 04/11/2013 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 4 | 131050637003 | 04/22/2013 14:03 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 2 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:49 | Katlin N Cataldi | 1 |

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016768**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/20/2013 23:48 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/20/2013 23:48 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/20/2013 23:48 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/20/2013 23:48 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:10 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 1 | 13108243201A | 04/19/2013 16:47 | Clinton M Wilson | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 2 | 13108243201A | 04/18/2013 21:00 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401A | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016769**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 40 | | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 39 | | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 37 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 35 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 35 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 40 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 31 | | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 34 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 32 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 42 | | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 42 | | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 37 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 37 | | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 47 | | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 40 | | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 37 | | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 34 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 38 | | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 37 | | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 36 | | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 37 | | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 36 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 27 | | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 34 | | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 37 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 38 | | 1.7 | 0.69 | 1 |
| **HPLC Organics** | **SW-846 8315A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 04173 | 25a Formaldehyde by EPA 8315A | 50-00-0 | 11,000 | | 2,100 | 1,200 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 170 | | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 180 | | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 4.6 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 9.3 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 19 | | 10 | 4.1 | 1 |

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016769**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C8-C11) | n.a. | 5.2 U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,900 | 40.2 | 7.74 | 1 |
| 06944 | Antimony | 7440-36-0 | 24.2 | 4.02 | 0.502 | 1 |
| 06935 | Arsenic | 7440-38-2 | 18.4 | 4.02 | 0.331 | 1 |
| 06946 | Barium | 7440-39-3 | 267 | 1.00 | 0.0331 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.65 | 1.00 | 0.0673 | 1 |
| 07914 | Boron | 7440-42-8 | 198 | 10.0 | 0.833 | 1 |
| 06949 | Cadmium | 7440-43-9 | 4.78 | 1.00 | 0.0331 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,160 | 20.1 | 4.04 | 1 |
| 06951 | Chromium | 7440-47-3 | 35.8 | 3.01 | 0.0884 | 1 |
| 06952 | Cobalt | 7440-48-4 | 50.6 | 1.00 | 0.0904 | 1 |
| 06953 | Copper | 7440-50-8 | 30.8 | 2.01 | 0.181 | 1 |
| 01654 | Iron | 7439-89-6 | 18,500 | 40.2 | 3.82 | 1 |
| 06955 | Lead | 7439-92-1 | 18.8 | 3.01 | 0.472 | 1 |
| 01656 | Lithium | 7439-93-2 | 123 | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,420 | 10.0 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 310 | 1.00 | 0.0833 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 189 | 2.01 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 55.7 | 2.01 | 0.110 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 455 | 10.0 | 0.512 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,370 | 100 | 13.6 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,050 | 100 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 353 | 10.0 | 0.221 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,210 | 1.00 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 83.1 | 1.00 | 0.110 | 1 |
| 06972 | Zinc | 7440-66-6 | 97.7 | 4.02 | 0.201 | 1 |
| 10146 | Zirconium | 7440-67-7 | 98.9 | 5.02 | 0.833 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.01 | 0.402 | 0.100 | 2 |
| 06142 | Silver | 7440-22-4 | 9.72 | 0.201 | 0.0201 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.8 | 0.402 | 0.0341 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.644 | 0.201 | 0.0301 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.187 | 0.0197 | 0.0102 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 3.3 | 0.10 | 0.10 | 1 |

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016769**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03MS

| CAT No. | Analysis Name | | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | | 1746-01-6 | 18.9 | | 1.02 | 0.0391 | 1 |
| 11031 | 12378-PeCDD | | 40321-76-4 | 99.4 | B | 5.10 | 0.0371 | 1 |
| 11031 | 123478-HxCDD | | 39227-28-6 | 103 | B | 5.10 | 0.0351 | 1 |
| 11031 | 123678-HxCDD | | 57653-85-7 | 104 | B | 5.10 | 0.0378 | 1 |
| 11031 | 123789-HxCDD | | 19408-74-3 | 102 | B | 5.10 | 0.0343 | 1 |
| 11031 | 1234678-HpCDD | | 35822-46-9 | 105 | B | 5.10 | 0.0368 | 1 |
| 11031 | OCDD | | 3268-87-9 | 248 | B | 10.2 | 0.0287 | 1 |
| 11031 | 2378-TCDF | | 51207-31-9 | 20.1 | | 1.02 | 0.0390 | 1 |
| 11031 | 12378-PeCDF | | 57117-41-6 | 103 | B | 5.10 | 0.0311 | 1 |
| 11031 | 23478-PeCDF | | 57117-31-4 | 106 | B | 5.10 | 0.0300 | 1 |
| 11031 | 123478-HxCDF | | 70648-26-9 | 107 | B | 5.10 | 0.0502 | 1 |
| 11031 | 123678-HxCDF | | 57117-44-9 | 105 | B | 5.10 | 0.0475 | 1 |
| 11031 | 123789-HxCDF | | 72918-21-9 | 104 | | 5.10 | 0.0487 | 1 |
| 11031 | 234678-HxCDF | | 60851-34-5 | 105 | B | 5.10 | 0.0467 | 1 |
| 11031 | 1234678-HpCDF | | 67562-39-4 | 104 | B | 5.10 | 0.0344 | 1 |
| 11031 | 1234789-HpCDF | | 55673-89-7 | 103 | B | 5.10 | 0.0410 | 1 |
| 11031 | OCDF | | 39001-02-0 | 208 | B | 10.2 | 0.0287 | 1 |

| **Labeled Compounds** | **%Rec** | **Windows** |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 77 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 86 | 23 - 140 |
| 13C12-OCDD | 98 | 17 - 157 |
| 13C12-2378-TCDF | 66 | 24 - 169 |
| 13C12-12378-PeCDF | 78 | 24 - 185 |
| 13C12-23478-PeCDF | 78 | 21 - 178 |
| 13C12-123478-HxCDF | 83 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 84 | 28 - 136 |
| 13C12-123789-HxCDF | 87 | 29 - 147 |
| 13C12-1234678-HpCDF | 96 | 28 - 143 |
| 13C12-1234789-HpCDF | 90 | 26 - 138 |
| 13C12-OCDF | 101 | 17 - 157 |

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

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016769**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03MS

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 03:37 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 04173 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 131050002A | 04/16/2013 18:34 | James H Place | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 00:04 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 131050002A | 04/15/2013 14:20 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131030014A | 04/16/2013 06:39 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131030014A | 04/14/2013 23:55 | Roman Kuropatkin | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13101001 | 04/12/2013 23:05 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13101001 | 04/11/2013 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 4 | 131050637003 | 04/22/2013 14:15 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:01 | Katlin N Cataldi | 1 |

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016769**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/20/2013 23:55 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/20/2013 23:55 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/20/2013 23:55 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/20/2013 23:55 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:16 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401A | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016770**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 38 | | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 37 | | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 36 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 36 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 35 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 38 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 30 | | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 33 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 31 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 41 | | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 38 | | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 37 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 35 | | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 46 | | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 38 | | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 38 | | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 33 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 38 | | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 35 | | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 35 | | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 37 | | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 35 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 26 | | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 33 | | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 37 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 39 | | 1.7 | 0.69 | 1 |
| **HPLC Organics** | **SW-846 8315A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 04173 | 25a Formaldehyde by EPA 8315A | 50-00-0 | 11,000 | | 2,100 | 1,200 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 120 | | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 120 | | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 6.0 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 8.8 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 24 | | 10 | 4.1 | 1 |

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

REVISED

**Sample Description:** SL-540-SA7-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7016770**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,700 | | 41.0 | 7.89 | 1 |
| 06944 | Antimony | 7440-36-0 | 24.2 | | 4.10 | 0.512 | 1 |
| 06935 | Arsenic | 7440-38-2 | 19.0 | | 4.10 | 0.338 | 1 |
| 06946 | Barium | 7440-39-3 | 275 | | 1.02 | 0.0338 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.72 | | 1.02 | 0.0686 | 1 |
| 07914 | Boron | 7440-42-8 | 216 | | 10.2 | 0.850 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.13 | | 1.02 | 0.0338 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,590 | | 20.5 | 4.12 | 1 |
| 06951 | Chromium | 7440-47-3 | 36.5 | | 3.07 | 0.0901 | 1 |
| 06952 | Cobalt | 7440-48-4 | 52.4 | | 1.02 | 0.0921 | 1 |
| 06953 | Copper | 7440-50-8 | 33.2 | | 2.05 | 0.184 | 1 |
| 01654 | Iron | 7439-89-6 | 17,900 | | 41.0 | 3.89 | 1 |
| 06955 | Lead | 7439-92-1 | 19.5 | | 3.07 | 0.481 | 1 |
| 01656 | Lithium | 7439-93-2 | 125 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,240 | | 10.2 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 277 | | 1.02 | 0.0850 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 196 | | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 58.3 | | 2.05 | 0.113 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 529 | | 10.2 | 0.522 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,230 | | 102 | 13.8 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,070 | | 102 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 366 | | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,100 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 82.2 | | 1.02 | 0.113 | 1 |
| 06972 | Zinc | 7440-66-6 | 107 | | 4.10 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 100 | | 5.12 | 0.850 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 1.92 | | 0.410 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 10.4 | | 0.205 | 0.0205 | 2 |
| 06144 | Strontium | 7440-24-6 | 31.9 | | 0.410 | 0.0348 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.685 | | 0.205 | 0.0307 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.188 | | 0.0197 | 0.0102 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 3.3 | | 0.10 | 0.10 | 1 |

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016770**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 18.1 | | 0.994 | 0.0439 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 96.4 | B | 4.97 | 0.0456 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 103 | B | 4.97 | 0.0484 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 101 | B | 4.97 | 0.0497 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 99.9 | B | 4.97 | 0.0465 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 107 | B | 4.97 | 0.0408 | 1 |
| 11031 | OCDD | 3268-87-9 | 273 | B | 9.94 | 0.0296 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 19.3 | | 0.994 | 0.0421 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 97.5 | B | 4.97 | 0.0318 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 103 | B | 4.97 | 0.0307 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 102 | B | 4.97 | 0.0574 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 101 | B | 4.97 | 0.0520 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 104 | | 4.97 | 0.0611 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 100 | B | 4.97 | 0.0505 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 102 | B | 4.97 | 0.0380 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 102 | B | 4.97 | 0.0459 | 1 |
| 11031 | OCDF | 39001-02-0 | 204 | B | 9.94 | 0.0360 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 71 | 25 - 164 |
| 13C12-12378-PeCDD | 80 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 87 | 23 - 140 |
| 13C12-OCDD | 100 | 17 - 157 |
| 13C12-2378-TCDF | 68 | 24 - 169 |
| 13C12-12378-PeCDF | 80 | 24 - 185 |
| 13C12-23478-PeCDF | 79 | 21 - 178 |
| 13C12-123478-HxCDF | 84 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 84 | 28 - 136 |
| 13C12-123789-HxCDF | 80 | 29 - 147 |
| 13C12-1234678-HpCDF | 95 | 28 - 143 |
| 13C12-1234789-HpCDF | 87 | 26 - 138 |
| 13C12-OCDF | 103 | 17 - 157 |

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

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016770**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03MSD

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 04:07 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 04173 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 131050002A | 04/16/2013 18:42 | James H Place | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 00:23 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 131050002A | 04/15/2013 14:20 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131030014A | 04/16/2013 06:59 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131030014A | 04/14/2013 23:55 | Roman Kuropatkin | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13101001 | 04/13/2013 00:02 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13101001 | 04/11/2013 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 4 | 131050637003 | 04/22/2013 14:20 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:05 | Katlin N Cataldi | 1 |

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016770**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/20/2013 23:57 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/20/2013 23:57 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/20/2013 23:57 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/20/2013 23:57 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:18 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401A | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016771**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,900 | | 40.6 | 7.82 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.06 | U | 4.06 | 0.507 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.64 | | 4.06 | 0.335 | 1 |
| 06946 | Barium | 7440-39-3 | 72.3 | | 1.01 | 0.0335 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.569 | J | 1.01 | 0.0679 | 1 |
| 07914 | Boron | 7440-42-8 | 10.1 | U | 10.1 | 0.841 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.120 | J | 1.01 | 0.0335 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,010 | | 20.3 | 4.08 | 1 |
| 06951 | Chromium | 7440-47-3 | 14.8 | | 3.04 | 0.0892 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.84 | | 1.01 | 0.0912 | 1 |
| 06953 | Copper | 7440-50-8 | 6.33 | | 2.03 | 0.182 | 1 |
| 01654 | Iron | 7439-89-6 | 17,800 | | 40.6 | 3.85 | 1 |
| 06955 | Lead | 7439-92-1 | 5.30 | | 3.04 | 0.477 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.1 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,830 | | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 228 | | 1.01 | 0.0841 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.242 | J | 2.03 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.52 | | 2.03 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 378 | | 10.1 | 0.517 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,400 | | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 68.2 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.66 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 910 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 29.6 | | 1.01 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 52.1 | | 4.06 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.77 | J | 5.07 | 0.841 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.171 | J | 0.406 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0218 | J | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 18.3 | | 0.406 | 0.0345 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.231 | | 0.203 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0196 | U | 0.0196 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.45 | | 0.43 | 0.15 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 3.3 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 3.0 | | 0.10 | 0.10 | 1 |

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

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

eurofins | Lancaster Laboratories

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

# Analysis Report

REVISED

**Sample Description: SL-540-SA7-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016771**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:10

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-540- SDG#: PH027-03DUP

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 4 | 131050637003 | 04/22/2013 14:11 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 2 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 16:57 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/20/2013 23:53 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/20/2013 23:53 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/20/2013 23:53 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/20/2013 23:53 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:14 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 2 | 13108243201A | 04/19/2013 17:48 | Clinton M Wilson | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 2 | 13108243201A | 04/18/2013 21:00 | Daniel S Smith | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401A | 04/16/2013 21:43 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401A | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

REVISED

**Sample Description: SL-840-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016772**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:15

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-840- SDG#: PH027-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.80 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.89 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.6 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.77 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 8.7 | J | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.5 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 13 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.1 | J | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.1 | | 1.7 | 0.69 | 1 |
| **HPLC Organics** | **SW-846 8315A** | | ug/kg | | ug/kg | ug/kg | |
| 04173 | 25a Formaldehyde by EPA 8315A | 50-00-0 | 2,100 | U | 2,100 | 1,200 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | mg/kg | | mg/kg | mg/kg | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 4.3 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 7.0 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 46 | | 10 | 4.1 | 1 |

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

REVISED

**Sample Description: SL-840-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016772**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:15

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-840- SDG#: PH027-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,800 | | 39.9 | 7.69 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.99 | U | 3.99 | 0.499 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.74 | | 3.99 | 0.329 | 1 |
| 06946 | Barium | 7440-39-3 | 73.5 | | 0.998 | 0.0329 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.613 | J | 0.998 | 0.0669 | 1 |
| 07914 | Boron | 7440-42-8 | 9.98 | U | 9.98 | 0.828 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.0728 | J | 0.998 | 0.0329 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,670 | | 20.0 | 4.01 | 1 |
| 06951 | Chromium | 7440-47-3 | 15.4 | | 2.99 | 0.0878 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.00 | | 0.998 | 0.0898 | 1 |
| 06953 | Copper | 7440-50-8 | 6.02 | | 2.00 | 0.180 | 1 |
| 01654 | Iron | 7439-89-6 | 19,100 | | 39.9 | 3.79 | 1 |
| 06955 | Lead | 7439-92-1 | 4.92 | | 2.99 | 0.469 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.6 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,100 | | 9.98 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 245 | | 0.998 | 0.0828 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.00 | U | 2.00 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.86 | | 2.00 | 0.110 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 426 | | 9.98 | 0.509 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,400 | | 99.8 | 13.5 | 1 |
| 01667 | Sodium | 7440-23-5 | 69.5 | J | 99.8 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.64 | J | 9.98 | 0.220 | 1 |
| 06970 | Titanium | 7440-32-6 | 983 | | 0.998 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 32.0 | | 0.998 | 0.110 | 1 |
| 06972 | Zinc | 7440-66-6 | 52.3 | | 3.99 | 0.200 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.99 | U | 4.99 | 0.828 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.399 | U | 0.399 | 0.0998 | 2 |
| 06142 | Silver | 7440-22-4 | 0.200 | U | 0.200 | 0.0200 | 2 |
| 06144 | Strontium | 7440-24-6 | 14.9 | | 0.399 | 0.0339 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.244 | | 0.200 | 0.0299 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0200 | U | 0.0200 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.26 | J | 0.43 | 0.15 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.7 | | 0.10 | 0.10 | 1 |

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

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

REVISED

**Sample Description: SL-840-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016772**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:15

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-840- SDG#: PH027-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.980 | U | 0.980 | 0.0293 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.175 | JB | 4.90 | 0.0370 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.197 | JB | 4.90 | 0.0383 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.661 | JB | 4.90 | 0.0386 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.443 | JB | 4.90 | 0.0344 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 12.7 | B | 4.90 | 0.0354 | 1 |
| 11031 | OCDD | 3268-87-9 | 161 | B | 9.80 | 0.0297 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.980 | U | 0.980 | 0.0329 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.148 | JBQ | 4.90 | 0.0208 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.117 | JB | 4.90 | 0.0195 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.196 | JB | 4.90 | 0.0263 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.173 | JBQ | 4.90 | 0.0248 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.204 | J | 4.90 | 0.0271 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.187 | JB | 4.90 | 0.0251 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.35 | JB | 4.90 | 0.0210 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.239 | JB | 4.90 | 0.0266 | 1 |
| 11031 | OCDF | 39001-02-0 | 4.40 | JB | 9.80 | 0.0236 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.602 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 69 | 25 - 164 |
| 13C12-12378-PeCDD | 77 | 25 - 181 |
| 13C12-123478-HxCDD | 76 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 79 | 28 - 130 |
| 13C12-1234678-HpCDD | 88 | 23 - 140 |
| 13C12-OCDD | 101 | 17 - 157 |
| 13C12-2378-TCDF | 66 | 24 - 169 |
| 13C12-12378-PeCDF | 78 | 24 - 185 |
| 13C12-23478-PeCDF | 75 | 21 - 178 |
| 13C12-123478-HxCDF | 77 | 26 - 152 |
| 13C12-123678-HxCDF | 80 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 79 | 29 - 147 |
| 13C12-1234678-HpCDF | 100 | 28 - 143 |
| 13C12-1234789-HpCDF | 86 | 26 - 138 |
| 13C12-OCDF | 97 | 17 - 157 |

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

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

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

REVISED

**Sample Description: SL-840-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016772**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:15

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-840- SDG#: PH027-04

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

REVISED

**Sample Description: SL-840-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016772**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:15

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-840- SDG#: PH027-04

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 05:34 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 04173 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 131050002A | 04/16/2013 18:59 | James H Place | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 01:55 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 131050002A | 04/15/2013 14:20 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131030014A | 04/16/2013 07:20 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131030014A | 04/14/2013 23:55 | Roman Kuropatkin | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13101001 | 04/13/2013 00:58 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13101001 | 04/11/2013 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 3 | 131050637003 | 04/22/2013 14:32 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:28 | Katlin N Cataldi | 1 |

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

REVISED

**Sample Description: SL-840-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016772**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 10:15

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-840- SDG#: PH027-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:12 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:12 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:12 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:12 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:20 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 2 | 13108243201A | 04/19/2013 18:01 | Clinton M Wilson | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 2 | 13108243201A | 04/18/2013 21:00 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401A | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

REVISED

**Sample Description: SL-544-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016773**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 13:05

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

544-- SDG#: PH027-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.71 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.4 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.6 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.84 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.1 | J | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 11 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 54 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

REVISED

**Sample Description: SL-544-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016773**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 13:05

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

544-- SDG#: PH027-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,800 | | 39.4 | 7.59 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.94 | U | 3.94 | 0.492 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.40 | J | 3.94 | 0.325 | 1 |
| 06946 | Barium | 7440-39-3 | 70.7 | | 0.984 | 0.0325 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.465 | J | 0.984 | 0.0659 | 1 |
| 07914 | Boron | 7440-42-8 | 9.84 | U | 9.84 | 0.817 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.0699 | J | 0.984 | 0.0325 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,460 | | 19.7 | 3.96 | 1 |
| 06951 | Chromium | 7440-47-3 | 14.3 | | 2.95 | 0.0866 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.74 | | 0.984 | 0.0886 | 1 |
| 06953 | Copper | 7440-50-8 | 5.32 | | 1.97 | 0.177 | 1 |
| 01654 | Iron | 7439-89-6 | 18,200 | | 39.4 | 3.74 | 1 |
| 06955 | Lead | 7439-92-1 | 4.04 | | 2.95 | 0.463 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.1 | | 3.9 | 0.54 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,210 | | 9.84 | 1.70 | 1 |
| 06958 | Manganese | 7439-96-5 | 262 | | 0.984 | 0.0817 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 1.97 | U | 1.97 | 0.167 | 1 |
| 06961 | Nickel | 7440-02-0 | 7.81 | | 1.97 | 0.108 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 405 | | 9.84 | 0.502 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,280 | | 98.4 | 13.3 | 1 |
| 01667 | Sodium | 7440-23-5 | 66.5 | J | 98.4 | 16.4 | 1 |
| 06969 | Tin | 7440-31-5 | 2.61 | J | 9.84 | 0.217 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,000 | | 0.984 | 0.167 | 1 |
| 06971 | Vanadium | 7440-62-2 | 29.2 | | 0.984 | 0.108 | 1 |
| 06972 | Zinc | 7440-66-6 | 56.3 | | 3.94 | 0.197 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.92 | U | 4.92 | 0.817 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.394 | U | 0.394 | 0.0984 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0205 | J | 0.197 | 0.0197 | 2 |
| 06144 | Strontium | 7440-24-6 | 10.0 | | 0.394 | 0.0335 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.250 | | 0.197 | 0.0295 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0199 | U | 0.0199 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.67 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

REVISED

**Sample Description: SL-544-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016773**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 13:05

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

544-- SDG#: PH027-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0275 JQ | 1.02 | 0.0218 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0609 JB | 5.09 | 0.0292 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0644 JBQ | 5.09 | 0.0286 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.164 JB | 5.09 | 0.0288 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.153 JBQ | 5.09 | 0.0284 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 3.09 JB | 5.09 | 0.0219 | 1 |
| 11031 | OCDD | 3268-87-9 | 30.1 B | 10.2 | 0.0188 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 U | 1.02 | 0.0258 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0861 JBQ | 5.09 | 0.0156 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0669 JBQ | 5.09 | 0.0153 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0972 JB | 5.09 | 0.0205 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0818 JB | 5.09 | 0.0192 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0801 JQ | 5.09 | 0.0194 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0429 JBQ | 5.09 | 0.0185 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.518 JB | 5.09 | 0.0128 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.119 JB | 5.09 | 0.0165 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.856 JB | 10.2 | 0.0232 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.142 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 78 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 91 | 23 - 140 |
| 13C12-OCDD | 98 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 81 | 24 - 185 |
| 13C12-23478-PeCDF | 79 | 21 - 178 |
| 13C12-123478-HxCDF | 83 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 82 | 28 - 136 |
| 13C12-123789-HxCDF | 87 | 29 - 147 |
| 13C12-1234678-HpCDF | 101 | 28 - 143 |
| 13C12-1234789-HpCDF | 90 | 26 - 138 |
| 13C12-OCDF | 95 | 17 - 157 |

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

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

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

REVISED

**Sample Description: SL-544-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016773**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 13:05

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

544-- SDG#: PH027-05

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

REVISED

**Sample Description: SL-544-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016773**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 13:05

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

544-- SDG#: PH027-05

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 06:03 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 02:14 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131030014A | 04/16/2013 08:01 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131030014A | 04/14/2013 23:55 | Roman Kuropatkin | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13101001 | 04/13/2013 04:52 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13101001 | 04/11/2013 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 3 | 131050637003 | 04/22/2013 14:36 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 2 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:32 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:14 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:14 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:14 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:14 | David K Beck | 2 |

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

REVISED

**Sample Description: SL-544-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016773**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 13:05

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

544-- SDG#: PH027-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:26 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13101039401A | 04/11/2013 19:40 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401A | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

# Analysis Report

REVISED

**Sample Description: SL-546-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016774**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 14:15

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-546- SDG#: PH027-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.6 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

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

REVISED

**Sample Description: SL-546-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016774**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 14:15

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-546- SDG#: PH027-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.149 | J | 0.993 | 0.0300 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.952 | JBQ | 4.97 | 0.0619 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.80 | JB | 4.97 | 0.0939 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 5.44 | B | 4.97 | 0.0981 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 3.26 | JB | 4.97 | 0.0957 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 161 | B | 4.97 | 0.134 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,700 | B | 9.93 | 0.134 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.801 | J | 0.993 | 0.0896 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.704 | JB | 4.97 | 0.0565 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 1.56 | JB | 4.97 | 0.0531 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 1.62 | JB | 4.97 | 0.0764 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.03 | JB | 4.97 | 0.0745 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.605 | J | 4.97 | 0.101 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 1.27 | JB | 4.97 | 0.0853 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 19.2 | B | 4.97 | 0.0684 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 1.68 | JB | 4.97 | 0.0728 | 1 |
| 11031 | OCDF | 39001-02-0 | 37.7 | B | 9.93 | 0.151 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 4.56 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 91 | 25 - 164 |
| 13C12-12378-PeCDD | 83 | 25 - 181 |
| 13C12-123478-HxCDD | 89 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 61 | 23 - 140 |
| 13C12-OCDD | 41 | 17 - 157 |
| 13C12-2378-TCDF | 92 | 24 - 169 |
| 13C12-12378-PeCDF | 88 | 24 - 185 |
| 13C12-23478-PeCDF | 85 | 21 - 178 |
| 13C12-123478-HxCDF | 100 | 26 - 152 |
| 13C12-123678-HxCDF | 99 | 26 - 123 |
| 13C12-234678-HxCDF | 94 | 28 - 136 |
| 13C12-123789-HxCDF | 87 | 29 - 147 |
| 13C12-1234678-HpCDF | 71 | 28 - 143 |
| 13C12-1234789-HpCDF | 63 | 26 - 138 |
| 13C12-OCDF | 37 | 17 - 157 |

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

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

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

REVISED

**Sample Description: SL-546-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016774**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 14:15

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-546- SDG#: PH027-06*

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

REVISED

**Sample Description: SL-546-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7016774**
**LLI Group # 1381875**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 14:15

Submitted: 04/10/2013 09:20
Reported: 05/06/2013 13:50

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

-546- SDG#: PH027-06*

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13101001 | 04/13/2013 05:49 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13101001 | 04/11/2013 12:30 | Deborah M Zimmerman | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401A | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1381875
Reported: 05/06/13 at 01:50 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13105SLA026 | Sample number(s): 7016766-7016770,7016772-7016773 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 120* | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 111 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 92 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 109 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 105 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 125 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 110 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 120 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 87 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 105 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 71-120 | | |
| Batch number: 131050002A | Sample number(s): 7016768-7016770,7016772 | | | | | | | | | |
| 25a Formaldehyde by EPA 8315A | 2,000 U | | 2,000. | 1,200 | ug/kg | 117 | | 80-126 | | |
| Batch number: 131050020A | Sample number(s): 7016766-7016770,7016772-7016773 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 70 | 75 | 36-106 | 6 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 84 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 105 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1381875
Reported: 05/06/13 at 01:50 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131030014A | Sample number(s): 7016766-7016770,7016772-7016773 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 93 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 98 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 98 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 70 | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 73 | | 49-107 | | |
| Batch number: 131050637003 | Sample number(s): 7016766-7016773 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 103 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 113 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 104 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 98 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 107 | | 80-120 | | |
| Calcium | 4.23 | J | 20.0 | 4.02 | mg/kg | 105 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 107 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 105 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 100 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 109 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 102 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 107 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 109 | | 80-120 | | |
| Phosphorus | 14.4 | | 10.0 | 0.510 | mg/kg | 120 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.39 | J | 10.0 | 0.220 | mg/kg | 106 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 106 | | 80-120 | | |
| Zinc | 0.273 | J | 4.00 | 0.200 | mg/kg | 108 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 104 | | 80-120 | | |
| Batch number: 131050637003A | Sample number(s): 7016766-7016773 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 108 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0340 | mg/kg | 102 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 111 | | 80-120 | | |
| Batch number: 131050637003B | Sample number(s): 7016766-7016773 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 120 | | 80-120 | | |
| Batch number: 131060638003 | Sample number(s): 7016766-7016773 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0103 | mg/kg | 100 | | 85-120 | | |
| Batch number: 13108243201A | Sample number(s): 7016768,7016771-7016772 | | | | | | | | | |
| 2a Chromium VI by EPA 7199 | 1.0 | U | 1.0 | 0.20 | mg/kg | 88 | | 80-120 | | |
| Batch number: 13101039401A | Sample number(s): 7016766-7016767,7016773 | | | | | | | | | |
| 15a pH by 9045C | | | | | | 100 | | 95-105 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1381875
Reported: 05/06/13 at 01:50 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13106162401A | Sample number(s): 7016766-7016774 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13101001 | Sample number(s): 7016766-7016770,7016772-7016774 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0271 | ng/kg | 91 | | 67-158 | | |
| 12378-PeCDD | 0.0393 J | 5.00 | 0.0265 | ng/kg | 97 | | 70-142 | | |
| 123478-HxCDD | 0.0258 J | 5.00 | 0.0175 | ng/kg | 105 | | 70-164 | | |
| 123678-HxCDD | 0.0317 J | 5.00 | 0.0182 | ng/kg | 100 | | 76-134 | | |
| 123789-HxCDD | 0.0327 J | 5.00 | 0.0178 | ng/kg | 101 | | 64-162 | | |
| 1234678-HpCDD | 0.0607 J | 5.00 | 0.0190 | ng/kg | 100 | | 70-140 | | |
| OCDD | 0.181 J | 10.0 | 0.0162 | ng/kg | 100 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0242 | ng/kg | 99 | | 75-158 | | |
| 12378-PeCDF | 0.0399 J | 5.00 | 0.0129 | ng/kg | 102 | | 80-134 | | |
| 23478-PeCDF | 0.0324 J | 5.00 | 0.0124 | ng/kg | 103 | | 68-160 | | |
| 123478-HxCDF | 0.0274 J | 5.00 | 0.0128 | ng/kg | 105 | | 72-134 | | |
| 123678-HxCDF | 0.0363 J | 5.00 | 0.0119 | ng/kg | 102 | | 84-130 | | |
| 123789-HxCDF | 5.00 U | 5.00 | 0.0152 | ng/kg | 104 | | 78-130 | | |
| 234678-HxCDF | 0.0246 J | 5.00 | 0.0130 | ng/kg | 102 | | 70-156 | | |
| 1234678-HpCDF | 0.0395 J | 5.00 | 0.00705 | ng/kg | 102 | | 82-122 | | |
| 1234789-HpCDF | 0.0369 J | 5.00 | 0.00940 | ng/kg | 103 | | 78-138 | | |
| OCDF | 0.120 J | 10.0 | 0.0256 | ng/kg | 102 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0000540 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13105SLA026 | Sample number(s): 7016766-7016770,7016772-7016773 UNSPK: 7016768 | | | | | | | | |
| Acenaphthene | 116 | 110 | 48-127 | 6 | 30 | | | | |
| Acenaphthylene | 112 | 109 | 49-121 | 3 | 30 | | | | |
| Anthracene | 107 | 105 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 103 | 106 | 32-135 | 3 | 30 | | | | |
| Benzo(a)pyrene | 101 | 99 | 36-138 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 111 | 107 | 26-142 | 4 | 30 | | | | |
| Benzo(e)pyrene | 1* | 1* | 70-130 | 1 | 30 | | | | |
| Benzo(g,h,i)perylene | 97 | 93 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 93 | 91 | 47-129 | 2 | 30 | | | | |
| Butylbenzylphthalate | 102 | 99 | 59-153 | 2 | 30 | | | | |
| Di-n-butylphthalate | 123 | 110 | 62-154 | 11 | 30 | | | | |
| Chrysene | 102 | 103 | 29-148 | 1 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1381875
Reported: 05/06/13 at 01:50 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Dibenz(a,h)anthracene | 107 | 103 | 34-125 | 4 | 30 | | | | |
| Diethylphthalate | 135* | 133* | 76-127 | 1 | 30 | | | | |
| Dimethylphthalate | 116 | 110 | 62-136 | 5 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 66 | 69 | 39-167 | 2 | 30 | | | | |
| Fluoranthene | 95 | 91 | 47-135 | 5 | 30 | | | | |
| Fluorene | 109 | 109 | 50-129 | 0 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 107 | 101 | 17-136 | 6 | 30 | | | | |
| 1-Methylnaphthalene | 104 | 102 | 50-131 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 107 | 106 | 28-144 | 1 | 30 | | | | |
| Naphthalene | 101 | 100 | 31-148 | 2 | 30 | | | | |
| N-Nitrosodimethylamine | 79 | 76 | 48-113 | 3 | 30 | | | | |
| Di-n-octylphthalate | 97 | 96 | 52-162 | 2 | 30 | | | | |
| Phenanthrene | 105 | 104 | 29-142 | 1 | 30 | | | | |
| Pyrene | 105 | 108 | 26-143 | 3 | 30 | | | | |
| Batch number: 131050002A | Sample number(s): 7016768-7016770,7016772 UNSPK: 7016768 | | | | | | | | |
| 25a Formaldehyde by EPA 8315A | 107 | 103 | 66-134 | 3 | 50 | | | | |
| Batch number: 131050020A | Sample number(s): 7016766-7016770,7016772-7016773 UNSPK: 7016768 | | | | | | | | |
| PCB-1016 | 100 | 72 | 16-146 | 31 | 50 | | | | |
| PCB-1260 | 104 | 70 | 40-134 | 39 | 50 | | | | |
| Batch number: 131030014A | Sample number(s): 7016766-7016770,7016772-7016773 UNSPK: 7016768 | | | | | | | | |
| EFH (C12-C14) | 90 | 91 | 49-123 | 0 | 20 | | | | |
| EFH (C15-C20) | 60 | 116 | 49-123 | 27* | 20 | | | | |
| EFH (C21-C30) | 102 | 91 | 49-123 | 6 | 20 | | | | |
| EFH (C30-C40) | 40* | 134* | 49-123 | 22* | 20 | | | | |
| EFH (C8-C11) | 73 | 75 | 49-123 | 1 | 20 | | | | |
| Batch number: 131050637003 | Sample number(s): 7016766-7016773 UNSPK: 7016768 BKG: 7016768 | | | | | | | | |
| Aluminum | 1818 (2) | 1689 (2) | 75-125 | 1 | 20 | 12,800 | 13,500 | 5 | 20 |
| Antimony | 48* | 47* | 75-125 | 0 | 20 | 3.96 U | 3.92 U | 0 (1) | 20 |
| Arsenic | 94 | 96 | 75-125 | 3 | 20 | 4.05 | 4.49 | 10 (1) | 20 |
| Barium | 97 | 99 | 75-125 | 3 | 20 | 70.3 | 69.9 | 1 | 20 |
| Beryllium | 102 | 101 | 75-125 | 1 | 20 | 0.538 J | 0.550 J | 2 (1) | 20 |
| Boron | 99 | 106 | 75-125 | 9 | 20 | 9.90 U | 9.80 U | 0 (1) | 20 |
| Cadmium | 94 | 99 | 75-125 | 7 | 20 | 0.0703 J | 0.116 J | 49* (1) | 20 |
| Calcium | 17 (2) | 365 (2) | 75-125 | 37* | 20 | 2,990 | 2,910 | 3 | 20 |
| Chromium | 102 | 104 | 75-125 | 2 | 20 | 14.7 | 14.3 | 3 (1) | 20 |
| Cobalt | 92 | 94 | 75-125 | 3 | 20 | 4.14 | 3.71 | 11 (1) | 20 |
| Copper | 96 | 103 | 75-125 | 7 | 20 | 6.49 | 6.12 | 6 (1) | 20 |
| Iron | -545 (2) | -1097 (2) | 75-125 | 3 | 20 | 18,400 | 17,300 | 7 | 20 |
| Lead | 90 | 93 | 75-125 | 4 | 20 | 5.05 | 5.12 | 2 (1) | 20 |
| Lithium | 100 | 100 | 75-125 | 1 | 20 | 21.7 | 20.4 | 6 | 20 |
| Magnesium | 169 (2) | 78 (2) | 75-125 | 4 | 20 | 3,950 | 3,710 | 6 | 20 |
| Manganese | 131 (2) | 65 (2) | 75-125 | 11 | 20 | 236 | 220 | 7 | 20 |
| Molybdenum | 94 | 95 | 75-125 | 3 | 20 | 0.650 J | 0.234 J | 94* (1) | 20 |
| Nickel | 93 | 97 | 75-125 | 5 | 20 | 8.52 | 8.24 | 3 (1) | 20 |
| Phosphorus | 56* | 127* | 75-125 | 15 | 20 | 385 | 365 | 5 | 20 |
| Potassium | 81 | 65* | 75-125 | 3 | 20 | 3,440 | 3,290 | 5 | 20 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1381875
Reported: 05/06/13 at 01:50 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Sodium | 98 | 97 | 75-125 | 2 | 20 | 67.0 J | 66.0 J | 2 (1) | 20 |
| Tin | 87 | 89 | 75-125 | 4 | 20 | 2.67 J | 2.57 J | 4 (1) | 20 |
| Titanium | 325 (2) | 208 (2) | 75-125 | 10 | 20 | 859 | 880 | 2 | 20 |
| Vanadium | 106 | 102 | 75-125 | 1 | 20 | 28.8 | 28.6 | 1 | 20 |
| Zinc | 83 | 100 | 75-125 | 9 | 20 | 54.0 | 50.4 | 7 | 20 |
| Zirconium | 98 | 97 | 75-125 | 1 | 20 | 0.891 J | 1.71 J | 63* (1) | 20 |
| Batch number: 131050637003A | Sample number(s): 7016766-7016773 UNSPK: 7016768 BKG: 7016768 | | | | | | | | |
| Silver | 97 | 101 | 75-125 | 7 | 20 | 0.0232 J | 0.0211 J | 9 (1) | 20 |
| Strontium | 92 | 153* | 75-125 | 17 | 20 | 18.8 | 17.7 | 6 | 20 |
| Thallium | 105 | 113 | 75-125 | 6 | 20 | 0.216 | 0.224 | 3 (1) | 20 |
| Batch number: 131050637003B | Sample number(s): 7016766-7016773 UNSPK: 7016768 BKG: 7016768 | | | | | | | | |
| Selenium | 95 | 89 | 75-125 | 4 | 20 | 0.0990 J | 0.165 J | 50* (1) | 20 |
| Batch number: 131060638003 | Sample number(s): 7016766-7016773 UNSPK: 7016768 BKG: 7016768 | | | | | | | | |
| 3a Mercury 7471A | 114 | 115 | 65-135 | 1 | 20 | 0.0195 U | 0.0189 U | 0 (1) | 20 |
| Batch number: 13108243201A | Sample number(s): 7016768,7016771-7016772 UNSPK: 7016768 BKG: 7016768 | | | | | | | | |
| 2a Chromium VI by EPA 7199 | 88 | | 75-125 | | | 0.36 J | 0.43 | 19 (1) | 20 |
| Batch number: 13101039401A | Sample number(s): 7016766-7016767,7016773 BKG: 7016766 | | | | | | | | |
| 15a pH by 9045C | | | | | | 7.59 | 7.61 | 0 | 3 |
| Batch number: 13106162401A | Sample number(s): 7016766-7016774 BKG: 7016768 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.3 | 3.0 | 12 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 3.3 | 3.0 | 12 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 3.3 | 3.0 | 12 | 20 |
| Batch number: 13101001 | Sample number(s): 7016766-7016770,7016772-7016774 UNSPK: 7016768 | | | | | | | | |
| 2378-TCDD | 92 | 91 | 40-135 | 4 | 20 | | | | |
| 12378-PeCDD | 97 | 97 | 40-135 | 3 | 20 | | | | |
| 123478-HxCDD | 101 | 103 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDD | 102 | 101 | 40-135 | 3 | 20 | | | | |
| 123789-HxCDD | 100 | 100 | 40-135 | 2 | 20 | | | | |
| 1234678-HpCDD | 95 | 99 | 40-135 | 1 | 20 | | | | |
| OCDD | 79 | 94 | 40-135 | 10 | 20 | | | | |
| 2378-TCDF | 99 | 97 | 40-135 | 4 | 20 | | | | |
| 12378-PeCDF | 101 | 98 | 40-135 | 5 | 20 | | | | |
| 23478-PeCDF | 104 | 103 | 40-135 | 3 | 20 | | | | |
| 123478-HxCDF | 105 | 102 | 40-135 | 5 | 20 | | | | |
| 123678-HxCDF | 103 | 101 | 40-135 | 4 | 20 | | | | |
| 123789-HxCDF | 102 | 105 | 40-135 | 0 | 20 | | | | |
| 234678-HxCDF | 103 | 100 | 40-135 | 5 | 20 | | | | |
| 1234678-HpCDF | 101 | 101 | 40-135 | 2 | 20 | | | | |
| 1234789-HpCDF | 101 | 102 | 40-135 | 1 | 20 | | | | |
| OCDF | 100 | 101 | 40-135 | 2 | 20 | | | | |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1381875
Reported: 05/06/13 at 01:50 PM

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13105SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7016766 | 80 | 90 | 90 |
| 7016767 | 84 | 97 | 96 |
| 7016768 | 85 | 97 | 93 |
| 7016769 | 83 | 98 | 99 |
| 7016770 | 80 | 96 | 94 |
| 7016772 | 80 | 92 | 93 |
| 7016773 | 82 | 98 | 93 |
| Blank | 88 | 96 | 124 |
| LCS | 89 | 99 | 97 |
| MS | 83 | 98 | 99 |
| MSD | 80 | 96 | 94 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 25a Formaldehyde by EPA 8315A
Batch number: 131050002A

| | Butyraldehyde |
|---|---|
| 7016768 | 89 |
| 7016769 | 103 |
| 7016770 | 105 |
| 7016772 | 105 |
| Blank | 105 |
| LCS | 108 |
| MS | 103 |
| MSD | 105 |
| Limits: | 64-126 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131050020A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7016766 | 111 | 85 |
| 7016767 | 116 | 85 |
| 7016768 | 111 | 86 |
| 7016769 | 120 | 93 |
| 7016770 | 79 | 73 |
| 7016772 | 112 | 118 |
| 7016773 | 117 | 83 |
| Blank | 117 | 87 |
| LCS | 117 | 90 |
| LCSD | 121* | 94 |
| MS | 120 | 93 |
| MSD | 79 | 73 |
| Limits: | 45-120 | 45-120 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1381875
Reported: 05/06/13 at 01:50 PM

## Surrogate Quality Control

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131030014A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7016766 | 117 | 106 |
| 7016767 | 84 | 82 |
| 7016768 | 89 | 81 |
| 7016769 | 85 | 78 |
| 7016770 | 88 | 73 |
| 7016772 | 88 | 80 |
| 7016773 | 91 | 88 |
| Blank | 86 | 81 |
| LCS | 88 | 90 |
| MS | 85 | 78 |
| MSD | 87 | 73 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13101001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7016766 | 77 | 81 | 86 | 85 | 85 | 88 |
| 7016767 | 74 | 83 | 87 | 89 | 86 | 86 |
| 7016768 | 68 | 77 | 81 | 84 | 80 | 81 |
| 7016769 | 70 | 78 | 83 | 85 | 84 | 87 |
| 7016770 | 71 | 79 | 84 | 85 | 84 | 80 |
| 7016772 | 69 | 75 | 77 | 80 | 77 | 79 |
| 7016773 | 73 | 79 | 83 | 84 | 82 | 87 |
| 7016774 | 91 | 85 | 100 | 99 | 94 | 87 |
| Blank | 71 | 80 | 88 | 93 | 88 | 84 |
| MS | 70 | 78 | 83 | 85 | 84 | 87 |
| MSD | 71 | 79 | 84 | 85 | 84 | 80 |
| OPR | 67 | 76 | 84 | 88 | 86 | 83 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7016766 | 96 | 96 | 113 | 81 | 82 | 81 |
| 7016767 | 102 | 98 | 110 | 83 | 83 | 83 |
| 7016768 | 102 | 89 | 99 | 76 | 76 | 80 |
| 7016769 | 96 | 90 | 101 | 77 | 83 | 81 |
| 7016770 | 95 | 87 | 103 | 80 | 79 | 80 |
| 7016772 | 100 | 86 | 97 | 77 | 76 | 77 |
| 7016773 | 101 | 90 | 95 | 78 | 79 | 80 |
| 7016774 | 71 | 63 | 37 | 83 | 89 | 84 |
| Blank | 105 | 87 | 92 | 82 | 88 | 87 |
| MS | 96 | 90 | 101 | 77 | 83 | 81 |
| MSD | 95 | 87 | 103 | 80 | 79 | 80 |
| OPR | 97 | 84 | 87 | 78 | 81 | 84 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1381875
Reported: 05/06/13 at 01:50 PM

## Surrogate Quality Control

| | | | | | |
|---|---|---|---|---|---|
| 7016766 | 80 | 91 | 111 | 74 | 80 |
| 7016767 | 83 | 94 | 107 | 74 | 83 |
| 7016768 | 79 | 87 | 104 | 63 | 77 |
| 7016769 | 85 | 86 | 98 | 66 | 78 |
| 7016770 | 82 | 87 | 100 | 68 | 80 |
| 7016772 | 79 | 88 | 101 | 66 | 78 |
| 7016773 | 78 | 91 | 98 | 69 | 81 |
| 7016774 | 84 | 61 | 41 | 92 | 88 |
| Blank | 86 | 90 | 95 | 67 | 82 |
| MS | 85 | 86 | 98 | 66 | 78 |
| MSD | 82 | 87 | 100 | 68 | 80 |
| OPR | 82 | 83 | 87 | 65 | 77 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
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# SSFL Phase 3 Chain of Custody

A-13013 G-1381875 S-7016766-74

**CDM Smith**

DateShipped: 4/9/2013
CarrierName: FedEx
AirbillNo: 799485562831

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130409-01
Cooler #: 1, 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-539-SA7-SB-0.0-0.5 | 4/8/13 12:45 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-539-SA7-SB-0.0-0.5 | 4/8/13 12:45 | SO | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-542-SA7-SB-0.0-0.5 | 4/9/13 08:40 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-542-SA7-SB-0.0-0.5 | 4/9/13 08:40 | SO | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-540-SA7-SB-0.0-0.5MS | 4/9/13 10:10 | SO | None | 6 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | | | | | | | | X | | | | MS/MSD |
| SL-540-SA7-SB-0.0-0.5MS | 4/9/13 10:10 | SO | None | 2 - 16 oz glass | 0 | | | | | | | | | | | | | | | X | | | | | X | | | | | | | | | | MS/MSD |
| SL-840-SA7-SB-0.0-0.5 | 4/9/13 10:15 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | | | | | | | | X | | | | |
| SL-840-SA7-SB-0.0-0.5 | 4/9/13 10:15 | SO | None | 2 - 4 oz glass | 0 | | | | | | | | | | | | | | | X | | | | | X | | | | | | | | | | | |
| SL-544-SA7-SB-0.0-0.5 | 4/9/13 13:05 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-544-SA7-SB-0.0-0.5 | 4/9/13 13:05 | SO | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-546-SA7-SB-0.0-0.5 | 4/9/13 14:15 | SO | None | 1 - SS-Sleeve | 0 | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

Sampler: Steven Mann

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 4/9/13 | | | | | | | | [signature] | 4/10/13 | 920 |

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G-1381875

# Environmental Sample Administration
# Receipt Documentation Log

**Client/Project:** CDM

**Date of Receipt:** 4.10.13

**Time of Receipt:** 920

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | 1396 | 2.4 | TB | WI | Y | B | |
| 2 | ↓ | 1.9 | ↓ | ↓ | ↓ | ↓ | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** 2299 **Date/Time:** 4.10.13 1121

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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# Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

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

April 25, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/11/2013
Group Number: 1382144
SDG: PH028
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| SL-547-SA7-SB-0.0-0.5 Soil | 7018431 |
| SL-552-SA7-SB-0.0-0.5 Soil | 7018432 |
| SL-551-SA7-SB-0.0-0.5 Soil | 7018433 |
| SL-551-SA7-SB-2.0-3.0 Soil | 7018434 |
| TB-041013 Water | 7018435 |
| SL-548-SA7-SB-0.0-0.5 Soil | 7018436 |
| SL-549-SA7-SB-0.0-0.5 Soil | 7018437 |

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

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-547-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7018431**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 15:10 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL547 SDG#: PH028-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.4 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.9 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 0.93 | J | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.9 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 4.7 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 3.0 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 4.7 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 4.7 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 9.6 | J | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description: SL-547-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018431**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 15:10 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL547 SDG#: PH028-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,400 | | 40.1 | 7.73 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.01 | U | 4.01 | 0.501 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.78 | J | 4.01 | 0.331 | 1 |
| 06946 | Barium | 7440-39-3 | 67.8 | | 1.00 | 0.0331 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.475 | J | 1.00 | 0.0672 | 1 |
| 07914 | Boron | 7440-42-8 | 2.59 | J | 10.0 | 0.832 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.0531 | J | 1.00 | 0.0331 | 1 |
| 01650 | Calcium | 7440-70-2 | 1,360 | | 20.0 | 4.03 | 1 |
| 06951 | Chromium | 7440-47-3 | 9.79 | | 3.01 | 0.0882 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.19 | | 1.00 | 0.0902 | 1 |
| 06953 | Copper | 7440-50-8 | 3.54 | | 2.00 | 0.180 | 1 |
| 01654 | Iron | 7439-89-6 | 16,500 | | 40.1 | 3.81 | 1 |
| 06955 | Lead | 7439-92-1 | 5.62 | | 3.01 | 0.471 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.5 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,120 | | 10.0 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 237 | | 1.00 | 0.0832 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.00 | U | 2.00 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 5.93 | | 2.00 | 0.110 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 277 | | 10.2 | 0.521 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,600 | | 100 | 13.5 | 1 |
| 01667 | Sodium | 7440-23-5 | 66.5 | J | 100 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.60 | J | 10.0 | 0.221 | 1 |
| 06970 | Titanium | 7440-32-6 | 958 | | 1.00 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 21.3 | | 1.00 | 0.110 | 1 |
| 06972 | Zinc | 7440-66-6 | 56.4 | | 4.01 | 0.200 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.01 | U | 5.01 | 0.832 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.401 | U | 0.401 | 0.100 | 2 |
| 06142 | Silver | 7440-22-4 | 0.200 | U | 0.200 | 0.0200 | 2 |
| 06144 | Strontium | 7440-24-6 | 7.03 | | 0.401 | 0.0341 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.257 | | 0.200 | 0.0301 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0203 | U | 0.0203 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 5.94 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

**Sample Description: SL-547-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018431**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 15:10 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL547 SDG#: PH028-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.105 | JQ | 1.02 | 0.0394 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.263 | JBQ | 5.11 | 0.0513 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.315 | JB | 5.11 | 0.0449 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.35 | J | 5.11 | 0.0472 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.687 | JB | 5.11 | 0.0463 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 13.0 | B | 5.11 | 0.0714 | 1 |
| 11031 | OCDD | 3268-87-9 | 128 | B | 10.2 | 0.0826 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.183 | J | 1.02 | 0.0641 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.365 | JBQ | 5.11 | 0.0324 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.485 | JB | 5.11 | 0.0361 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.321 | JB | 5.11 | 0.0517 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.512 | JB | 5.11 | 0.0401 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.243 | JB | 5.11 | 0.0703 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.445 | JB | 5.11 | 0.0472 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.81 | JB | 5.11 | 0.0302 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.435 | JB | 5.11 | 0.0703 | 1 |
| 11031 | OCDF | 39001-02-0 | 3.66 | JB | 10.2 | 0.116 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.743 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 65 | 25 - 164 |
| 13C12-12378-PeCDD | 82 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 79 | 28 - 130 |
| 13C12-123789-HxCDD | 76 | 28 - 130 |
| 13C12-1234678-HpCDD | 73 | 23 - 140 |
| 13C12-OCDD | 64 | 17 - 157 |
| 13C12-2378-TCDF | 56 | 24 - 169 |
| 13C12-12378-PeCDF | 82 | 24 - 185 |
| 13C12-23478-PeCDF | 69 | 21 - 178 |
| 13C12-123478-HxCDF | 66 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 70 | 28 - 136 |
| 13C12-123789-HxCDF | 53 | 29 - 147 |
| 13C12-1234678-HpCDF | 101 | 28 - 143 |
| 13C12-1234789-HpCDF | 49 | 26 - 138 |
| 13C12-OCDF | 41 | 17 - 157 |

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

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

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

**Sample Description: SL-547-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018431**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 15:10 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL547 SDG#: PH028-01

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-547-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018431**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 15:10 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL547 SDG#: PH028-01

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 06:32 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 02:32 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 10:55 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13102001 | 04/15/2013 16:11 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13102001 | 04/12/2013 10:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131050637003 | 04/21/2013 14:45 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131120637001 | 04/23/2013 05:20 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:36 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:16 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:16 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:16 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:16 | David K Beck | 2 |

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

**Sample Description: SL-547-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018431**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/09/2013 15:10 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL547 SDG#: PH028-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:28 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 2 | 131120637001 | 04/22/2013 21:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13101039401A | 04/11/2013 19:40 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401B | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

**Sample Description:** SL-552-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7018432**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 09:05 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL552 SDG#: PH028-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.3 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 2.2 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.7 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.0 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 6.4 | J | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 3.0 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 29 | | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 4.3 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.3 | J | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.7 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.2 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 4.6 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description: SL-552-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018432**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 09:05 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL552 SDG#: PH028-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,920 | | 40.4 | 7.79 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.04 | U | 4.04 | 0.505 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.35 | J | 4.04 | 0.334 | 1 |
| 06946 | Barium | 7440-39-3 | 67.9 | | 1.01 | 0.0334 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.442 | J | 1.01 | 0.0677 | 1 |
| 07914 | Boron | 7440-42-8 | 10.1 | U | 10.1 | 0.839 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.111 | J | 1.01 | 0.0334 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,470 | | 20.2 | 4.06 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.0 | | 3.03 | 0.0889 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.27 | | 1.01 | 0.0910 | 1 |
| 06953 | Copper | 7440-50-8 | 7.10 | | 2.02 | 0.182 | 1 |
| 01654 | Iron | 7439-89-6 | 17,500 | | 40.4 | 3.84 | 1 |
| 06955 | Lead | 7439-92-1 | 4.34 | | 3.03 | 0.475 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.9 | | 4.0 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,960 | | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 255 | | 1.01 | 0.0839 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.02 | U | 2.02 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.0 | | 2.02 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 430 | | 10.1 | 0.515 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,950 | | 101 | 13.6 | 1 |
| 01667 | Sodium | 7440-23-5 | 86.7 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.36 | J | 10.1 | 0.222 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,000 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 33.7 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 59.0 | | 4.04 | 0.202 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.05 | U | 5.05 | 0.839 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.106 | J | 0.404 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.202 | U | 0.202 | 0.0202 | 2 |
| 06144 | Strontium | 7440-24-6 | 10.8 | | 0.404 | 0.0344 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.206 | | 0.202 | 0.0303 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0202 | U | 0.0202 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.33 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.0 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

**Sample Description: SL-552-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018432**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 09:05 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL552 SDG#: PH028-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.991 | U | 0.991 | 0.0324 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.228 | JBQ | 4.96 | 0.0341 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.372 | JBQ | 4.96 | 0.0411 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.860 | J | 4.96 | 0.0435 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.787 | JB | 4.96 | 0.0412 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 21.7 | B | 4.96 | 0.0497 | 1 |
| 11031 | OCDD | 3268-87-9 | 228 | B | 9.91 | 0.0496 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.991 | U | 0.991 | 0.0368 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.153 | JB | 4.96 | 0.0193 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.138 | JB | 4.96 | 0.0215 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.192 | JB | 4.96 | 0.0389 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.262 | JB | 4.96 | 0.0320 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 4.96 | U | 4.96 | 0.0478 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.344 | JB | 4.96 | 0.0347 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 3.39 | JB | 4.96 | 0.0210 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.405 | JB | 4.96 | 0.0447 | 1 |
| 11031 | OCDF | 39001-02-0 | 6.59 | JB | 9.91 | 0.0603 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.616 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 78 | 23 - 140 |
| 13C12-OCDD | 72 | 17 - 157 |
| 13C12-2378-TCDF | 60 | 24 - 169 |
| 13C12-12378-PeCDF | 85 | 24 - 185 |
| 13C12-23478-PeCDF | 73 | 21 - 178 |
| 13C12-123478-HxCDF | 69 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 57 | 29 - 147 |
| 13C12-1234678-HpCDF | 104 | 28 - 143 |
| 13C12-1234789-HpCDF | 54 | 26 - 138 |
| 13C12-OCDF | 49 | 17 - 157 |

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

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

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

**Sample Description: SL-552-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018432**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 09:05 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL552 SDG#: PH028-02

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-552-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018432**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 09:05 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL552 SDG#: PH028-02

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 07:00 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 02:50 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 15:25 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13102001 | 04/15/2013 17:08 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13102001 | 04/12/2013 10:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 3 | 131050637003 | 04/22/2013 14:40 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:40 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:19 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:19 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:19 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:19 | David K Beck | 2 |

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

**Sample Description: SL-552-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018432**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 09:05 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL552 SDG#: PH028-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:30 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13101039401A | 04/11/2013 19:40 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401B | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

**Sample Description:** SL-551-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7018433**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 09:55 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL551 SDG#: PH028-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.47 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.9 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 2.8 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 5.0 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.3 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 4.3 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 9.0 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 6.8 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.6 | J | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.0 | J | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.5 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 5.0 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 6.2 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 13 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 29 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description: SL-551-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018433**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 09:55 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL551 SDG#: PH028-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,000 | | 40.5 | 7.81 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.05 | U | 4.05 | 0.506 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.03 | J | 4.05 | 0.334 | 1 |
| 06946 | Barium | 7440-39-3 | 77.6 | | 1.01 | 0.0334 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.509 | J | 1.01 | 0.0679 | 1 |
| 07914 | Boron | 7440-42-8 | 10.1 | U | 10.1 | 0.841 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.164 | J | 1.01 | 0.0334 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,720 | | 20.3 | 4.07 | 1 |
| 06951 | Chromium | 7440-47-3 | 13.9 | | 3.04 | 0.0891 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.73 | | 1.01 | 0.0912 | 1 |
| 06953 | Copper | 7440-50-8 | 6.20 | | 2.03 | 0.182 | 1 |
| 01654 | Iron | 7439-89-6 | 18,600 | | 40.5 | 3.85 | 1 |
| 06955 | Lead | 7439-92-1 | 7.10 | | 3.04 | 0.476 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.9 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,090 | | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 251 | | 1.01 | 0.0841 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.03 | U | 2.03 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.20 | | 2.03 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 405 | | 10.1 | 0.517 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,880 | | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 65.0 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.56 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 982 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 28.6 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 72.3 | | 4.05 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.06 | U | 5.06 | 0.841 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.405 | U | 0.405 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0411 | J | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 12.3 | | 0.405 | 0.0344 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.253 | | 0.203 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0110 | J | 0.0196 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.74 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.5 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

**Sample Description: SL-551-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018433**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 09:55 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL551 SDG#: PH028-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0747 | JQ | 1.03 | 0.0330 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.244 | JBQ | 5.14 | 0.0360 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.417 | JB | 5.14 | 0.0358 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.12 | JQ | 5.14 | 0.0369 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.704 | JB | 5.14 | 0.0361 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 30.9 | B | 5.14 | 0.0408 | 1 |
| 11031 | OCDD | 3268-87-9 | 327 | B | 10.3 | 0.0475 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.153 | JQ | 1.03 | 0.0414 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.177 | JB | 5.14 | 0.0212 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.186 | JB | 5.14 | 0.0244 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.300 | JB | 5.14 | 0.0351 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.276 | JB | 5.14 | 0.0272 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.123 | JBQ | 5.14 | 0.0468 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.401 | JB | 5.14 | 0.0318 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 3.99 | JB | 5.14 | 0.0194 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.574 | JB | 5.14 | 0.0472 | 1 |
| 11031 | OCDF | 39001-02-0 | 8.50 | JB | 10.3 | 0.0507 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.726 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 81 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 70 | 17 - 157 |
| 13C12-2378-TCDF | 63 | 24 - 169 |
| 13C12-12378-PeCDF | 89 | 24 - 185 |
| 13C12-23478-PeCDF | 74 | 21 - 178 |
| 13C12-123478-HxCDF | 69 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 54 | 29 - 147 |
| 13C12-1234678-HpCDF | 103 | 28 - 143 |
| 13C12-1234789-HpCDF | 51 | 26 - 138 |
| 13C12-OCDF | 46 | 17 - 157 |

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

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

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

**Sample Description: SL-551-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018433**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 09:55 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL551 SDG#: PH028-03

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-551-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018433**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 09:55 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL551 SDG#: PH028-03

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 07:30 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 03:09 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 15:45 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13102001 | 04/15/2013 18:05 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13102001 | 04/12/2013 10:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 3 | 131050637003 | 04/22/2013 14:52 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:44 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:21 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:21 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:21 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:21 | David K Beck | 2 |

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

**Sample Description: SL-551-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018433**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 09:55 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL551 SDG#: PH028-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:33 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13101039401A | 04/11/2013 19:40 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401B | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

**Sample Description:** SL-551-SA7-SB-2.0-3.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7018434**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 11:00 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

S5512 SDG#: PH028-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.76 | J | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.72 | J | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.74 | J | 1.7 | 0.69 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.56 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.3 | J | 5.2 | 2.1 | 1 |

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

**Sample Description: SL-551-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018434**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 11:00 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

S5512 SDG#: PH028-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 15 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 48 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,300 | | 41.6 | 8.01 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.16 | U | 4.16 | 0.520 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.02 | J | 4.16 | 0.343 | 1 |
| 06946 | Barium | 7440-39-3 | 77.4 | | 1.04 | 0.0343 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.467 | J | 1.04 | 0.0696 | 1 |
| 07914 | Boron | 7440-42-8 | 10.4 | U | 10.4 | 0.863 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.142 | J | 1.04 | 0.0343 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,750 | | 20.8 | 4.18 | 1 |
| 06951 | Chromium | 7440-47-3 | 15.6 | | 3.12 | 0.0915 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.09 | | 1.04 | 0.0936 | 1 |
| 06953 | Copper | 7440-50-8 | 5.44 | | 2.08 | 0.187 | 1 |
| 01654 | Iron | 7439-89-6 | 18,100 | | 41.6 | 3.95 | 1 |
| 06955 | Lead | 7439-92-1 | 4.81 | | 3.12 | 0.489 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.1 | | 4.2 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,490 | | 10.4 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 283 | | 1.04 | 0.0863 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.08 | U | 2.08 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.96 | | 2.08 | 0.114 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 366 | | 10.4 | 0.530 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,280 | | 104 | 14.0 | 1 |
| 01667 | Sodium | 7440-23-5 | 62.5 | J | 104 | 17.4 | 1 |
| 06969 | Tin | 7440-31-5 | 2.59 | J | 10.4 | 0.229 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,040 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 30.4 | | 1.04 | 0.114 | 1 |
| 06972 | Zinc | 7440-66-6 | 55.2 | | 4.16 | 0.208 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.20 | U | 5.20 | 0.863 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.416 | U | 0.416 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.208 | U | 0.208 | 0.0208 | 2 |
| 06144 | Strontium | 7440-24-6 | 11.3 | | 0.416 | 0.0353 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.209 | | 0.208 | 0.0312 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0203 | U | 0.0203 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C<br>The pH was measured in water at 21.3 C. | n.a. | 7.45 | | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.8 | | 0.10 | 0.10 | 1 |

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

**Sample Description: SL-551-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018434**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 11:00 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

S5512 SDG#: PH028-04

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

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

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

**Sample Description:** SL-551-SA7-SB-2.0-3.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7018434**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 11:00 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

S5512 SDG#: PH028-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.01 | U | 1.01 | 0.0315 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.102 | JBQ | 5.03 | 0.0317 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.161 | JBQ | 5.03 | 0.0319 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.472 | J | 5.03 | 0.0332 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.360 | JB | 5.03 | 0.0316 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 13.0 | B | 5.03 | 0.0352 | 1 |
| 11031 | OCDD | 3268-87-9 | 169 | B | 10.1 | 0.0328 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0596 | JQ | 1.01 | 0.0370 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.143 | JBQ | 5.03 | 0.0175 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0893 | JBQ | 5.03 | 0.0192 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.203 | JB | 5.03 | 0.0313 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.182 | JB | 5.03 | 0.0249 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.106 | JBQ | 5.03 | 0.0412 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.238 | JB | 5.03 | 0.0283 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.24 | JB | 5.03 | 0.0122 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.298 | JB | 5.03 | 0.0272 | 1 |
| 11031 | OCDF | 39001-02-0 | 5.49 | JB | 10.1 | 0.0452 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.353 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 63 | 25 - 164 |
| 13C12-12378-PeCDD | 80 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 79 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 69 | 17 - 157 |
| 13C12-2378-TCDF | 55 | 24 - 169 |
| 13C12-12378-PeCDF | 80 | 24 - 185 |
| 13C12-23478-PeCDF | 69 | 21 - 178 |
| 13C12-123478-HxCDF | 68 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 55 | 29 - 147 |
| 13C12-1234678-HpCDF | 103 | 28 - 143 |
| 13C12-1234789-HpCDF | 54 | 26 - 138 |
| 13C12-OCDF | 47 | 17 - 157 |

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

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

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

**Sample Description: SL-551-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018434**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 11:00 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

S5512 SDG#: PH028-04

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-551-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018434**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 11:00 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

S5512 SDG#: PH028-04

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 07:59 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13106A16A | 04/16/2013 17:34 | Laura M Krieger | 25.56 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201310130716 | 04/11/2013 19:40 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201310130716 | 04/11/2013 19:41 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 3 | 201310130716 | 04/11/2013 19:42 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 03:27 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 16:48 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13102001 | 04/15/2013 19:01 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13102001 | 04/12/2013 10:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 3 | 131050637003 | 04/22/2013 14:56 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |

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

**Sample Description: SL-551-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018434**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 11:00 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

S5512 SDG#: PH028-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:47 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:23 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:23 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:23 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:23 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:35 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13101039401A | 04/11/2013 19:40 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401B | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

**Sample Description: TB-041013 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7018435**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 08:00

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SLTB1 SDG#: PH028-05TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13106A20A | 04/16/2013 11:24 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13106A20A | 04/16/2013 11:24 | Catherine J Schwarz | 1 |

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

**Sample Description:** SL-548-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7018436**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 13:50 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL548 SDG#: PH028-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.35 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.0 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.3 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.8 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 4.0 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.94 | J | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.6 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.6 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 3.3 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.9 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.2 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 16 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 39 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description:** SL-548-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7018436**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 13:50 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL548 SDG#: PH028-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,600 | | 39.9 | 7.68 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.41 | J | 3.99 | 0.498 | 1 |
| 06935 | Arsenic | 7440-38-2 | 1.72 | J | 3.99 | 0.329 | 1 |
| 06946 | Barium | 7440-39-3 | 71.2 | | 0.996 | 0.0329 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.408 | J | 0.996 | 0.0668 | 1 |
| 07914 | Boron | 7440-42-8 | 4.15 | J | 9.96 | 0.827 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.448 | J | 0.996 | 0.0329 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,230 | | 19.9 | 4.01 | 1 |
| 06951 | Chromium | 7440-47-3 | 12.0 | | 2.99 | 0.0877 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.53 | | 0.996 | 0.0897 | 1 |
| 06953 | Copper | 7440-50-8 | 4.26 | | 1.99 | 0.179 | 1 |
| 01654 | Iron | 7439-89-6 | 18,500 | | 39.9 | 3.79 | 1 |
| 06955 | Lead | 7439-92-1 | 5.75 | | 2.99 | 0.468 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.7 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,650 | | 9.96 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 255 | | 0.996 | 0.0827 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.403 | J | 1.99 | 0.169 | 1 |
| 06961 | Nickel | 7440-02-0 | 6.27 | | 1.99 | 0.110 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 406 | | 9.96 | 0.508 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,750 | | 99.6 | 13.5 | 1 |
| 01667 | Sodium | 7440-23-5 | 56.7 | J | 99.6 | 16.6 | 1 |
| 06969 | Tin | 7440-31-5 | 2.72 | J | 9.96 | 0.219 | 1 |
| 06970 | Titanium | 7440-32-6 | 999 | | 0.996 | 0.169 | 1 |
| 06971 | Vanadium | 7440-62-2 | 23.6 | | 0.996 | 0.110 | 1 |
| 06972 | Zinc | 7440-66-6 | 61.4 | | 3.99 | 0.199 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.98 | U | 4.98 | 0.827 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.399 | U | 0.399 | 0.0996 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0315 | J | 0.199 | 0.0199 | 2 |
| 06144 | Strontium | 7440-24-6 | 8.13 | | 0.399 | 0.0339 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.232 | | 0.199 | 0.0299 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0199 | U | 0.0199 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.49 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

**Sample Description: SL-548-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018436**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 13:50 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL548 SDG#: PH028-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0614 | JQ | 0.994 | 0.0495 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.596 | JB | 4.97 | 0.0665 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.02 | JBQ | 4.97 | 0.0563 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 3.24 | J | 4.97 | 0.0595 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 2.10 | JBQ | 4.97 | 0.0577 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 76.3 | B | 4.97 | 0.0633 | 1 |
| 11031 | OCDD | 3268-87-9 | 716 | B | 9.94 | 0.0490 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.994 | U | 0.994 | 0.0576 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.235 | JBQ | 4.97 | 0.0325 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.255 | JBQ | 4.97 | 0.0338 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.516 | JB | 4.97 | 0.0548 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.595 | JBQ | 4.97 | 0.0471 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 4.97 | U | 4.97 | 0.0607 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.909 | JBQ | 4.97 | 0.0504 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 10.2 | B | 4.97 | 0.0297 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 1.05 | JB | 4.97 | 0.0492 | 1 |
| 11031 | OCDF | 39001-02-0 | 20.5 | B | 9.94 | 0.0481 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 2.07 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 67 | 25 - 164 |
| 13C12-12378-PeCDD | 74 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 79 | 28 - 130 |
| 13C12-1234678-HpCDD | 87 | 23 - 140 |
| 13C12-OCDD | 91 | 17 - 157 |
| 13C12-2378-TCDF | 62 | 24 - 169 |
| 13C12-12378-PeCDF | 77 | 24 - 185 |
| 13C12-23478-PeCDF | 69 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 106 | 28 - 143 |
| 13C12-1234789-HpCDF | 76 | 26 - 138 |
| 13C12-OCDF | 77 | 17 - 157 |

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

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

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

**Sample Description: SL-548-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018436**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 13:50 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL548 SDG#: PH028-06

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-548-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018436**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 13:50 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL548 SDG#: PH028-06

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 08:28 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 03:46 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 16:06 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13102001 | 04/15/2013 19:58 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13102001 | 04/12/2013 10:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:37 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 01:56 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:56 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:56 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:56 | David K Beck | 2 |

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

**Sample Description: SL-548-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018436**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 13:50 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL548 SDG#: PH028-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 07:55 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13101039401A | 04/11/2013 19:40 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401B | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

**Sample Description:** SL-549-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7018437**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 14:40 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL549 SDG#: PH028-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.6 | J | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.73 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.93 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.6 | J | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 10 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 33 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description: SL-549-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018437**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 14:40 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL549 SDG#: PH028-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,700 | | 40.8 | 7.86 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.08 | U | 4.08 | 0.510 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.51 | | 4.08 | 0.336 | 1 |
| 06946 | Barium | 7440-39-3 | 74.6 | | 1.02 | 0.0336 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.528 | J | 1.02 | 0.0683 | 1 |
| 07914 | Boron | 7440-42-8 | 10.2 | U | 10.2 | 0.846 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.175 | J | 1.02 | 0.0336 | 1 |
| 01650 | Calcium | 7440-70-2 | 6,380 | | 20.4 | 4.10 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.2 | | 3.06 | 0.0897 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.78 | | 1.02 | 0.0917 | 1 |
| 06953 | Copper | 7440-50-8 | 6.96 | | 2.04 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 19,900 | | 40.8 | 3.87 | 1 |
| 06955 | Lead | 7439-92-1 | 7.88 | | 3.06 | 0.479 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.7 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,080 | | 10.2 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 338 | | 1.02 | 0.0846 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.04 | U | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.2 | | 2.04 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 438 | | 10.2 | 0.520 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,180 | | 102 | 13.8 | 1 |
| 01667 | Sodium | 7440-23-5 | 62.7 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.69 | J | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,050 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.0 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 56.2 | | 4.08 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.10 | U | 5.10 | 0.846 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.196 | J | 0.408 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0306 | J | 0.204 | 0.0204 | 2 |
| 06144 | Strontium | 7440-24-6 | 12.5 | | 0.408 | 0.0347 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.232 | | 0.204 | 0.0306 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0203 | U | 0.0203 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.71 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.9 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

**Sample Description: SL-549-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018437**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 14:40 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL549 SDG#: PH028-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.984 | U | 0.984 | 0.0383 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.156 | JB | 4.92 | 0.0371 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.231 | JB | 4.92 | 0.0447 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.597 | J | 4.92 | 0.0470 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.492 | JB | 4.92 | 0.0436 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 11.1 | B | 4.92 | 0.0405 | 1 |
| 11031 | OCDD | 3268-87-9 | 70.7 | B | 9.84 | 0.0307 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.109 | J | 0.984 | 0.0578 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.355 | JB | 4.92 | 0.0257 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.263 | JBQ | 4.92 | 0.0263 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.133 | JBQ | 4.92 | 0.0357 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.168 | JB | 4.92 | 0.0302 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 4.92 | U | 4.92 | 0.0410 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.147 | JBQ | 4.92 | 0.0312 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.08 | JB | 4.92 | 0.0161 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0925 | JBQ | 4.92 | 0.0298 | 1 |
| 11031 | OCDF | 39001-02-0 | 2.07 | JB | 9.84 | 0.0480 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.470 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 66 | 25 - 164 |
| 13C12-12378-PeCDD | 81 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 75 | 23 - 140 |
| 13C12-OCDD | 74 | 17 - 157 |
| 13C12-2378-TCDF | 60 | 24 - 169 |
| 13C12-12378-PeCDF | 82 | 24 - 185 |
| 13C12-23478-PeCDF | 73 | 21 - 178 |
| 13C12-123478-HxCDF | 70 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 72 | 28 - 136 |
| 13C12-123789-HxCDF | 62 | 29 - 147 |
| 13C12-1234678-HpCDF | 97 | 28 - 143 |
| 13C12-1234789-HpCDF | 60 | 26 - 138 |
| 13C12-OCDF | 58 | 17 - 157 |

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

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

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

**Sample Description: SL-549-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018437**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 14:40 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL549 SDG#: PH028-07*

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-549-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018437**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 14:40 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL549 SDG#: PH028-07*

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 08:56 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 04:04 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 16:27 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13102001 | 04/15/2013 20:54 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13102001 | 04/12/2013 10:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 3 | 131050637003 | 04/22/2013 15:00 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:51 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:26 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:26 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:26 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:26 | David K Beck | 2 |

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

**Sample Description: SL-549-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7018437**
**LLI Group # 1382144**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/10/2013 14:40 by SM

Submitted: 04/11/2013 10:00
Reported: 04/25/2013 14:39

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

SL549 SDG#: PH028-07*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:37 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13101039401A | 04/11/2013 19:40 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401B | 04/16/2013 21:43 | Scott W Freisher | 1 |

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

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382144
Reported: 04/25/13 at 02:39 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13105SLA026 | Sample number(s): 7018431-7018434,7018436-7018437 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 120* | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 111 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 92 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 109 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 105 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 125 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 110 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 120 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 87 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 105 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 71-120 | | |
| Batch number: 13106A16A | Sample number(s): 7018434 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 90 | | 67-119 | | |
| Batch number: 13106A20A | Sample number(s): 7018435 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 99 | 98 | 75-135 | 2 | 30 |
| Batch number: 131050020A | Sample number(s): 7018431-7018434,7018436-7018437 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 70 | 75 | 36-106 | 6 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 84 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382144
Reported: 04/25/13 at 02:39 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 105 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131060013A | Sample number(s): 7018431-7018434,7018436-7018437 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 98 | 95 | 70-123 | 3 | 20 |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 113 | 110 | 75-128 | 3 | 20 |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 110 | 108 | 64-134 | 2 | 20 |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 79 | 70 | 65-128 | 12 | 20 |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 82 | 79 | 49-107 | 4 | 20 |
| Batch number: 131050637003 | Sample number(s): 7018431-7018434,7018437 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 103 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 113 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 104 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 98 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 107 | | 80-120 | | |
| Calcium | 4.23 | J | 20.0 | 4.02 | mg/kg | 105 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 107 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 105 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 100 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 109 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 102 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 107 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 109 | | 80-120 | | |
| Phosphorus | 14.4 | | 10.0 | 0.510 | mg/kg | 120 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.39 | J | 10.0 | 0.220 | mg/kg | 106 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 106 | | 80-120 | | |
| Zinc | 0.273 | J | 4.00 | 0.200 | mg/kg | 108 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 104 | | 80-120 | | |
| Batch number: 131050637003A | Sample number(s): 7018431-7018434,7018437 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 108 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0340 | mg/kg | 102 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 111 | | 80-120 | | |
| Batch number: 131050637003B | Sample number(s): 7018431-7018434,7018437 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 120 | | 80-120 | | |
| Batch number: 131060638003 | Sample number(s): 7018431-7018434,7018437 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0103 | mg/kg | 100 | | 85-120 | | |
| Batch number: 131070637001 | Sample number(s): 7018436 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 99 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 101 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 109 | | 80-120 | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382144
Reported: 04/25/13 at 02:39 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 96 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 106 | | 80-120 | | |
| Calcium | 20.0 | U | 20.0 | 4.02 | mg/kg | 101 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 100 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 106 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 103 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 103 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 1.82 | J | 10.0 | 1.73 | mg/kg | 99 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 100 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 10.9 | | 10.0 | 0.510 | mg/kg | 116 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 99 | | 80-120 | | |
| Tin | 1.40 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 98 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 108 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 101 | | 80-120 | | |
| Batch number: 131070637001A | Sample number(s): 7018436 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 110 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0340 | mg/kg | 111 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 97 | | 80-120 | | |
| Batch number: 131070637001B | Sample number(s): 7018436 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 117 | | 80-120 | | |
| Batch number: 131070638001 | Sample number(s): 7018436 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0103 | mg/kg | 109 | | 85-120 | | |
| Batch number: 131120637001 | Sample number(s): 7018431 | | | | | | | | | |
| Phosphorus | 0.876 | J | 10.0 | 0.510 | mg/kg | 102 | | 80-120 | | |
| Batch number: 13101039401A | Sample number(s): 7018431-7018434,7018436-7018437 | | | | | | | | | |
| 15a pH by 9045C | | | | | | 100 | | 95-105 | | |
| Batch number: 13106162401B | Sample number(s): 7018431-7018434,7018436-7018437 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13102001 | Sample number(s): 7018431-7018434,7018436-7018437 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0405 | ng/kg | 90 | | 67-158 | | |
| 12378-PeCDD | 0.0495 | J | 5.00 | 0.0292 | ng/kg | 96 | | 70-142 | | |
| 123478-HxCDD | 0.0211 | J | 5.00 | 0.0201 | ng/kg | 101 | | 70-164 | | |
| 123678-HxCDD | 5.00 | U | 5.00 | 0.0211 | ng/kg | 101 | | 76-134 | | |
| 123789-HxCDD | 0.0541 | J | 5.00 | 0.0210 | ng/kg | 100 | | 64-162 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382144
Reported: 04/25/13 at 02:39 PM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 1234678-HpCDD | 0.0738 J | 5.00 | 0.0241 | ng/kg | 98 | | 70-140 | | |
| OCDD | 0.157 J | 10.0 | 0.0247 | ng/kg | 99 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0472 | ng/kg | 107 | | 75-158 | | |
| 12378-PeCDF | 0.0431 J | 5.00 | 0.0178 | ng/kg | 97 | | 80-134 | | |
| 23478-PeCDF | 0.0684 J | 5.00 | 0.0181 | ng/kg | 100 | | 68-160 | | |
| 123478-HxCDF | 0.0555 J | 5.00 | 0.0217 | ng/kg | 104 | | 72-134 | | |
| 123678-HxCDF | 0.0300 J | 5.00 | 0.0177 | ng/kg | 99 | | 84-130 | | |
| 123789-HxCDF | 0.0734 J | 5.00 | 0.0261 | ng/kg | 103 | | 78-130 | | |
| 234678-HxCDF | 0.0447 J | 5.00 | 0.0203 | ng/kg | 101 | | 70-156 | | |
| 1234678-HpCDF | 0.0663 J | 5.00 | 0.00888 | ng/kg | 99 | | 82-122 | | |
| 1234789-HpCDF | 0.0735 J | 5.00 | 0.0194 | ng/kg | 102 | | 78-138 | | |
| OCDF | 0.166 J | 10.0 | 0.0444 | ng/kg | 102 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0118 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13105SLA026 | Sample number(s): 7018431-7018434,7018436-7018437 UNSPK: P016768 | | | | | | | | |
| Acenaphthene | 116 | 110 | 48-127 | 6 | 30 | | | | |
| Acenaphthylene | 112 | 109 | 49-121 | 3 | 30 | | | | |
| Anthracene | 107 | 105 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 103 | 106 | 32-135 | 3 | 30 | | | | |
| Benzo(a)pyrene | 101 | 99 | 36-138 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 111 | 107 | 26-142 | 4 | 30 | | | | |
| Benzo(e)pyrene | 1* | 1* | 70-130 | 1 | 30 | | | | |
| Benzo(g,h,i)perylene | 97 | 93 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 93 | 91 | 47-129 | 2 | 30 | | | | |
| Butylbenzylphthalate | 102 | 99 | 59-153 | 2 | 30 | | | | |
| Di-n-butylphthalate | 123 | 110 | 62-154 | 11 | 30 | | | | |
| Chrysene | 102 | 103 | 29-148 | 1 | 30 | | | | |
| Dibenz(a,h)anthracene | 107 | 103 | 34-125 | 4 | 30 | | | | |
| Diethylphthalate | 135* | 133* | 76-127 | 1 | 30 | | | | |
| Dimethylphthalate | 116 | 110 | 62-136 | 5 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 66 | 69 | 39-167 | 2 | 30 | | | | |
| Fluoranthene | 95 | 91 | 47-135 | 5 | 30 | | | | |
| Fluorene | 109 | 109 | 50-129 | 0 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 107 | 101 | 17-136 | 6 | 30 | | | | |
| 1-Methylnaphthalene | 104 | 102 | 50-131 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 107 | 106 | 28-144 | 1 | 30 | | | | |
| Naphthalene | 101 | 100 | 31-148 | 2 | 30 | | | | |
| N-Nitrosodimethylamine | 79 | 76 | 48-113 | 3 | 30 | | | | |
| Di-n-octylphthalate | 97 | 96 | 52-162 | 2 | 30 | | | | |
| Phenanthrene | 105 | 104 | 29-142 | 1 | 30 | | | | |
| Pyrene | 105 | 108 | 26-143 | 3 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382144
Reported: 04/25/13 at 02:39 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13106A16A | Sample number(s): 7018434 UNSPK: P022144 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 92 | 100 | 39-118 | 9 | 30 | | | | |
| Batch number: 131050020A | Sample number(s): 7018431-7018434,7018436-7018437 UNSPK: P016768 | | | | | | | | |
| PCB-1016 | 100 | 72 | 16-146 | 31 | 50 | | | | |
| PCB-1260 | 104 | 70 | 40-134 | 39 | 50 | | | | |
| Batch number: 131060013A | Sample number(s): 7018431-7018434,7018436-7018437 UNSPK: P022144 | | | | | | | | |
| EFH (C12-C14) | 96 | 113 | 49-123 | 16 | 20 | | | | |
| EFH (C15-C20) | 152* | 217* | 49-123 | 35* | 20 | | | | |
| EFH (C21-C30) | 125* | 235* | 49-123 | 33* | 20 | | | | |
| EFH (C30-C40) | 198* | 401* | 49-123 | 35* | 20 | | | | |
| EFH (C8-C11) | 92 | 108 | 49-123 | 16 | 20 | | | | |
| Batch number: 131050637003 | Sample number(s): 7018431-7018434,7018437 UNSPK: P016768 BKG: P016768 | | | | | | | | |
| Aluminum | 1818 (2) | 1689 (2) | 75-125 | 1 | 20 | 12,800 | 13,500 | 5 | 20 |
| Antimony | 48* | 47* | 75-125 | 0 | 20 | 3.96 U | 3.92 U | 0 (1) | 20 |
| Arsenic | 94 | 96 | 75-125 | 3 | 20 | 4.05 | 4.49 | 10 (1) | 20 |
| Barium | 97 | 99 | 75-125 | 3 | 20 | 70.3 | 69.9 | 1 | 20 |
| Beryllium | 102 | 101 | 75-125 | 1 | 20 | 0.538 J | 0.550 J | 2 (1) | 20 |
| Boron | 99 | 106 | 75-125 | 9 | 20 | 9.90 U | 9.80 U | 0 (1) | 20 |
| Cadmium | 94 | 99 | 75-125 | 7 | 20 | 0.0703 J | 0.116 J | 49* (1) | 20 |
| Calcium | 17 (2) | 365 (2) | 75-125 | 37* | 20 | 2,990 | 2,910 | 3 | 20 |
| Chromium | 102 | 104 | 75-125 | 2 | 20 | 14.7 | 14.3 | 3 (1) | 20 |
| Cobalt | 92 | 94 | 75-125 | 3 | 20 | 4.14 | 3.71 | 11 (1) | 20 |
| Copper | 96 | 103 | 75-125 | 7 | 20 | 6.49 | 6.12 | 6 (1) | 20 |
| Iron | -545 (2) | -1097 (2) | 75-125 | 3 | 20 | 18,400 | 17,300 | 7 | 20 |
| Lead | 90 | 93 | 75-125 | 4 | 20 | 5.05 | 5.12 | 2 (1) | 20 |
| Lithium | 100 | 100 | 75-125 | 1 | 20 | 21.7 | 20.4 | 6 | 20 |
| Magnesium | 169 (2) | 78 (2) | 75-125 | 4 | 20 | 3,950 | 3,710 | 6 | 20 |
| Manganese | 131 (2) | 65 (2) | 75-125 | 11 | 20 | 236 | 220 | 7 | 20 |
| Molybdenum | 94 | 95 | 75-125 | 3 | 20 | 0.650 J | 0.234 J | 94* (1) | 20 |
| Nickel | 93 | 97 | 75-125 | 5 | 20 | 8.52 | 8.24 | 3 (1) | 20 |
| Phosphorus | 56* | 127* | 75-125 | 15 | 20 | 385 | 365 | 5 | 20 |
| Potassium | 81 | 65* | 75-125 | 3 | 20 | 3,440 | 3,290 | 5 | 20 |
| Sodium | 98 | 97 | 75-125 | 2 | 20 | 67.0 J | 66.0 J | 2 (1) | 20 |
| Tin | 87 | 89 | 75-125 | 4 | 20 | 2.67 J | 2.57 J | 4 (1) | 20 |
| Titanium | 325 (2) | 208 (2) | 75-125 | 10 | 20 | 859 | 880 | 2 | 20 |
| Vanadium | 106 | 102 | 75-125 | 1 | 20 | 28.8 | 28.6 | 1 | 20 |
| Zinc | 83 | 100 | 75-125 | 9 | 20 | 54.0 | 50.4 | 7 | 20 |
| Zirconium | 98 | 97 | 75-125 | 1 | 20 | 0.891 J | 1.71 J | 63* (1) | 20 |
| Batch number: 131050637003A | Sample number(s): 7018431-7018434,7018437 UNSPK: P016768 BKG: P016768 | | | | | | | | |
| Silver | 97 | 101 | 75-125 | 7 | 20 | 0.0232 J | 0.0211 J | 9 (1) | 20 |
| Strontium | 92 | 153* | 75-125 | 17 | 20 | 18.8 | 17.7 | 6 | 20 |
| Thallium | 105 | 113 | 75-125 | 6 | 20 | 0.216 | 0.224 | 3 (1) | 20 |
| Batch number: 131050637003B | Sample number(s): 7018431-7018434,7018437 UNSPK: P016768 BKG: P016768 | | | | | | | | |
| Selenium | 95 | 89 | 75-125 | 4 | 20 | 0.0990 J | 0.165 J | 50* (1) | 20 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382144
Reported: 04/25/13 at 02:39 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 131060638003 | Sample number(s): 7018431-7018434,7018437 UNSPK: P016768 BKG: P016768 | | | | | | | | |
| 3a Mercury 7471A | 114 | 115 | 65-135 | 1 | 20 | 0.0195 U | 0.0189 U | 0 (1) | 20 |
| Batch number: 131070637001 | Sample number(s): 7018436 UNSPK: P022144 BKG: P022144 | | | | | | | | |
| Aluminum | 1359 (2) | 1600 (2) | 75-125 | 3 | 20 | 10,500 | 10,800 | 2 | 20 |
| Antimony | 70* | 73* | 75-125 | 4 | 20 | 1.54 J | 1.48 J | 4 (1) | 20 |
| Arsenic | 111 | 108 | 75-125 | 2 | 20 | 2.01 J | 2.79 J | 32* (1) | 20 |
| Barium | 105 | 100 | 75-125 | 3 | 20 | 70.2 | 68.6 | 2 | 20 |
| Beryllium | 99 | 99 | 75-125 | 1 | 20 | 0.469 J | 0.472 J | 1 (1) | 20 |
| Boron | 94 | 95 | 75-125 | 0 | 20 | 3.12 J | 3.00 J | 4 (1) | 20 |
| Cadmium | 105 | 104 | 75-125 | 1 | 20 | 0.409 J | 0.437 J | 7 (1) | 20 |
| Calcium | 67 (2) | 102 (2) | 75-125 | 4 | 20 | 3,060 | 2,860 | 7 | 20 |
| Chromium | 103 | 118 | 75-125 | 8 | 20 | 18.0 | 17.9 | 1 | 20 |
| Cobalt | 101 | 100 | 75-125 | 1 | 20 | 4.98 | 4.86 | 3 | 20 |
| Copper | 101 | 101 | 75-125 | 0 | 20 | 5.00 | 5.12 | 2 (1) | 20 |
| Iron | 1525 (2) | 1576 (2) | 75-125 | 0 | 20 | 18,500 | 19,000 | 3 | 20 |
| Lead | 106 | 104 | 75-125 | 1 | 20 | 5.00 | 5.37 | 7 (1) | 20 |
| Lithium | 104 | 105 | 75-125 | 1 | 20 | 22.9 | 23.7 | 3 | 20 |
| Magnesium | 277 (2) | 267 (2) | 75-125 | 0 | 20 | 3,970 | 3,970 | 0 | 20 |
| Manganese | 107 (2) | 104 (2) | 75-125 | 0 | 20 | 275 | 269 | 2 | 20 |
| Molybdenum | 96 | 96 | 75-125 | 0 | 20 | 1.19 J | 0.434 J | 93* (1) | 20 |
| Nickel | 100 | 99 | 75-125 | 1 | 20 | 8.44 | 8.47 | 0 (1) | 20 |
| Phosphorus | 98 | 132* | 75-125 | 7 | 20 | 357 | 368 | 3 | 20 |
| Potassium | 129* | 124 | 75-125 | 1 | 20 | 2,680 | 2,750 | 2 | 20 |
| Sodium | 96 | 97 | 75-125 | 2 | 20 | 59.7 J | 60.9 J | 2 (1) | 20 |
| Tin | 92 | 91 | 75-125 | 0 | 20 | 2.85 J | 2.68 J | 6 (1) | 20 |
| Titanium | 243 (2) | 230 (2) | 75-125 | 1 | 20 | 1,030 | 1,050 | 2 | 20 |
| Vanadium | 100 | 99 | 75-125 | 1 | 20 | 28.1 | 28.2 | 0 | 20 |
| Zinc | 112 | 111 | 75-125 | 0 | 20 | 53.7 | 54.2 | 1 | 20 |
| Zirconium | 95 | 94 | 75-125 | 1 | 20 | 1.08 J | 1.96 J | 57* (1) | 20 |
| Batch number: 131070637001A | Sample number(s): 7018436 UNSPK: P022144 BKG: P022144 | | | | | | | | |
| Silver | 100 | 101 | 75-125 | 1 | 20 | 0.0299 J | 0.0323 J | 8 (1) | 20 |
| Strontium | 89 | 103 | 75-125 | 6 | 20 | 11.7 | 11.4 | 2 | 20 |
| Thallium | 105 | 98 | 75-125 | 5 | 20 | 0.226 | 0.220 | 3 (1) | 20 |
| Batch number: 131070637001B | Sample number(s): 7018436 UNSPK: P022144 BKG: P022144 | | | | | | | | |
| Selenium | 116 | 111 | 75-125 | 4 | 20 | 0.385 U | 0.385 U | 0 (1) | 20 |
| Batch number: 131070638001 | Sample number(s): 7018436 UNSPK: P022144 BKG: P022144 | | | | | | | | |
| 3a Mercury 7471A | 112 | 111 | 65-135 | 1 | 20 | 0.0197 U | 0.0198 U | 0 (1) | 20 |
| Batch number: 131120637001 | Sample number(s): 7018431 UNSPK: 7018431 BKG: 7018431 | | | | | | | | |
| Phosphorus | 107 | 123 | 75-125 | 4 | 20 | 271 | 274 | 1 | 20 |
| Batch number: 13101039401A | Sample number(s): 7018431-7018434,7018436-7018437 BKG: P016766 | | | | | | | | |
| 15a pH by 9045C | | | | | | 7.59 | 7.61 | 0 | 3 |
| Batch number: 13106162401B | Sample number(s): 7018431-7018434,7018436-7018437 BKG: 7018437 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 1.9 | 2.0 | 3 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382144
Reported: 04/25/13 at 02:39 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13105SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7018431 | 81 | 97 | 93 |
| 7018432 | 83 | 94 | 94 |
| 7018433 | 81 | 92 | 90 |
| 7018434 | 80 | 95 | 92 |
| 7018436 | 80 | 92 | 92 |
| 7018437 | 78 | 93 | 92 |
| Blank | 88 | 96 | 124 |
| LCS | 89 | 99 | 97 |
| MS | 83 | 98 | 99 |
| MSD | 80 | 96 | 94 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13106A16A

| | Trifluorotoluene-F |
|---|---|
| 7018434 | 81 |
| Blank | 89 |
| LCS | 84 |
| MS | 80 |
| MSD | 80 |
| Limits: | 61-122 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13106A20A

| | Trifluorotoluene-F |
|---|---|
| 7018435 | 88 |
| Blank | 88 |
| LCS | 110 |
| LCSD | 112 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382144
Reported: 04/25/13 at 02:39 PM

## Surrogate Quality Control

Batch number: 131050020A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7018431 | 120 | 83 |
| 7018432 | 105 | 77 |
| 7018433 | 122* | 87 |
| 7018434 | 120 | 85 |
| 7018436 | 121* | 85 |
| 7018437 | 124* | 91 |
| Blank | 117 | 87 |
| LCS | 117 | 90 |
| LCSD | 121* | 94 |
| MS | 120 | 93 |
| MSD | 79 | 73 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131060013A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7018431 | 82 | 81 |
| 7018432 | 82 | 79 |
| 7018433 | 94 | 79 |
| 7018434 | 89 | 77 |
| 7018436 | 85 | 73 |
| 7018437 | 81 | 72 |
| Blank | 84 | 85 |
| LCS | 92 | 83 |
| LCSD | 88 | 81 |
| MS | 86 | 72 |
| MSD | 90 | 66 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13102001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7018431 | 65 | 69 | 66 | 82 | 70 | 53 |
| 7018432 | 70 | 73 | 69 | 82 | 71 | 57 |
| 7018433 | 72 | 74 | 69 | 84 | 71 | 54 |
| 7018434 | 63 | 69 | 68 | 82 | 71 | 55 |
| 7018436 | 67 | 69 | 75 | 85 | 76 | 72 |
| 7018437 | 66 | 73 | 70 | 81 | 72 | 62 |
| Blank | 72 | 81 | 76 | 90 | 80 | 69 |
| OPR | 63 | 62 | 58 | 75 | 63 | 50 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7018431 | 101 | 49 | 41 | 82 | 77 | 79 |
| 7018432 | 104 | 54 | 49 | 85 | 79 | 80 |
| 7018433 | 103 | 51 | 46 | 85 | 79 | 81 |
| 7018434 | 103 | 54 | 47 | 80 | 77 | 79 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382144
Reported: 04/25/13 at 02:39 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7018436 | 106 | 76 | 77 | 74 | 80 | 80 |
| 7018437 | 97 | 60 | 58 | 81 | 77 | 77 |
| Blank | 127 | 70 | 68 | 92 | 90 | 88 |
| OPR | 107 | 49 | 47 | 79 | 76 | 76 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7018431 | 76 | 73 | 64 | 56 | 82 |
| 7018432 | 78 | 78 | 72 | 60 | 85 |
| 7018433 | 81 | 76 | 70 | 63 | 89 |
| 7018434 | 78 | 76 | 69 | 55 | 80 |
| 7018436 | 79 | 87 | 91 | 62 | 77 |
| 7018437 | 78 | 75 | 74 | 60 | 82 |
| Blank | 87 | 96 | 97 | 60 | 89 |
| OPR | 76 | 81 | 82 | 49 | 74 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct#13013 Ap#1382144 sample#701843137

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/10/2013
CarrierName: FedEx
AirbillNo: 7994 9700 1597

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130410-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-547-SA7-SB-0.0-0.5 | 4/9/13 15:10 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-547-SA7-SB-0.0-0.5 | 4/9/13 15:10 | SO | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-552-SA7-SB-0.0-0.5 | 4/10/13 09:05 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-552-SA7-SB-0.0-0.5 | 4/10/13 09:05 | SO | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-551-SA7-SB-0.0-0.5 | 4/10/13 09:55 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-551-SA7-SB-0.0-0.5 | 4/10/13 09:55 | SO | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-551-SA7-SB-2.0-3.0 | 4/10/13 11:00 | | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-551-SA7-SB-2.0-3.0 | 4/10/13 11:00 | | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-551-SA7-SB-2.0-3.0 | 4/10/13 11:00 | | None | 3 - Encore | 0 | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| TB-041013 | 4/10/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 0 | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-548-SA7-SB-0.0-0.5 | 4/10/13 13:50 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-548-SA7-SB-0.0-0.5 | 4/10/13 13:50 | SO | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-549-SA7-SB-0.0-0.5 | 4/10/13 14:40 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-549-SA7-SB-0.0-0.5 | 4/10/13 14:40 | SO | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |

Special Instructions:

Sampler: Steven Mercer

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| J. Gatz | 4/10/13 | | | | | | | | | | |
| | | | | | | | | | Patch | 4/11/13 | 1000 |

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C# 1382144

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** CDM Smith

**Date of Receipt:** 4/11/13

**Time of Receipt:** 1000

**Source Code:** SO

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | 2783 | 2.6 | TB | WI | Y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** Pat Gfk 3472 **Date/Time:** 4/11/13 1240

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

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

May 03, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/12/2013
Group Number: 1382496
SDG: PH029
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| SL-553-SA7-SB-0.0-0.5 Soil | 7020345 |
| SL-554-SA7-SB-0.0-0.5 Soil | 7020346 |
| SL-555-SA7-SB-0.0-0.5 Soil | 7020347 |
| SL-536-SA7-SB-0.0-0.5 Soil | 7020348 |
| EB-041113 Water | 7020349 |
| FB-041113 Water | 7020350 |

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

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-553-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7020345
**LLI Group #** 1382496
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 04/11/2013 08:10 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

553-- SDG#: PH029-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.67 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.67 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.67 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.2 | J | 1.7 | 0.67 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.67 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.67 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.1 | J | 1.7 | 0.34 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.67 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 6.8 | J | 18 | 6.1 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.2 | J | 1.7 | 0.67 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.67 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.67 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.67 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.67 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.67 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.67 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.68 | J | 1.7 | 0.67 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.2 | J | 1.7 | 0.67 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | mg/kg | | mg/kg | mg/kg | mg/kg | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 11 | | 5.1 | 2.0 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 16 | | 10 | 4.0 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| **Metals** | **SW-846 6010C** | | mg/kg | | mg/kg | mg/kg | mg/kg | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-553-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7020345**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 08:10 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

553-- SDG#: PH029-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,500 | | 40.0 | 7.72 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.00 | U | 4.00 | 0.501 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.00 | J | 4.00 | 0.330 | | 1 |
| 06946 | Barium | 7440-39-3 | 88.2 | | 1.00 | 0.0330 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.509 | J | 1.00 | 0.0671 | | 1 |
| 07914 | Boron | 7440-42-8 | 10.0 | U | 10.0 | 0.831 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.229 | J | 1.00 | 0.0330 | | 1 |
| 01650 | Calcium | 7440-70-2 | 8,930 | | 20.0 | 4.02 | | 1 |
| 06951 | Chromium | 7440-47-3 | 20.7 | | 3.00 | 0.0881 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.78 | | 1.00 | 0.0901 | | 1 |
| 06953 | Copper | 7440-50-8 | 7.89 | | 2.00 | 0.180 | | 1 |
| 01654 | Iron | 7439-89-6 | 20,400 | | 40.0 | 3.80 | | 1 |
| 06955 | Lead | 7439-92-1 | 7.06 | | 3.00 | 0.471 | | 1 |
| 01656 | Lithium | 7439-93-2 | 29.2 | | 4.0 | 0.55 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,440 | | 10.0 | 1.73 | | 1 |
| 06958 | Manganese | 7439-96-5 | 302 | | 1.00 | 0.0831 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.00 | U | 2.00 | 0.170 | | 1 |
| 06961 | Nickel | 7440-02-0 | 11.8 | | 2.00 | 0.110 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 459 | | 10.0 | 0.511 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,090 | | 100 | 13.5 | | 1 |
| 01667 | Sodium | 7440-23-5 | 69.1 | J | 100 | 16.7 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.70 | J | 10.0 | 0.220 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,190 | | 1.00 | 0.170 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.1 | | 1.00 | 0.110 | | 1 |
| 06972 | Zinc | 7440-66-6 | 60.8 | | 4.00 | 0.200 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.01 | U | 5.01 | 0.831 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.107 | J | 0.400 | 0.100 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0459 | J | 0.200 | 0.0200 | | 2 |
| 06144 | Strontium | 7440-24-6 | 19.2 | | 0.400 | 0.0340 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.223 | | 0.200 | 0.0300 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0192 | U | 0.0192 | 0.0099 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.90 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.1 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.1 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-553-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7020345**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 08:10 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

553-- SDG#: PH029-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0659 JBQ | 1.00 | 0.0297 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0481 JQ | 5.02 | 0.0295 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.147 JB | 5.02 | 0.0338 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.399 JB | 5.02 | 0.0347 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.368 J | 5.02 | 0.0340 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 6.94 B | 5.02 | 0.0282 | | 1 |
| 11031 | OCDD | 3268-87-9 | 73.4 B | 10.0 | 0.0216 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0333 JQ | 1.00 | 0.0332 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.149 JB | 5.02 | 0.0163 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.144 JB | 5.02 | 0.0154 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.121 JB | 5.02 | 0.0252 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0953 JB | 5.02 | 0.0231 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0657 JB | 5.02 | 0.0243 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.122 JBQ | 5.02 | 0.0239 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.12 JB | 5.02 | 0.0147 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.137 JB | 5.02 | 0.0172 | | 1 |
| 11031 | OCDF | 39001-02-0 | 2.38 JB | 10.0 | 0.0237 | | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.272 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 74 | 25 - 164 |
| 13C12-12378-PeCDD | 86 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 93 | 23 - 140 |
| 13C12-OCDD | 101 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 85 | 24 - 185 |
| 13C12-23478-PeCDF | 85 | 21 - 178 |
| 13C12-123478-HxCDF | 88 | 26 - 152 |
| 13C12-123678-HxCDF | 91 | 26 - 123 |
| 13C12-234678-HxCDF | 88 | 28 - 136 |
| 13C12-123789-HxCDF | 97 | 29 - 147 |
| 13C12-1234678-HpCDF | 101 | 28 - 143 |
| 13C12-1234789-HpCDF | 94 | 26 - 138 |
| 13C12-OCDF | 100 | 17 - 157 |

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-553-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020345**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 08:10 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

553-- SDG#: PH029-01

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

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-553-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020345**
**LLI Group # 1382496**
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**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 08:10 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

553-- SDG#: PH029-01

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 09:25 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 04:23 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 11:16 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106003 | 04/17/2013 20:41 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13106003 | 04/16/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 3 | 131050637003 | 04/22/2013 15:04 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:55 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:28 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:28 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:28 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:28 | David K Beck | 2 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-553-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020345**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 08:10 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

553-- SDG#: PH029-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:39 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13102039401A | 04/12/2013 20:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401B | 04/16/2013 21:43 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-554-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7020346**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 09:00 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

554-- SDG#: PH029-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.5 | | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.5 | | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 68 | | 17 | 6.9 | | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 80 | J | 180 | 35 | | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 35 | | 17 | 6.9 | | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 190 | U | 190 | 62 | | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 190 | U | 190 | 62 | | 10 |
| 12969 | Chrysene | 218-01-9 | 17 | U | 17 | 3.5 | | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 190 | U | 190 | 62 | | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 190 | U | 190 | 62 | | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 190 | U | 190 | 62 | | 10 |
| 12969 | Fluoranthene | 206-44-0 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | Naphthalene | 91-20-3 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 190 | U | 190 | 62 | | 10 |
| 12969 | Phenanthrene | 85-01-8 | 17 | U | 17 | 6.9 | | 10 |
| 12969 | Pyrene | 129-00-0 | 8.3 | J | 17 | 6.9 | | 10 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 520 | U | 520 | 210 | | 100 |
| 12952 | EFH (C15-C20) | n.a. | 520 | U | 520 | 210 | | 100 |
| 12952 | EFH (C21-C30) | n.a. | 1,500 | | 520 | 210 | | 100 |
| 12952 | EFH (C30-C40) | n.a. | 4,100 | | 1,000 | 410 | | 100 |
| 12952 | EFH (C8-C11) | n.a. | 520 | U | 520 | 210 | | 100 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-554-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7020346**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 09:00 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

554-- SDG#: PH029-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,300 | | 40.7 | 7.84 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.07 | U | 4.07 | 0.509 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.23 | | 4.07 | 0.336 | | 1 |
| 06946 | Barium | 7440-39-3 | 80.6 | | 1.02 | 0.0336 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.549 | J | 1.02 | 0.0681 | | 1 |
| 07914 | Boron | 7440-42-8 | 10.2 | U | 10.2 | 0.844 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.169 | J | 1.02 | 0.0336 | | 1 |
| 01650 | Calcium | 7440-70-2 | 3,670 | | 20.3 | 4.09 | | 1 |
| 06951 | Chromium | 7440-47-3 | 17.7 | | 3.05 | 0.0895 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.98 | | 1.02 | 0.0915 | | 1 |
| 06953 | Copper | 7440-50-8 | 8.26 | | 2.03 | 0.183 | | 1 |
| 01654 | Iron | 7439-89-6 | 19,400 | | 40.7 | 3.86 | | 1 |
| 06955 | Lead | 7439-92-1 | 8.02 | | 3.05 | 0.478 | | 1 |
| 01656 | Lithium | 7439-93-2 | 22.7 | | 4.1 | 0.56 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,510 | | 10.2 | 1.76 | | 1 |
| 06958 | Manganese | 7439-96-5 | 281 | | 1.02 | 0.0844 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.03 | U | 2.03 | 0.173 | | 1 |
| 06961 | Nickel | 7440-02-0 | 11.4 | | 2.03 | 0.112 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 426 | | 10.2 | 0.519 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,430 | | 102 | 13.7 | | 1 |
| 01667 | Sodium | 7440-23-5 | 66.8 | J | 102 | 17.0 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.54 | J | 10.2 | 0.224 | | 1 |
| 06970 | Titanium | 7440-32-6 | 988 | | 1.02 | 0.173 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 35.8 | | 1.02 | 0.112 | | 1 |
| 06972 | Zinc | 7440-66-6 | 60.0 | | 4.07 | 0.203 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.09 | U | 5.09 | 0.844 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.117 | J | 0.407 | 0.102 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0846 | J | 0.203 | 0.0203 | | 2 |
| 06144 | Strontium | 7440-24-6 | 15.8 | | 0.407 | 0.0346 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.230 | | 0.203 | 0.0305 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0221 | | 0.0199 | 0.0103 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.18 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.5 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.6 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-554-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7020346**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 09:00 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

554-- SDG#: PH029-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0864 | JB | 1.03 | 0.0294 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.441 | J | 5.13 | 0.0407 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.627 | JB | 5.13 | 0.0336 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.60 | JB | 5.13 | 0.0337 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.41 | J | 5.13 | 0.0331 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 36.8 | B | 5.13 | 0.0355 | | 1 |
| 11031 | OCDD | 3268-87-9 | 455 | B | 10.3 | 0.0422 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.389 | J | 1.03 | 0.0823 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.294 | JB | 5.13 | 0.0380 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.865 | JB | 5.13 | 0.0339 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.505 | JB | 5.13 | 0.0313 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.356 | JB | 5.13 | 0.0296 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.293 | JB | 5.13 | 0.0305 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.440 | JBQ | 5.13 | 0.0275 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 5.79 | B | 5.13 | 0.0428 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.599 | JB | 5.13 | 0.0483 | | 1 |
| 11031 | OCDF | 39001-02-0 | 12.8 | B | 10.3 | 0.0317 | | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.89 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 79 | 25 - 164 |
| 13C12-12378-PeCDD | 86 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 72 | 17 - 157 |
| 13C12-2378-TCDF | 76 | 24 - 169 |
| 13C12-12378-PeCDF | 84 | 24 - 185 |
| 13C12-23478-PeCDF | 86 | 21 - 178 |
| 13C12-123478-HxCDF | 85 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 84 | 28 - 136 |
| 13C12-123789-HxCDF | 85 | 29 - 147 |
| 13C12-1234678-HpCDF | 83 | 28 - 143 |
| 13C12-1234789-HpCDF | 80 | 26 - 138 |
| 13C12-OCDF | 74 | 17 - 157 |

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-554-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020346**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 09:00 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

554-- SDG#: PH029-02

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

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-554-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020346**
**LLI Group # 1382496**
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**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 09:00 by SM

Submitted: 04/12/2013 09:25
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

554-- SDG#: PH029-02

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 09:54 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 04:41 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 17:29 | Heather E Williams | 100 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106003 | 04/17/2013 21:37 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13106003 | 04/16/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 3 | 131050637003 | 04/22/2013 15:08 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 17:59 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:30 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:30 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:30 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:30 | David K Beck | 2 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-554-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020346**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 09:00 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

554-- SDG#: PH029-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:41 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13102039401A | 04/12/2013 20:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401B | 04/16/2013 21:43 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-555-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020347**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 10:15 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

555-- SDG#: PH029-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 180 | U | 180 | 71 | | 100 |
| 12969 | Acenaphthylene | 208-96-8 | 180 | U | 180 | 36 | | 100 |
| 12969 | Anthracene | 120-12-7 | 180 | U | 180 | 36 | | 100 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 180 | U | 180 | 71 | | 100 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 180 | U | 180 | 71 | | 100 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 180 | U | 180 | 71 | | 100 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 1,800 | U | 1,800 | 360 | | 100 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 180 | U | 180 | 71 | | 100 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 180 | U | 180 | 71 | | 100 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 1,900 | U | 1,900 | 640 | | 100 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 1,900 | U | 1,900 | 640 | | 100 |
| 12969 | Chrysene | 218-01-9 | 180 | U | 180 | 36 | | 100 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 180 | U | 180 | 71 | | 100 |
| 12969 | Diethylphthalate | 84-66-2 | 1,900 | U | 1,900 | 640 | | 100 |
| 12969 | Dimethylphthalate | 131-11-3 | 1,900 | U | 1,900 | 640 | | 100 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 1,900 | U | 1,900 | 640 | | 100 |
| 12969 | Fluoranthene | 206-44-0 | 180 | U | 180 | 71 | | 100 |
| 12969 | Fluorene | 86-73-7 | 180 | U | 180 | 71 | | 100 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 180 | U | 180 | 71 | | 100 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 180 | U | 180 | 71 | | 100 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 180 | U | 180 | 71 | | 100 |
| 12969 | Naphthalene | 91-20-3 | 180 | U | 180 | 71 | | 100 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 180 | U | 180 | 71 | | 100 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 1,900 | U | 1,900 | 640 | | 100 |
| 12969 | Phenanthrene | 85-01-8 | 180 | U | 180 | 71 | | 100 |
| 12969 | Pyrene | 129-00-0 | 180 | U | 180 | 71 | | 100 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.5 | | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 1,100 | U | 1,100 | 430 | | 100 |
| 12952 | EFH (C15-C20) | n.a. | 1,100 | U | 1,100 | 430 | | 100 |
| 12952 | EFH (C21-C30) | n.a. | 2,100 | | 1,100 | 430 | | 100 |
| 12952 | EFH (C30-C40) | n.a. | 5,100 | | 2,100 | 860 | | 100 |
| 12952 | EFH (C8-C11) | n.a. | 1,100 | U | 1,100 | 430 | | 100 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-555-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020347**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 10:15 by SM

Submitted: 04/12/2013 09:25
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Suite 400
Fairfax VA 22030

555-- SDG#: PH029-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,800 | | 41.2 | 7.94 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.12 | U | 4.12 | 0.515 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.64 | J | 4.12 | 0.340 | | 1 |
| 06946 | Barium | 7440-39-3 | 84.2 | | 1.03 | 0.0340 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.575 | J | 1.03 | 0.0690 | | 1 |
| 07914 | Boron | 7440-42-8 | 6.79 | J | 10.3 | 0.854 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.397 | J | 1.03 | 0.0340 | | 1 |
| 01650 | Calcium | 7440-70-2 | 4,940 | | 20.6 | 4.14 | | 1 |
| 06951 | Chromium | 7440-47-3 | 16.9 | | 3.09 | 0.0906 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.08 | | 1.03 | 0.0927 | | 1 |
| 06953 | Copper | 7440-50-8 | 8.64 | | 2.06 | 0.185 | | 1 |
| 01654 | Iron | 7439-89-6 | 19,600 | | 41.2 | 3.91 | | 1 |
| 06955 | Lead | 7439-92-1 | 10.5 | | 3.09 | 0.484 | | 1 |
| 01656 | Lithium | 7439-93-2 | 20.4 | | 4.1 | 0.57 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,080 | | 10.3 | 1.78 | | 1 |
| 06958 | Manganese | 7439-96-5 | 291 | | 1.03 | 0.0854 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.06 | U | 2.06 | 0.175 | | 1 |
| 06961 | Nickel | 7440-02-0 | 12.9 | | 2.06 | 0.113 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 445 | | 10.3 | 0.525 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,660 | | 103 | 13.9 | | 1 |
| 01667 | Sodium | 7440-23-5 | 76.8 | J | 103 | 17.2 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.62 | J | 10.3 | 0.226 | | 1 |
| 06970 | Titanium | 7440-32-6 | 965 | | 1.03 | 0.175 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.4 | | 1.03 | 0.113 | | 1 |
| 06972 | Zinc | 7440-66-6 | 67.5 | | 4.12 | 0.206 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 0.902 | J | 5.15 | 0.854 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.134 | J | 0.412 | 0.103 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0523 | J | 0.206 | 0.0206 | | 2 |
| 06144 | Strontium | 7440-24-6 | 23.4 | | 0.412 | 0.0350 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.188 | J | 0.206 | 0.0309 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0178 | J | 0.0213 | 0.0110 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.79 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.2 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.6 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-555-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7020347**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 10:15 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

555-- SDG#: PH029-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0496 | JBQ | 1.06 | 0.0345 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.383 | JQ | 5.30 | 0.0572 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.475 | JB | 5.30 | 0.0346 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.35 | JB | 5.30 | 0.0354 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.20 | JQ | 5.30 | 0.0335 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 28.5 | B | 5.30 | 0.0512 | | 1 |
| 11031 | OCDD | 3268-87-9 | 296 | B | 10.6 | 0.0710 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.395 | J | 1.06 | 0.0790 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.427 | JBQ | 5.30 | 0.0386 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.849 | JB | 5.30 | 0.0364 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.375 | JB | 5.30 | 0.0320 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.388 | JB | 5.30 | 0.0303 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.400 | JB | 5.30 | 0.0361 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.433 | JB | 5.30 | 0.0315 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 4.16 | JB | 5.30 | 0.0600 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.360 | JB | 5.30 | 0.0702 | | 1 |
| 11031 | OCDF | 39001-02-0 | 9.21 | JB | 10.6 | 0.0582 | | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.06 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 86 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 82 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 75 | 23 - 140 |
| 13C12-OCDD | 65 | 17 - 157 |
| 13C12-2378-TCDF | 80 | 24 - 169 |
| 13C12-12378-PeCDF | 84 | 24 - 185 |
| 13C12-23478-PeCDF | 84 | 21 - 178 |
| 13C12-123478-HxCDF | 87 | 26 - 152 |
| 13C12-123678-HxCDF | 87 | 26 - 123 |
| 13C12-234678-HxCDF | 86 | 28 - 136 |
| 13C12-123789-HxCDF | 84 | 29 - 147 |
| 13C12-1234678-HpCDF | 80 | 28 - 143 |
| 13C12-1234789-HpCDF | 75 | 26 - 138 |
| 13C12-OCDF | 66 | 17 - 157 |

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-555-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020347**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 10:15 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

555-- SDG#: PH029-03

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

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-555-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020347**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 10:15 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

555-- SDG#: PH029-03

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 10:22 | Mark A Clark | 100 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 05:00 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 18:32 | Heather E Williams | 100 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106003 | 04/17/2013 22:34 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13106003 | 04/16/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131050637003 | 04/21/2013 15:21 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:03 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:33 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:33 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:33 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:33 | David K Beck | 2 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-555-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020347**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 10:15 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

555-- SDG#: PH029-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:43 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13102039401A | 04/12/2013 20:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401B | 04/16/2013 21:43 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-536-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7020348**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 12:55 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

536-- SDG#: PH029-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Anthracene | 120-12-7 | 0.41 | J | 1.7 | 0.34 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 2.3 | | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 4.4 | | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 9.9 | | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 4.3 | J | 17 | 3.4 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 3.0 | | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 3.2 | | 1.7 | 0.68 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 7.6 | J | 18 | 6.1 | | 1 |
| 12969 | Chrysene | 218-01-9 | 7.0 | | 1.7 | 0.34 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 10 | J | 18 | 6.1 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 10 | | 1.7 | 0.68 | | 1 |
| 12969 | Fluorene | 86-73-7 | 0.72 | J | 1.7 | 0.68 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.4 | | 1.7 | 0.68 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.2 | J | 1.7 | 0.68 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 5.8 | | 1.7 | 0.68 | | 1 |
| 12969 | Pyrene | 129-00-0 | 11 | | 1.7 | 0.68 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | mg/kg | | mg/kg | mg/kg | mg/kg | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.2 | J | 5.1 | 2.0 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 18 | | 5.1 | 2.0 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 55 | | 10 | 4.1 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| **Metals** | **SW-846 6010C** | | mg/kg | | mg/kg | mg/kg | mg/kg | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-536-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7020348**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 12:55 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

536-- SDG#: PH029-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,260 | | 40.7 | 7.84 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.07 | U | 4.07 | 0.508 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.54 | J | 4.07 | 0.335 | | 1 |
| 06946 | Barium | 7440-39-3 | 61.4 | | 1.02 | 0.0335 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.411 | J | 1.02 | 0.0681 | | 1 |
| 07914 | Boron | 7440-42-8 | 2.81 | J | 10.2 | 0.843 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.162 | J | 1.02 | 0.0335 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,690 | | 20.3 | 4.09 | | 1 |
| 06951 | Chromium | 7440-47-3 | 12.7 | | 3.05 | 0.0894 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.50 | | 1.02 | 0.0915 | | 1 |
| 06953 | Copper | 7440-50-8 | 5.16 | | 2.03 | 0.183 | | 1 |
| 01654 | Iron | 7439-89-6 | 15,500 | | 40.7 | 3.86 | | 1 |
| 06955 | Lead | 7439-92-1 | 4.32 | | 3.05 | 0.478 | | 1 |
| 01656 | Lithium | 7439-93-2 | 22.0 | | 4.1 | 0.56 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,870 | | 10.2 | 1.76 | | 1 |
| 06958 | Manganese | 7439-96-5 | 228 | | 1.02 | 0.0843 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.03 | U | 2.03 | 0.173 | | 1 |
| 06961 | Nickel | 7440-02-0 | 7.27 | | 2.03 | 0.112 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 372 | | 10.2 | 0.518 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,030 | | 102 | 13.7 | | 1 |
| 01667 | Sodium | 7440-23-5 | 55.1 | J | 102 | 17.0 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.49 | J | 10.2 | 0.224 | | 1 |
| 06970 | Titanium | 7440-32-6 | 875 | | 1.02 | 0.173 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 24.9 | | 1.02 | 0.112 | | 1 |
| 06972 | Zinc | 7440-66-6 | 63.0 | | 4.07 | 0.203 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.08 | U | 5.08 | 0.843 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.407 | U | 0.407 | 0.102 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.203 | U | 0.203 | 0.0203 | | 2 |
| 06144 | Strontium | 7440-24-6 | 11.0 | | 0.407 | 0.0346 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.204 | | 0.203 | 0.0305 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0113 | J | 0.0192 | 0.0099 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.42 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.3 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.6 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-536-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7020348**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 12:55 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

536-- SDG#: PH029-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0447 | JB | 0.994 | 0.0276 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.799 | J | 4.97 | 0.0431 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.30 | JB | 4.97 | 0.0355 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 3.42 | JB | 4.97 | 0.0376 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 2.74 | J | 4.97 | 0.0346 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 78.1 | B | 4.97 | 0.0582 | | 1 |
| 11031 | OCDD | 3268-87-9 | 722 | B | 9.94 | 0.0663 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0619 | J | 0.994 | 0.0261 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.192 | JBQ | 4.97 | 0.0200 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.195 | JB | 4.97 | 0.0190 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.465 | JB | 4.97 | 0.0290 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.489 | JB | 4.97 | 0.0271 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.158 | JB | 4.97 | 0.0309 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.695 | JB | 4.97 | 0.0274 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 9.84 | B | 4.97 | 0.0228 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.861 | JB | 4.97 | 0.0306 | | 1 |
| 11031 | OCDF | 39001-02-0 | 19.2 | B | 9.94 | 0.0536 | | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 2.94 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 76 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 82 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 78 | 23 - 140 |
| 13C12-OCDD | 70 | 17 - 157 |
| 13C12-2378-TCDF | 72 | 24 - 169 |
| 13C12-12378-PeCDF | 85 | 24 - 185 |
| 13C12-23478-PeCDF | 85 | 21 - 178 |
| 13C12-123478-HxCDF | 85 | 26 - 152 |
| 13C12-123678-HxCDF | 87 | 26 - 123 |
| 13C12-234678-HxCDF | 85 | 28 - 136 |
| 13C12-123789-HxCDF | 83 | 29 - 147 |
| 13C12-1234678-HpCDF | 89 | 28 - 143 |
| 13C12-1234789-HpCDF | 77 | 26 - 138 |
| 13C12-OCDF | 67 | 17 - 157 |

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-536-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020348**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 12:55 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

536-- SDG#: PH029-04

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

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-536-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020348**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 12:55 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

536-- SDG#: PH029-04

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13105SLA026 | 04/23/2013 10:51 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13105SLA026 | 04/15/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131050020A | 04/20/2013 05:18 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131050020A | 04/16/2013 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 17:08 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106003 | 04/17/2013 23:31 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13106003 | 04/16/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131050637003 | 04/21/2013 15:25 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131050637003 | 04/19/2013 18:15 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131050637003B | 04/21/2013 00:40 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:40 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:40 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131050637003A | 04/21/2013 00:40 | David K Beck | 2 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-536-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7020348**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 12:55 by SM

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

536-- SDG#: PH029-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131060638003 | 04/18/2013 07:45 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131050637003 | 04/17/2013 09:07 | Denise K Conners | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131060638003 | 04/17/2013 11:40 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13102039401A | 04/12/2013 20:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13106162401B | 04/16/2013 21:43 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020349**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:15 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

EB411 SDG#: PH029-05EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Anthracene | 120-12-7 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 | U | 1.1 | 0.055 | | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.16 | J | 1.1 | 0.055 | | 1 |
| 12971 | Chrysene | 218-01-9 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.24 | J | 1.1 | 0.055 | | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 | U | 1.1 | 0.055 | | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.11 | J | 1.1 | 0.055 | | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Fluorene | 86-73-7 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.020 | J | 0.055 | 0.011 | | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.027 | J | 0.055 | 0.011 | | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.13 | | 0.055 | 0.033 | | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.055 | U | 0.055 | 0.011 | | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.1 | U | 1.1 | 0.055 | | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.055 | U | 0.055 | 0.033 | | 1 |
| 12971 | Pyrene | 129-00-0 | 0.055 | U | 0.055 | 0.011 | | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
di-n-octylphthalate

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/l | | ug/l | ug/l | ug/l | |
| 10591 | Aroclor 5432 | 63496-31-1 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | Aroclor 5442 | 12642-23-8 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | Aroclor 5460 | 11126-42-4 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | PCB-1016 | 12674-11-2 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | PCB-1221 | 11104-28-2 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | PCB-1232 | 11141-16-5 | 0.43 | U | 0.43 | 0.17 | | 1 |
| 10591 | PCB-1242 | 53469-21-9 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | PCB-1248 | 12672-29-6 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | PCB-1254 | 11097-69-1 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | PCB-1260 | 11096-82-5 | 0.43 | U | 0.43 | 0.13 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020349**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:15 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

EB411 SDG#: PH029-05EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10591 | PCB-1262 | 37324-23-5 | 0.43 | U | 0.43 | 0.17 | | 1 |
| 10591 | PCB-1268 | 11100-14-4 | 0.43 | U | 0.43 | 0.14 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.57 | U | 0.57 | 0.095 | | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.57 | U | 0.57 | 0.095 | | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.57 | U | 0.57 | 0.095 | | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.57 | U | 0.57 | 0.095 | | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.57 | U | 0.57 | 0.095 | | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0743 | | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0035 | | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 | U | 0.100 | 0.0083 | | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00036 | | 1 |
| 01750 | Calcium | 7440-70-2 | 0.131 | J | 0.400 | 0.0640 | | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0011 | | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 | U | 0.0100 | 0.00066 | | 1 |
| 07053 | Copper | 7440-50-8 | 0.0035 | J | 0.0200 | 0.0021 | | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 | U | 0.400 | 0.0333 | | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 | U | 0.0300 | 0.0051 | | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 | U | 0.0400 | 0.0060 | | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 | U | 0.200 | 0.0606 | | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0012 | J | 0.0100 | 0.00083 | | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0143 | J | 0.0200 | 0.0029 | | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 | U | 0.0200 | 0.0011 | | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 | U | 0.200 | 0.0052 | | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 | U | 1.00 | 0.145 | | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 | U | 2.00 | 0.167 | | 1 |
| 07069 | Tin | 7440-31-5 | 0.0024 | J | 0.0400 | 0.0022 | | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 | U | 0.0200 | 0.0017 | | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 | U | 0.0100 | 0.0013 | | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0041 | J | 0.0400 | 0.0020 | | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 | U | 0.100 | 0.0092 | | 1 |
| | **SW-846 6020A** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 | U | 0.0040 | 0.00050 | | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 | U | 0.0010 | 0.00010 | | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 | U | 0.0020 | 0.00022 | | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 | U | 0.0010 | 0.00015 | | 1 |
| | **SW-846 7470A** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 | U | 0.00020 | 0.000070 | | 1 |

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**Sample Description: EB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020349**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:15 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

EB411 SDG#: PH029-05EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 7199** | | ug/l | ug/l | ug/l | ug/l | |
| 06467 | 2b Chromium VI by EPA 7199 | 18540-29-9 | 10.0 U | 10.0 | 5.0 | | 1 |
| | **SW-846 9040C** | | Std. Units | Std. Units | Std. Units | Std. Units | |
| 12152 | 28b. pH (9040B and 9040C) | n.a. | 7.1 | 0.010 | 0.010 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020349**
**LLI Group # 1382496**
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**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:15 by VC

Submitted: 04/12/2013 09:25
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB411 SDG#: PH029-05EB

| CAT No. | Analysis Name | | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | | **EPA 1613B** | | pg/l | | pg/l | pg/l | pg/l | |
| 10915 | 2378-TCDD | | 1746-01-6 | 1.95 | U | 1.95 | 0.220 | | 1 |
| 10915 | 12378-PeCDD | | 40321-76-4 | 1.24 | JBQ | 9.74 | 0.256 | | 1 |
| 10915 | 123478-HxCDD | | 39227-28-6 | 0.322 | JQ | 9.74 | 0.162 | | 1 |
| 10915 | 123678-HxCDD | | 57653-85-7 | 0.314 | JBQ | 9.74 | 0.175 | | 1 |
| 10915 | 123789-HxCDD | | 19408-74-3 | 0.463 | JB | 9.74 | 0.172 | | 1 |
| 10915 | 1234678-HpCDD | | 35822-46-9 | 0.314 | JBQ | 9.74 | 0.183 | | 1 |
| 10915 | OCDD | | 3268-87-9 | 1.04 | JBQ | 19.5 | 0.406 | | 1 |
| 10915 | 2378-TCDF | | 51207-31-9 | 1.95 | U | 1.95 | 0.192 | | 1 |
| 10915 | 12378-PeCDF | | 57117-41-6 | 0.820 | JBQ | 9.74 | 0.160 | | 1 |
| 10915 | 23478-PeCDF | | 57117-31-4 | 0.492 | JBQ | 9.74 | 0.145 | | 1 |
| 10915 | 123478-HxCDF | | 70648-26-9 | 0.378 | JB | 9.74 | 0.102 | | 1 |
| 10915 | 123678-HxCDF | | 57117-44-9 | 0.354 | JBQ | 9.74 | 0.0994 | | 1 |
| 10915 | 123789-HxCDF | | 72918-21-9 | 0.272 | JBQ | 9.74 | 0.0946 | | 1 |
| 10915 | 234678-HxCDF | | 60851-34-5 | 0.202 | JBQ | 9.74 | 0.0978 | | 1 |
| 10915 | 1234678-HpCDF | | 67562-39-4 | 0.443 | JBQ | 9.74 | 0.0883 | | 1 |
| 10915 | 1234789-HpCDF | | 55673-89-7 | 0.321 | JB | 9.74 | 0.102 | | 1 |
| 10915 | OCDF | | 39001-02-0 | 0.655 | JB | 19.5 | 0.292 | | 1 |
| **Toxic Equivalents** | | **EPA 1613B** | | pg/l | | pg/l | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | | n.a. | 0.0875 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 76 | 25 - 164 |
| 13C12-12378-PeCDD | 81 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 79 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 73 | 24 - 169 |
| 13C12-12378-PeCDF | 78 | 24 - 185 |
| 13C12-23478-PeCDF | 77 | 21 - 178 |
| 13C12-123478-HxCDF | 78 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 86 | 29 - 147 |
| 13C12-1234678-HpCDF | 74 | 28 - 143 |
| 13C12-1234789-HpCDF | 71 | 26 - 138 |
| 13C12-OCDF | 71 | 17 - 157 |

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020349**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:15 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

EB411 SDG#: PH029-05EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020349**
**LLI Group # 1382496**
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**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:15 by VC

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

EB411 SDG#: PH029-05EB

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13107WAH026 | 04/28/2013 22:53 | Holly Berry | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13107WAH026 | 04/18/2013 01:30 | Karen L Beyer | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13106A20A | 04/16/2013 11:46 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13106A20A | 04/16/2013 11:46 | Catherine J Schwarz | 1 |
| 10591 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 131060007A | 04/19/2013 21:18 | Monica M Souders | 1 |
| 11121 | PCB Waters Update IV Ext | SW-846 3510C | 1 | 131060007A | 04/16/2013 16:30 | Seth A Farrier | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131030007A | 04/16/2013 01:49 | Heather E Williams | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 131030007A | 04/14/2013 15:30 | Elaine F Stoltzfus | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106001 | 04/18/2013 22:51 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13106001 | 04/17/2013 08:30 | Ginelle L McQuaid | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |

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**Sample Description: EB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020349**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:15 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

EB411 SDG#: PH029-05EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10144 | Zirconium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:54 | John P Hook | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 131080639002B | 04/23/2013 22:22 | David K Beck | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 131080639002A | 04/23/2013 22:22 | David K Beck | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 131080639002A | 04/23/2013 22:22 | David K Beck | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 131080639002A | 04/23/2013 22:22 | David K Beck | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 2 | 131055713004 | 04/18/2013 11:13 | Parker D Lindstrom | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 131080635001 | 04/19/2013 10:15 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 131080639002 | 04/19/2013 10:15 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131055713004 | 04/17/2013 16:35 | Nelli S Markaryan | 1 |
| 06467 | 2b Chromium VI by EPA 7199 | SW-846 7199 | 1 | 13102621301B | 04/12/2013 12:41 | William L Hamaker Jr | 1 |
| 12152 | 28b. pH (9040B and 9040C) | SW-846 9040C | 1 | 13102007106A | 04/13/2013 07:07 | Clayton C Litchmore | 1 |

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**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

FB411 SDG#: PH029-06FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 1 | | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 10 | | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 1 | | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 1 | | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | | 1 |

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**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB411 SDG#: PH029-06FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 2 | J | 5 | 2 | | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.7 | | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.8 | | 1 |
| **GC/MS Volatiles** | **SW-846 8260B SIM** | | ug/l | | ug/l | ug/l | ug/l | |
| 00527 | 1,4-Dioxane | 123-91-1 | 2.0 | U | 2.0 | 0.5 | | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270D** | | ug/l | | ug/l | ug/l | ug/l | |
| 10461 | Acenaphthene | 83-32-9 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Acenaphthylene | 208-96-8 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Aniline | 62-53-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Anthracene | 120-12-7 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzidine | 92-87-5 | 61 | U | 61 | 20 | | 1 |
| 10461 | Benzo(a)anthracene | 56-55-3 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(a)pyrene | 50-32-8 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(b)fluoranthene | 205-99-2 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(g,h,i)perylene | 191-24-2 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(k)fluoranthene | 207-08-9 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzoic acid | 65-85-0 | 15 | U | 15 | 6 | | 1 |
| 10461 | Benzyl alcohol | 100-51-6 | 15 | U | 15 | 5 | | 1 |
| 10461 | 1,1'-Biphenyl | 92-52-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Bromophenyl-phenylether | 101-55-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Butylbenzylphthalate | 85-68-7 | 5 | U | 5 | 2 | | 1 |
| 10461 | Di-n-butylphthalate | 84-74-2 | 5 | U | 5 | 2 | | 1 |
| 10461 | Carbazole | 86-74-8 | 1 | U | 1 | 0.5 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

FB411 SDG#: PH029-06FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | ug/l | | ug/l | ug/l | ug/l | |
| 10461 | 4-Chloro-3-methylphenol | 59-50-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Chloroaniline | 106-47-8 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Chloroethoxy)methane | 111-91-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Chloroethyl)ether | 111-44-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 1 | U | 1 | 0.5 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10461 | 2-Chloronaphthalene | 91-58-7 | 1 | U | 1 | 0.4 | | 1 |
| 10461 | 2-Chlorophenol | 95-57-8 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Chlorophenyl-phenylether | 7005-72-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Chrysene | 218-01-9 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Dibenz(a,h)anthracene | 53-70-3 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Dibenzofuran | 132-64-9 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1,2-Dichlorobenzene | 95-50-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1,3-Dichlorobenzene | 541-73-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1,4-Dichlorobenzene | 106-46-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 3,3'-Dichlorobenzidine | 91-94-1 | 5 | U | 5 | 2 | | 1 |
| 10461 | 2,4-Dichlorophenol | 120-83-2 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2,6-Dichlorophenol | 87-65-0 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Diethylphthalate | 84-66-2 | 5 | U | 5 | 2 | | 1 |
| 10461 | 2,4-Dimethylphenol | 105-67-9 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 3,5-Dimethylphenol | 108-68-9 | 10 | U | 10 | 3 | | 1 |
| 10461 | Dimethylphthalate | 131-11-3 | 5 | U | 5 | 2 | | 1 |
| 10461 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 15 | U | 15 | 5 | | 1 |
| 10461 | 2,4-Dinitrophenol | 51-28-5 | 31 | U | 31 | 10 | | 1 |
| 10461 | 1,2-Diphenylhydrazine | 122-66-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Ethylhexyl)phthalate | 117-81-7 | 5 | U | 5 | 2 | | 1 |
| 10461 | Fluoranthene | 206-44-0 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Fluorene | 86-73-7 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Hexachlorobenzene | 118-74-1 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Hexachlorobutadiene | 87-68-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Hexachlorocyclopentadiene | 77-47-4 | 15 | U | 15 | 5 | | 1 |
| 10461 | Hexachloroethane | 67-72-1 | 5 | U | 5 | 1 | | 1 |
| 10461 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Isophorone | 78-59-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1-Methylnaphthalene | 90-12-0 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | 2-Methylnaphthalene | 91-57-6 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | 2-Methylphenol | 95-48-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Methylphenol | 106-44-5 | 1 | U | 1 | 0.5 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10461 | Naphthalene | 91-20-3 | 0.2 | J | 0.5 | 0.1 | | 1 |
| 10461 | NDPA as diphenylamine | n.a. | 5 | U | 5 | 2 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10461 | 2-Nitroaniline | 88-74-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 3-Nitroaniline | 99-09-2 | 1 | U | 1 | 0.5 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

FB411 SDG#: PH029-06FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | ug/l | | ug/l | ug/l | ug/l | |
| 10461 | 4-Nitroaniline | 100-01-6 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Nitrobenzene | 98-95-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2-Nitrophenol | 88-75-5 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Nitrophenol | 100-02-7 | 31 | U | 31 | 10 | | 1 |
| 10461 | N-Nitrosodimethylamine | 62-75-9 | 5 | U | 5 | 2 | | 1 |
| 10461 | N-Nitroso-di-n-propylamine | 621-64-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | N-Nitrosodiphenylamine | 86-30-6 | 1 | U | 1 | 0.5 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10461 | Di-n-octylphthalate | 117-84-0 | 5 | U | 5 | 2 | | 1 |
| 10461 | Pentachlorophenol | 87-86-5 | 5 | U | 5 | 1 | | 1 |
| 10461 | Phenanthrene | 85-01-8 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Phenol | 108-95-2 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Pyrene | 129-00-0 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Pyridine | 110-86-1 | 5 | U | 5 | 2 | | 1 |
| 10461 | 1,2,4-Trichlorobenzene | 120-82-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2,4,5-Trichlorophenol | 95-95-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2,4,6-Trichlorophenol | 88-06-2 | 1 | U | 1 | 0.5 | | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Anthracene | 120-12-7 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.051 | | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.17 | J | 1.0 | 0.051 | | 1 |
| 12971 | Chrysene | 218-01-9 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.18 | J | 1.0 | 0.051 | | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.051 | | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.082 | J | 1.0 | 0.051 | | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Fluorene | 86-73-7 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.019 | J | 0.051 | 0.010 | | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.024 | J | 0.051 | 0.010 | | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.17 | | 0.051 | 0.031 | | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.051 | | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.051 | U | 0.051 | 0.031 | | 1 |
| 12971 | Pyrene | 129-00-0 | 0.051 | U | 0.051 | 0.010 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

FB411 SDG#: PH029-06FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| | di-n-octylphthalate | | | | | | | |
| | Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported. | | | | | | | |
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | | 1 |
| **Explosives** | **SW-846 8330A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10131 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 0.60 | U | 0.60 | 0.30 | 10000000 | 1 |
| 10131 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 1,3-Dinitrobenzene | 99-65-0 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4-Dinitrotoluene | 121-14-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,6-Dinitrotoluene | 606-20-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | HMX | 2691-41-0 | 2.0 | U | 2.0 | 0.65 | 10000000 | 1 |
| 10131 | Nitrobenzene | 98-95-3 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | Nitroglycerin | 55-63-0 | 15 | U | 15 | 5.2 | 10000000 | 1 |
| 10131 | 2-Nitrotoluene | 88-72-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 3-Nitrotoluene | 99-08-1 | 1.2 | U | 1.2 | 0.40 | 10000000 | 1 |
| 10131 | 4-Nitrotoluene | 99-99-0 | 1.2 | U | 1.2 | 0.60 | 10000000 | 1 |
| 10131 | PETN | 78-11-5 | 18 | U | 18 | 6.0 | 10000000 | 1 |
| 10131 | RDX | 121-82-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | Tetryl | 479-45-8 | 0.60 | U | 0.60 | 0.40 | 10000000 | 1 |
| 10131 | 1,3,5-Trinitrobenzene | 99-35-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4,6-Trinitrotoluene | 118-96-7 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| | The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials. | | | | | | | |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

FB411 SDG#: PH029-06FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | ug/l | | ug/l | ug/l | ug/l | |
| 10407 | 2,4-D | 94-75-7 | 0.49 | U | 0.49 | 0.16 | | 1 |
| 10407 | Dalapon | 75-99-0 | 1.2 | U | 1.2 | 0.25 | | 1 |
| 10407 | 2,4-DB | 94-82-6 | 0.98 | U | 0.98 | 0.29 | | 1 |
| 10407 | Dicamba | 1918-00-9 | 0.29 | U | 0.29 | 0.078 | | 1 |
| 10407 | Dinoseb | 88-85-7 | 0.49 | U | 0.49 | 0.12 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10407 | 2,4-DP (Dichlorprop) | 120-36-5 | 0.49 | U | 0.49 | 0.16 | | 1 |
| 10407 | MCPA | 94-74-6 | 200 | U | 200 | 49 | | 1 |
| 10407 | MCPP | 93-65-2 | 200 | U | 200 | 49 | | 1 |
| 10407 | 2,4,5-T | 93-76-5 | 0.049 | U | 0.049 | 0.015 | | 1 |
| 10407 | 2,4,5-TP | 93-72-1 | 0.049 | U | 0.049 | 0.0098 | | 1 |
| **HPLC Organics** | **SW-846 8315A** | | ug/l | | ug/l | ug/l | ug/l | |
| 04144 | 19b Formaldehyde 8315A | 50-00-0 | 50 | U | 50 | 30 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/l | | ug/l | ug/l | ug/l | |
| 06386 | 6b Perchlorate (Method 6850) | 14797-73-0 | 1.0 | U | 1.0 | 0.20 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/l | | ug/l | ug/l | ug/l | |
| 10589 | Aldrin | 309-00-2 | 0.0081 | U | 0.0081 | 0.0016 | | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0081 | U | 0.0081 | 0.0024 | | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0081 | U | 0.0081 | 0.0028 | | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0081 | U | 0.0081 | 0.0016 | | 1 |
| 10589 | Chlordane | 57-74-9 | 0.40 | U | 0.40 | 0.13 | | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.016 | U | 0.016 | 0.0040 | | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.016 | U | 0.016 | 0.0040 | | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.016 | U | 0.016 | 0.0042 | | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0081 | U | 0.0081 | 0.0028 | | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.016 | U | 0.016 | 0.0043 | | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0081 | U | 0.0081 | 0.0035 | | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.016 | U | 0.016 | 0.012 | | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.016 | U | 0.016 | 0.0047 | | 1 |
| 10589 | Endrin | 72-20-8 | 0.016 | U | 0.016 | 0.0066 | | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.081 | U | 0.081 | 0.016 | | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.016 | U | 0.016 | 0.0040 | | 1 |
| 10589 | Heptachlor | 76-44-8 | 0.0081 | U | 0.0081 | 0.0016 | | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0081 | U | 0.0081 | 0.0019 | | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.081 | U | 0.081 | 0.024 | | 1 |
| 10589 | Mirex | 2385-85-5 | 0.20 | U | 0.20 | 0.069 | | 1 |
| 10589 | Toxaphene | 8001-35-2 | 2.4 | U | 2.4 | 0.81 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/l | | ug/l | ug/l | ug/l | |
| 10591 | Aroclor 5432 | 63496-31-1 | 0.40 | U | 0.40 | 0.081 | | 1 |
| 10591 | Aroclor 5442 | 12642-23-8 | 0.40 | U | 0.40 | 0.081 | | 1 |
| 10591 | Aroclor 5460 | 11126-42-4 | 0.40 | U | 0.40 | 0.081 | | 1 |
| 10591 | PCB-1016 | 12674-11-2 | 0.40 | U | 0.40 | 0.081 | | 1 |
| 10591 | PCB-1221 | 11104-28-2 | 0.40 | U | 0.40 | 0.081 | | 1 |
| 10591 | PCB-1232 | 11141-16-5 | 0.40 | U | 0.40 | 0.16 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

FB411 SDG#: PH029-06FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10591 | PCB-1242 | 53469-21-9 | 0.40 | U | 0.40 | 0.081 | | 1 |
| 10591 | PCB-1248 | 12672-29-6 | 0.40 | U | 0.40 | 0.081 | | 1 |
| 10591 | PCB-1254 | 11097-69-1 | 0.40 | U | 0.40 | 0.081 | | 1 |
| 10591 | PCB-1260 | 11096-82-5 | 0.40 | U | 0.40 | 0.12 | | 1 |
| 10591 | PCB-1262 | 37324-23-5 | 0.40 | U | 0.40 | 0.16 | | 1 |
| 10591 | PCB-1268 | 11100-14-4 | 0.40 | U | 0.40 | 0.13 | | 1 |
| **GC Miscellaneous** | **SW-846 8015C** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10603 | Ethanol | 64-17-5 | 1,000 | U | 1,000 | 200 | | 1 |
| 10603 | Isopropanol | 67-63-0 | 1,000 | U | 1,000 | 200 | | 1 |
| 10603 | Methanol | 67-56-1 | 1,000 | U | 1,000 | 200 | | 1 |
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 12926 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Propylene glycol | 57-55-6 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 8.0 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 10319 | m-Terphenyl | 92-06-8 | 0.0048 | U | 0.0048 | 0.0019 | | 1 |
| 10319 | o-Terphenyl | 84-15-1 | 0.0048 | U | 0.0048 | 0.0019 | | 1 |
| 10319 | p-Terphenyl | 92-94-4 | 0.0048 | U | 0.0048 | 0.0019 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.57 | U | 0.57 | 0.095 | | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.57 | U | 0.57 | 0.095 | | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.57 | U | 0.57 | 0.095 | | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.57 | U | 0.57 | 0.095 | | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.57 | U | 0.57 | 0.095 | | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0743 | | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0035 | | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 | U | 0.100 | 0.0083 | | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00036 | | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 | U | 0.400 | 0.0640 | | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0011 | | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 | U | 0.0100 | 0.00066 | | 1 |
| 07053 | Copper | 7440-50-8 | 0.0036 | J | 0.0200 | 0.0021 | | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 | U | 0.400 | 0.0333 | | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 | U | 0.0300 | 0.0051 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

FB411 SDG#: PH029-06FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0060 | | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0606 | | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0036 J | 0.0200 | 0.0029 | | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0011 | | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0052 | | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.145 | | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0022 | | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0013 | | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0092 | | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00010 | | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00022 | | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000070 | | 1 |
| **Wet Chemistry** | **EPA 300.0** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 01505 | 1b Anions by 300.0-Bromide | 24959-67-9 | 0.50 U | 0.50 | 0.40 | | 1 |
| 00224 | 1b Anions by 300.0-Chloride | 16887-00-6 | 0.40 U | 0.40 | 0.20 | | 1 |
| 01504 | 1b Anions by 300.0-Fluoride | 16984-48-8 | 0.10 U | 0.10 | 0.080 | | 1 |
| 00368 | 1b Anions by 300.0-Nitrate | 14797-55-8 | 0.10 U | 0.10 | 0.050 | | 1 |
| 01506 | 1b Anions by 300.0-Nitrite | 14797-65-0 | 0.10 U | 0.10 | 0.080 | | 1 |
| 07322 | 1b Anions by 300.0-Orthophosph | 7723-14-0 | 0.50 U | 0.50 | 0.20 | | 1 |
| 00228 | 1b Anions by 300.0-Sulfate | 14808-79-8 | 1.0 U | 1.0 | 0.30 | | 1 |
| | **SW-846 7199** | | **ug/l** | **ug/l** | **ug/l** | **ug/l** | |
| 06467 | 2b Chromium VI by EPA 7199 | 18540-29-9 | 10.0 U | 10.0 | 5.0 | | 1 |
| | **SW-846 9012B** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 08255 | 16b Cyanide by EPA 9012B | 57-12-5 | 0.010 U | 0.010 | 0.0050 | | 1 |
| | **EPA 350.3** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 12677 | 15b Ammonia by EPA 350.3 | 7664-41-7 | 0.050 J | 0.20 | 0.050 | | 1 |
| | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b. pH (9040B and 9040C) | n.a. | 7.5 | 0.010 | 0.010 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

FB411 SDG#: PH029-06FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.95 | U | 1.95 | 0.210 | | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 9.76 | U | 9.76 | 0.212 | | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 0.125 | J | 9.76 | 0.122 | | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.76 | U | 9.76 | 0.138 | | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 0.134 | JBQ | 9.76 | 0.131 | | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.402 | JBQ | 9.76 | 0.163 | | 1 |
| 10915 | OCDD | 3268-87-9 | 19.5 | U | 19.5 | 0.372 | | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.95 | U | 1.95 | 0.173 | | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.398 | JBQ | 9.76 | 0.138 | | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.316 | JBQ | 9.76 | 0.135 | | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.324 | JB | 9.76 | 0.0890 | | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.221 | JB | 9.76 | 0.0881 | | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.211 | JBQ | 9.76 | 0.0982 | | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.149 | JB | 9.76 | 0.0887 | | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.254 | JBQ | 9.76 | 0.0678 | | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 9.76 | U | 9.76 | 0.0836 | | 1 |
| 10915 | OCDF | 39001-02-0 | 0.840 | JBQ | 19.5 | 0.275 | | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0820 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 74 | 25 - 164 |
| 13C12-12378-PeCDD | 80 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 72 | 17 - 157 |
| 13C12-2378-TCDF | 75 | 24 - 169 |
| 13C12-12378-PeCDF | 79 | 24 - 185 |
| 13C12-23478-PeCDF | 78 | 21 - 178 |
| 13C12-123478-HxCDF | 79 | 26 - 152 |
| 13C12-123678-HxCDF | 78 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 75 | 29 - 147 |
| 13C12-1234678-HpCDF | 73 | 28 - 143 |
| 13C12-1234789-HpCDF | 70 | 26 - 138 |
| 13C12-OCDF | 65 | 17 - 157 |

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

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

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**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

FB411 SDG#: PH029-06FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB411 SDG#: PH029-06FB*

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y131141AA | 04/24/2013 12:38 | Angela D Sneeringer | 1 |
| 00527 | 13b 1,4-Dioxane by 8260B SIM | SW-846 8260B SIM | 1 | E131052AA | 04/15/2013 20:16 | Sara E Johnson | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | E131052AA | 04/15/2013 20:16 | Sara E Johnson | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 2 | Y131141AA | 04/24/2013 12:38 | Angela D Sneeringer | 1 |
| 10461 | 8b SVOCs by EPA 8270D | SW-846 8270D | 1 | 13107WAI026 | 04/23/2013 18:48 | Chad A Moline | 1 |
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13107WAH026 | 04/28/2013 23:20 | Holly Berry | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13107WAH026 | 04/18/2013 01:30 | Karen L Beyer | 1 |
| 11010 | 8270D BNA Extraction | SW-846 3510C | 1 | 13107WAI026 | 04/18/2013 01:30 | Karen L Beyer | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13106A20A | 04/16/2013 12:08 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13106A20A | 04/16/2013 12:08 | Catherine J Schwarz | 1 |
| 10131 | 18b Energetics by 8330A | SW-846 8330A | 1 | 131060031A | 04/18/2013 11:17 | James H Place | 1 |
| 04144 | 19b Formaldehyde 8315A | SW-846 8315A | 1 | 131020013A | 04/16/2013 17:20 | James H Place | 1 |
| 10407 | 24b Herbicides by EPA 8151A | SW-846 8151A | 1 | 131060002A | 04/17/2013 12:11 | Matthew S Listner | 1 |
| 06386 | 6b Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 131060040A | 04/17/2013 16:40 | Richard A Shober | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 131060008A | 04/19/2013 13:13 | Jamie L Brillhart | 1 |
| 10591 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 131060007A | 04/19/2013 21:37 | Monica M Souders | 1 |
| 11121 | PCB Waters Update IV Ext | SW-846 3510C | 1 | 131060007A | 04/16/2013 16:30 | Seth A Farrier | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 131060008A | 04/16/2013 16:30 | Seth A Farrier | 1 |
| 00816 | Water Sample Herbicide Extract | SW-846 8151A | 1 | 131060002A | 04/16/2013 11:10 | Katheryne V Sponheimer | 1 |
| 01013 | Formaldehyde Extraction | SW-846 8315A | 1 | 131020013A | 04/13/2013 01:45 | Olivia Arosemena | 1 |
| 11122 | Energetics Extraction | SW-846 8330 | 1 | 131060031A | 04/17/2013 12:30 | Edwin Ortiz | 1 |
| 10603 | 14b Alcohols by EPA 8015C | SW-846 8015C | 1 | 131080026A | 04/19/2013 04:02 | Elizabeth J Marin | 1 |
| 12926 | 20b Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 131130028A | 04/23/2013 22:54 | Tyler O Griffin | 1 |
| 10319 | 23b Terphenyls by 8015B | SW-846 8015B | 1 | 131080007A | 04/23/2013 20:17 | Glorines Suarez-Rivera | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131030007A | 04/16/2013 02:10 | Heather E Williams | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 131030007A | 04/14/2013 15:30 | Elaine F Stoltzfus | 1 |

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**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

FB411 SDG#: PH029-06FB*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10304 | Terphenyls water prep | SW-846 3510C | 1 | 131080007A | 04/18/2013 16:30 | Seth A Farrier | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106001 | 04/18/2013 23:48 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13106001 | 04/17/2013 08:30 | Ginelle L McQuaid | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 131080635001 | 04/23/2013 17:57 | John P Hook | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 131080639002B | 04/23/2013 22:24 | David K Beck | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 131080639002A | 04/23/2013 22:24 | David K Beck | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 131080639002A | 04/23/2013 22:24 | David K Beck | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 131080639002A | 04/23/2013 22:24 | David K Beck | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 2 | 131055713004 | 04/18/2013 11:15 | Parker D Lindstrom | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 131080635001 | 04/19/2013 10:15 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 131080639002 | 04/19/2013 10:15 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131055713004 | 04/17/2013 16:35 | Nelli S Markaryan | 1 |
| 01505 | 1b Anions by 300.0-Bromide | EPA 300.0 | 1 | 13102655901A | 04/12/2013 16:50 | Christopher D Meeks | 1 |
| 00224 | 1b Anions by 300.0-Chloride | EPA 300.0 | 1 | 13102655901A | 04/12/2013 16:50 | Christopher D Meeks | 1 |
| 01504 | 1b Anions by 300.0-Fluoride | EPA 300.0 | 1 | 13102655901A | 04/12/2013 16:50 | Christopher D Meeks | 1 |
| 00368 | 1b Anions by 300.0-Nitrate | EPA 300.0 | 1 | 13102655901A | 04/12/2013 16:50 | Christopher D Meeks | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041113 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7020350**
**LLI Group # 1382496**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/11/2013 15:00 by VC

Submitted: 04/12/2013 09:25
Reported: 05/03/2013 09:52

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

FB411 SDG#: PH029-06FB*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01506 | 1b Anions by 300.0-Nitrite | EPA 300.0 | 1 | 13102655901A | 04/13/2013 11:00 | Christopher D Meeks | 1 |
| 07322 | 1b Anions by 300.0-Orthophosph | EPA 300.0 | 1 | 13102655901A | 04/12/2013 16:50 | Christopher D Meeks | 1 |
| 00228 | 1b Anions by 300.0-Sulfate | EPA 300.0 | 1 | 13102655901A | 04/12/2013 16:50 | Christopher D Meeks | 1 |
| 06467 | 2b Chromium VI by EPA 7199 | SW-846 7199 | 1 | 13102621301B | 04/12/2013 12:28 | William L Hamaker Jr | 1 |
| 08255 | 16b Cyanide by EPA 9012B | SW-846 9012B | 1 | 13107117102A | 04/18/2013 08:57 | K Robert Caulfeild-James | 1 |
| 08256 | Cyanide Water Distillation | SW-846 9012B | 1 | 13107117102A | 04/17/2013 11:30 | Nancy J Shoop | 1 |
| 12677 | 15b Ammonia by EPA 350.3 | EPA 350.3 | 1 | 13105008201A | 04/15/2013 22:33 | Michelle L Lalli | 1 |
| 12152 | 28b. pH (9040B and 9040C) | SW-846 9040C | 1 | 13102007106A | 04/13/2013 07:04 | Clayton C Litchmore | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: E131052AA | Sample number(s): 7020350 | | | | | | | | | |
| 1,4-Dioxane | 2.0 | U | 2.0 | 0.5 | ug/l | 116 | 119 | 80-123 | 2 | 30 |
| Batch number: Y131141AA | Sample number(s): 7020350 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 83 | 79 | 35-181 | 5 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 73 | 78 | 46-146 | 8 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 99 | 94 | 61-130 | 5 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.8 | ug/l | 101 | 102 | 66-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 100 | 101 | 77-121 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 100 | 100 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 104 | 104 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 1 | ug/l | 100 | 99 | 73-120 | 1 | 30 |
| Bromoform | 5 | U | 5. | 1 | ug/l | 99 | 98 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 1 | ug/l | 79 | 78 | 51-120 | 2 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 97 | 94 | 57-141 | 3 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 10 | ug/l | 90 | 85 | 75-120 | 5 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 103 | 73-130 | 1 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 74-124 | 0 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 101 | 103 | 80-120 | 2 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 74 | 74 | 68-121 | 0 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 1 | ug/l | 100 | 100 | 65-137 | 0 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.8 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| Chloroethane | 5 | U | 5. | 1 | ug/l | 81 | 79 | 60-120 | 3 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 106 | 103 | 52-127 | 3 | 30 |
| Chloroform | 5 | U | 5. | 0.8 | ug/l | 102 | 103 | 77-122 | 1 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 100 | 100 | 70-130 | 1 | 30 |
| Chloromethane | 5 | U | 5. | 1 | ug/l | 82 | 81 | 54-123 | 2 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 102 | 80-120 | 2 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 60 | 58 | 47-120 | 3 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 96 | 94 | 56-120 | 2 | 30 |
| Dibromochloromethane | 5 | U | 5. | 1 | ug/l | 101 | 101 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 1 | ug/l | 104 | 105 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 1 | ug/l | 105 | 105 | 80-120 | 0 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 105 | 104 | 80-120 | 0 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 2 | ug/l | 82 | 83 | 35-122 | 1 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 1 | ug/l | 102 | 103 | 79-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 1 | ug/l | 106 | 106 | 64-130 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.8 | ug/l | 90 | 91 | 76-124 | 0 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.8 | ug/l | 103 | 104 | 80-120 | 0 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.8 | ug/l | 100 | 100 | 80-120 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 5 | U | 5. | 1 | ug/l | 106 | 106 | 80-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 1 | ug/l | 96 | 98 | 67-124 | 2 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 78-120 | 1 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/l | 87 | 88 | 66-124 | 1 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.8 | ug/l | 103 | 102 | 66-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.8 | ug/l | 102 | 103 | 79-120 | 1 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 90 | 89 | 69-128 | 1 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 96 | 96 | 64-120 | 1 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 95 | 100 | 58-120 | 5 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 93 | 92 | 59-125 | 1 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.8 | ug/l | 98 | 98 | 65-120 | 0 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 104 | 106 | 77-120 | 2 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 104 | 104 | 77-121 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 1 | ug/l | 86 | 86 | 71-122 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 102 | 101 | 68-121 | 2 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 97 | 97 | 65-122 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 97 | 96 | 84-118 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 103 | 77-130 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 104 | 105 | 77-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/l | 103 | 103 | 79-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/l | 99 | 99 | 70-129 | 0 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.8 | ug/l | 103 | 105 | 79-120 | 2 | 30 |
| Toluene | 5 | U | 5. | 0.7 | ug/l | 101 | 102 | 79-120 | 1 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 98 | 102 | 67-120 | 4 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 65-120 | 2 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.8 | ug/l | 96 | 98 | 66-126 | 2 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.8 | ug/l | 105 | 104 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/l | 88 | 87 | 65-130 | 1 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 99 | 98 | 76-120 | 1 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 103 | 69-122 | 1 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 103 | 68-124 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 87 | 94 | 57-147 | 8 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/l | 85 | 87 | 63-120 | 3 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.8 | ug/l | 104 | 105 | 77-120 | 1 | 30 |
| o-Xylene | 5 | U | 5. | 0.8 | ug/l | 103 | 104 | 77-120 | 1 | 30 |
| Batch number: 13105SLA026 | Sample number(s): 7020345-7020348 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 120* | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 111 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 92 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 109 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 105 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 125 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 110 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 67-143 | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 120 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 87 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 105 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 71-120 | | |
| Batch number: 13107WAH026 | Sample number(s): 7020349-7020350 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 106 | 65-124 | 1 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 109 | 72-113 | 2 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 111 | 70-117 | 2 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 111 | 75-115 | 1 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 116 | 119 | 72-120 | 3 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 113 | 115 | 74-130 | 2 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 97 | 70-130 | 1 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 106 | 104 | 63-121 | 1 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 112 | 114 | 74-118 | 1 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 89 | 88 | 40-138 | 1 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 114 | 119 | 70-145 | 5 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 109 | 75-112 | 0 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 101 | 66-122 | 2 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 107 | 115 | 74-129 | 7 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 100 | 98 | 40-119 | 2 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.059 | J | 1.0 | 0.050 | ug/l | 107 | 84 | 70-143 | 24 | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 113 | 73-116 | 3 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 106 | 74-115 | 1 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 101 | 66-122 | 1 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 113 | 114 | 71-120 | 1 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 112 | 114 | 74-119 | 2 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 106 | 109 | 67-118 | 2 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 86 | 89 | 36-120 | 3 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 53* | 56* | 57-145 | 6 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 105 | 107 | 72-109 | 2 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 111 | 110 | 71-116 | 1 | 30 |
| Batch number: 13107WAI026 | Sample number(s): 7020350 | | | | | | | | | |
| Acenaphthene | 0.5 | U | 0.5 | 0.1 | ug/l | 105 | 104 | 79-110 | 1 | 30 |
| Acenaphthylene | 0.5 | U | 0.5 | 0.1 | ug/l | 110 | 109 | 84-125 | 2 | 30 |
| Aniline | 1 | U | 1. | 0.5 | ug/l | 68 | 66 | 50-107 | 4 | 30 |
| Anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 107 | 108 | 82-116 | 1 | 30 |
| Benzidine | 60 | U | 60. | 20 | ug/l | 49 | 41 | 28-80 | 17 | 30 |
| Benzo(a)anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 115 | 114 | 79-119 | 1 | 30 |
| Benzo(a)pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 113 | 114 | 82-116 | 1 | 30 |
| Benzo(b)fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 109 | 109 | 78-119 | 0 | 30 |
| Benzo(g,h,i)perylene | 0.5 | U | 0.5 | 0.1 | ug/l | 114 | 114 | 81-121 | 0 | 30 |
| Benzo(k)fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 107 | 108 | 81-122 | 1 | 30 |
| Benzoic acid | 15 | U | 15. | 6 | ug/l | 15 | 22 | 10-69 | 37* | 30 |
| Benzyl alcohol | 15 | U | 15. | 5 | ug/l | 92 | 94 | 60-106 | 2 | 30 |
| 1,1'-Biphenyl | 1 | U | 1. | 0.5 | ug/l | 100 | 98 | 75-107 | 2 | 30 |
| 4-Bromophenyl-phenylether | 1 | U | 1. | 0.5 | ug/l | 104 | 103 | 75-115 | 1 | 30 |
| Butylbenzylphthalate | 5 | U | 5. | 2 | ug/l | 110 | 111 | 77-115 | 1 | 30 |
| Di-n-butylphthalate | 5 | U | 5. | 2 | ug/l | 104 | 106 | 80-115 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbazole | 1 | U | 1. | 0.5 | ug/l | 107 | 107 | 81-114 | 0 | 30 |
| 4-Chloro-3-methylphenol | 1 | U | 1. | 0.5 | ug/l | 102 | 102 | 77-119 | 0 | 30 |
| 4-Chloroaniline | 1 | U | 1. | 0.5 | ug/l | 76 | 75 | 43-110 | 2 | 30 |
| bis(2-Chloroethoxy)methane | 1 | U | 1. | 0.5 | ug/l | 99 | 98 | 76-112 | 0 | 30 |
| bis(2-Chloroethyl)ether | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 73-112 | 1 | 30 |
| bis(2-Chloroisopropyl)ether | 1 | U | 1. | 0.5 | ug/l | 99 | 98 | 60-115 | 1 | 30 |
| 2-Chloronaphthalene | 1 | U | 1. | 0.4 | ug/l | 104 | 103 | 56-135 | 1 | 30 |
| 2-Chlorophenol | 1 | U | 1. | 0.5 | ug/l | 101 | 102 | 76-111 | 1 | 30 |
| 4-Chlorophenyl-phenylether | 1 | U | 1. | 0.5 | ug/l | 101 | 99 | 77-114 | 2 | 30 |
| Chrysene | 0.5 | U | 0.5 | 0.1 | ug/l | 111 | 109 | 76-116 | 2 | 30 |
| Dibenz(a,h)anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 118 | 118 | 83-124 | 0 | 30 |
| Dibenzofuran | 1 | U | 1. | 0.5 | ug/l | 103 | 102 | 81-110 | 1 | 30 |
| 1,2-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 97 | 97 | 65-107 | 0 | 30 |
| 1,3-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 95 | 95 | 61-111 | 0 | 30 |
| 1,4-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 95 | 95 | 61-109 | 0 | 30 |
| 3,3'-Dichlorobenzidine | 5 | U | 5. | 2 | ug/l | 97 | 96 | 47-108 | 1 | 30 |
| 2,4-Dichlorophenol | 1 | U | 1. | 0.5 | ug/l | 101 | 102 | 84-114 | 1 | 30 |
| 2,6-Dichlorophenol | 1 | U | 1. | 0.5 | ug/l | 102 | 104 | 80-116 | 2 | 30 |
| Diethylphthalate | 5 | U | 5. | 2 | ug/l | 101 | 101 | 74-115 | 0 | 30 |
| 2,4-Dimethylphenol | 1 | U | 1. | 0.5 | ug/l | 100 | 101 | 78-117 | 1 | 30 |
| 3,5-Dimethylphenol | 10 | U | 10. | 3 | ug/l | | | | | |
| Dimethylphthalate | 5 | U | 5. | 2 | ug/l | 94 | 97 | 50-127 | 3 | 30 |
| 4,6-Dinitro-2-methylphenol | 15 | U | 15. | 5 | ug/l | 95 | 100 | 76-128 | 4 | 30 |
| 2,4-Dinitrophenol | 30 | U | 30. | 10 | ug/l | 84 | 90 | 45-146 | 7 | 30 |
| 1,2-Diphenylhydrazine | 1 | U | 1. | 0.5 | ug/l | 105 | 106 | 68-127 | 0 | 30 |
| bis(2-Ethylhexyl)phthalate | 5 | U | 5. | 2 | ug/l | 113 | 114 | 78-117 | 1 | 30 |
| Fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 108 | 109 | 81-121 | 1 | 30 |
| Fluorene | 0.5 | U | 0.5 | 0.1 | ug/l | 104 | 104 | 80-114 | 0 | 30 |
| Hexachlorobenzene | 0.5 | U | 0.5 | 0.1 | ug/l | 100 | 102 | 75-119 | 2 | 30 |
| Hexachlorobutadiene | 1 | U | 1. | 0.5 | ug/l | 95 | 93 | 61-115 | 2 | 30 |
| Hexachlorocyclopentadiene | 15 | U | 15. | 5 | ug/l | 83 | 87 | 30-124 | 4 | 30 |
| Hexachloroethane | 5 | U | 5. | 1 | ug/l | 90 | 90 | 55-109 | 0 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 116 | 116 | 83-121 | 0 | 30 |
| Isophorone | 1 | U | 1. | 0.5 | ug/l | 101 | 102 | 74-117 | 0 | 30 |
| 1-Methylnaphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 104 | 104 | 79-111 | 0 | 30 |
| 2-Methylnaphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 95 | 95 | 80-115 | 0 | 30 |
| 2-Methylphenol | 1 | U | 1. | 0.5 | ug/l | 95 | 97 | 65-115 | 2 | 30 |
| 4-Methylphenol | 1 | U | 1. | 0.5 | ug/l | 95 | 96 | 54-112 | 1 | 30 |
| Naphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 97 | 96 | 75-108 | 0 | 30 |
| NDPA as diphenylamine | 5 | U | 5. | 2 | ug/l | 104 | 104 | 70-130 | 1 | 30 |
| 2-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 112 | 114 | 84-122 | 2 | 30 |
| 3-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 88 | 88 | 80-120 | 1 | 30 |
| 4-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 90 | 88 | 61-110 | 3 | 30 |
| Nitrobenzene | 1 | U | 1. | 0.5 | ug/l | 101 | 102 | 72-116 | 0 | 30 |
| 2-Nitrophenol | 1 | U | 1. | 0.5 | ug/l | 105 | 111 | 84-118 | 5 | 30 |
| 4-Nitrophenol | 30 | U | 30. | 10 | ug/l | 78* | 82* | 13-71 | 5 | 30 |
| N-Nitroso-di-n-propylamine | 1 | U | 1. | 0.5 | ug/l | 101 | 100 | 69-110 | 0 | 30 |
| N-Nitrosodimethylamine | 5 | U | 5. | 2 | ug/l | 78 | 79 | 37-83 | 1 | 30 |
| N-Nitrosodiphenylamine | 1 | U | 1. | 0.5 | ug/l | 104 | 104 | 80-115 | 1 | 30 |
| Di-n-octylphthalate | 5 | U | 5. | 2 | ug/l | 110 | 112 | 72-129 | 2 | 30 |
| Pentachlorophenol | 5 | U | 5. | 1 | ug/l | 101 | 103 | 55-131 | 2 | 30 |
| Phenanthrene | 0.5 | U | 0.5 | 0.1 | ug/l | 96 | 96 | 76-113 | 0 | 30 |
| Phenol | 1 | U | 1. | 0.5 | ug/l | 64 | 64 | 26-68 | 0 | 30 |
| Pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 104 | 103 | 81-112 | 1 | 30 |
| Pyridine | 5 | U | 5. | 2 | ug/l | 79 | 68 | 13-97 | 14 | 30 |
| 1,2,4-Trichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 97 | 96 | 71-112 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 1 | U | 1. | 0.5 | ug/l | 106 | 107 | 80-114 | 0 | 30 |
| 2,4,6-Trichlorophenol | 1 | U | 1. | 0.5 | ug/l | 110 | 111 | 84-119 | 1 | 30 |
| Batch number: 13106A20A | Sample number(s): 7020349-7020350 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 99 | 98 | 75-135 | 2 | 30 |
| Batch number: 131060031A | Sample number(s): 7020350 | | | | | | | | | |
| 4-Amino-2,6-Dinitrotoluene | 0.60 | U | 0.60 | 0.30 | ug/l | 95 | 107 | 80-120 | 12 | 30 |
| 2-Amino-4,6-Dinitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 64* | 72* | 74-104 | 12 | 30 |
| 2,6-Diamino-4-nitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 97 | 96 | 50-122 | 1 | 30 |
| 2,4-Diamino-6-nitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 96 | 95 | 50-122 | 1 | 30 |
| 1,3-Dinitrobenzene | 0.60 | U | 0.60 | 0.20 | ug/l | 75* | 84 | 76-116 | 12 | 30 |
| 2,4-Dinitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 67* | 76 | 76-104 | 13 | 30 |
| 2,6-Dinitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 88 | 103 | 79-114 | 16 | 30 |
| HMX | 2.0 | U | 2.0 | 0.65 | ug/l | 66* | 76 | 73-104 | 14 | 30 |
| Nitrobenzene | 0.60 | U | 0.60 | 0.20 | ug/l | 71 | 80 | 71-111 | 11 | 30 |
| Nitroglycerin | 15 | U | 15. | 5.2 | ug/l | 68* | 78* | 83-104 | 14 | 30 |
| 2-Nitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 71* | 80 | 78-102 | 12 | 30 |
| 3-Nitrotoluene | 1.2 | U | 1.2 | 0.40 | ug/l | 72* | 82 | 81-107 | 13 | 30 |
| 4-Nitrotoluene | 1.2 | U | 1.2 | 0.60 | ug/l | 75* | 84 | 76-105 | 12 | 30 |
| PETN | 18 | U | 18. | 6.0 | ug/l | 74* | 86* | 88-128 | 14 | 30 |
| RDX | 0.60 | U | 0.60 | 0.20 | ug/l | 72* | 82 | 74-107 | 12 | 30 |
| Tetryl | 0.60 | U | 0.60 | 0.40 | ug/l | 72 | 84 | 31-148 | 15 | 30 |
| 1,3,5-Trinitrobenzene | 0.60 | U | 0.60 | 0.20 | ug/l | 73* | 84 | 80-111 | 13 | 30 |
| 2,4,6-Trinitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 71* | 82 | 76-109 | 14 | 30 |
| Batch number: 131020013A | Sample number(s): 7020350 | | | | | | | | | |
| 19b Formaldehyde 8315A | 50 | U | 50. | 30 | ug/l | 94 | 73 | 69-130 | 25 | 30 |
| Batch number: 131060002A | Sample number(s): 7020350 | | | | | | | | | |
| 2,4-D | 0.50 | U | 0.50 | 0.16 | ug/l | 108 | 115 | 68-155 | 6 | 30 |
| Dalapon | 1.3 | U | 1.3 | 0.25 | ug/l | 91 | 87 | 39-115 | 4 | 30 |
| 2,4-DB | 1.0 | U | 1.0 | 0.30 | ug/l | 104 | 112 | 50-163 | 7 | 30 |
| Dicamba | 0.30 | U | 0.30 | 0.080 | ug/l | 98 | 99 | 55-163 | 1 | 30 |
| Dinoseb | 0.50 | U | 0.50 | 0.12 | ug/l | 101 | 95 | 16-163 | 6 | 30 |
| 2,4-DP (Dichlorprop) | 0.50 | U | 0.50 | 0.16 | ug/l | 103 | 105 | 89-162 | 2 | 30 |
| MCPA | 200 U | | 200. | 50 | ug/l | 107 | 109 | 68-154 | 2 | 30 |
| MCPP | 200 U | | 200. | 50 | ug/l | 107 | 114 | 46-173 | 6 | 30 |
| 2,4,5-T | 0.050 | U | 0.050 | 0.015 | ug/l | 107 | 112 | 55-169 | 4 | 30 |
| 2,4,5-TP | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 100 | 58-155 | 2 | 30 |
| Batch number: 131060040A | Sample number(s): 7020350 | | | | | | | | | |
| 6b Perchlorate (Method 6850) | 1.0 | U | 1.0 | 0.20 | ug/l | 100 | | 85-115 | | |
| Batch number: 131050020A | Sample number(s): 7020345-7020348 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 70 | 75 | 36-106 | 6 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 84 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 105 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131060007A | Sample number(s): 7020349-7020350 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 60 | 59 | 35-84 | 2 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 85 | 73 | 69-120 | 16 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 89 | 82 | 69-128 | 8 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 131060008A | Sample number(s): 7020350 | | | | | | | | | |
| Aldrin | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 69 | 75 | 55-126 | 7 | 30 |
| Alpha BHC | 0.0080 | U | 0.0080 | 0.0024 | ug/l | 88 | 99 | 63-132 | 11 | 30 |
| Beta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 84 | 93 | 63-132 | 10 | 30 |
| Gamma BHC - Lindane | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 88 | 99 | 68-128 | 12 | 30 |
| Chlordane | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| p,p-DDD | 0.016 | U | 0.016 | 0.0040 | ug/l | 102 | 106 | 62-143 | 3 | 30 |
| p,p-DDE | 0.016 | U | 0.016 | 0.0040 | ug/l | 91 | 95 | 56-137 | 5 | 30 |
| p,p-DDT | 0.016 | U | 0.016 | 0.0042 | ug/l | 90 | 97 | 45-134 | 8 | 30 |
| Delta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 88 | 98 | 63-131 | 11 | 30 |
| Dieldrin | 0.016 | U | 0.016 | 0.0042 | ug/l | 91 | 98 | 65-135 | 8 | 30 |
| Endosulfan I | 0.0080 | U | 0.0080 | 0.0034 | ug/l | 89 | 95 | 48-124 | 7 | 30 |
| Endosulfan II | 0.016 | U | 0.016 | 0.012 | ug/l | 89 | 93 | 53-123 | 5 | 30 |
| Endosulfan Sulfate | 0.016 | U | 0.016 | 0.0046 | ug/l | 85 | 92 | 60-129 | 7 | 30 |
| Endrin | 0.016 | U | 0.016 | 0.0065 | ug/l | 91 | 97 | 43-139 | 6 | 30 |
| Endrin Aldehyde | 0.080 | U | 0.080 | 0.016 | ug/l | 77 | 82 | 55-123 | 6 | 20 |
| Endrin Ketone | 0.016 | U | 0.016 | 0.0040 | ug/l | 85 | 90 | 51-138 | 5 | 30 |
| Heptachlor | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 76 | 84 | 57-126 | 11 | 30 |
| Heptachlor Epoxide | 0.0080 | U | 0.0080 | 0.0018 | ug/l | 85 | 94 | 65-128 | 10 | 30 |
| Methoxychlor | 0.080 | U | 0.080 | 0.024 | ug/l | 94 | 96 | 46-134 | 2 | 30 |
| Mirex | 0.20 | U | 0.20 | 0.068 | ug/l | | | | | |
| Toxaphene | 2.4 | U | 2.4 | 0.80 | ug/l | | | | | |
| Batch number: 131080026A | Sample number(s): 7020350 | | | | | | | | | |
| Ethanol | 1,000 U | | 1,000. | 200 | ug/l | 104 | | 78-116 | | |
| Isopropanol | 1,000 U | | 1,000. | 200 | ug/l | 102 | | 67-120 | | |
| Methanol | 1,000 U | | 1,000. | 200 | ug/l | 104 | | 79-120 | | |
| Batch number: 131130028A | Sample number(s): 7020350 | | | | | | | | | |
| Diethylene glycol | 10 | U | 10. | 8.0 | mg/l | 90 | | 61-123 | | |
| Ethylene glycol | 10 | U | 10. | 8.0 | mg/l | 97 | | 63-128 | | |
| Propylene glycol | 10 | U | 10. | 8.0 | mg/l | 94 | | 62-136 | | |
| Triethylene glycol | 10 | U | 10. | 8.0 | mg/l | 86 | | 66-129 | | |
| Batch number: 131030007A | Sample number(s): 7020349-7020350 | | | | | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| EFH (C12-C14) | 0.60 | U | 0.60 | 0.10 | mg/l | 87 | 86 | 70-130 | 2 | 30 |
| EFH (C15-C20) | 0.60 | U | 0.60 | 0.10 | mg/l | 95 | 95 | 70-130 | 0 | 30 |
| EFH (C21-C30) | 0.60 | U | 0.60 | 0.10 | mg/l | 94 | 95 | 70-130 | 2 | 30 |
| EFH (C30 - C40) | 0.60 | U | 0.60 | 0.10 | mg/l | 70 | 71 | 70-130 | 2 | 30 |
| EFH (C8-C11) | 0.60 | U | 0.60 | 0.10 | mg/l | 69* | 68* | 70-130 | 1 | 30 |
| Batch number: 131060013A | Sample number(s): 7020345-7020348 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 98 | 95 | 70-123 | 3 | 20 |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 113 | 110 | 75-128 | 3 | 20 |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 110 | 108 | 64-134 | 2 | 20 |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 79 | 70 | 65-128 | 12 | 20 |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 82 | 79 | 49-107 | 4 | 20 |
| Batch number: 131080007A | Sample number(s): 7020350 | | | | | | | | | |
| m-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 82 | 85 | 61-108 | 4 | 20 |
| o-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 83 | 87 | 75-125 | 4 | 20 |
| p-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 97 | 101 | 63-110 | 4 | 20 |
| Batch number: 131050637003 | Sample number(s): 7020345-7020348 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 103 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 113 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 104 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 98 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 107 | | 80-120 | | |
| Calcium | 4.23 | J | 20.0 | 4.02 | mg/kg | 105 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 107 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 105 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 100 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 109 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 102 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 107 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 109 | | 80-120 | | |
| Phosphorus | 14.4 | | 10.0 | 0.510 | mg/kg | 120 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.39 | J | 10.0 | 0.220 | mg/kg | 106 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 106 | | 80-120 | | |
| Zinc | 0.273 | J | 4.00 | 0.200 | mg/kg | 108 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 104 | | 80-120 | | |
| Batch number: 131050637003A | Sample number(s): 7020345-7020348 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 108 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0340 | mg/kg | 102 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 111 | | 80-120 | | |
| Batch number: 131050637003B | Sample number(s): 7020345-7020348 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 120 | | 80-120 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 131055713004 | Sample number(s): 7020349-7020350 | | | | | | | | |
| 3b Mercury 7470A | 0.00020 U | 0.00020 | 0.00007 0 | mg/l | 96 | 92 | 90-115 | 4 | 20 |
| Batch number: 131060638003 | Sample number(s): 7020345-7020348 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0103 | mg/kg | 100 | | 85-120 | | |
| Batch number: 131080635001 | Sample number(s): 7020349-7020350 | | | | | | | | |
| Aluminum | 0.400 U | 0.400 | 0.0743 | mg/l | 103 | 103 | 90-112 | 0 | 20 |
| Antimony | 0.0400 U | 0.0400 | 0.0035 | mg/l | 106 | 106 | 88-111 | 0 | 20 |
| Arsenic | 0.0400 U | 0.0400 | 0.0068 | mg/l | 99 | 97 | 90-113 | 3 | 20 |
| Barium | 0.0100 U | 0.0100 | 0.00033 | mg/l | 103 | 103 | 90-110 | 0 | 20 |
| Beryllium | 0.0100 U | 0.0100 | 0.00067 | mg/l | 101 | 101 | 88-110 | 1 | 20 |
| Boron | 0.100 U | 0.100 | 0.0083 | mg/l | 94 | 94 | 89-110 | 0 | 20 |
| Cadmium | 0.0100 U | 0.0100 | 0.00036 | mg/l | 102 | 102 | 90-112 | 1 | 20 |
| Calcium | 0.400 U | 0.400 | 0.0640 | mg/l | 103 | 103 | 90-110 | 1 | 20 |
| Chromium | 0.0300 U | 0.0300 | 0.0011 | mg/l | 103 | 102 | 90-110 | 1 | 20 |
| Cobalt | 0.0100 U | 0.0100 | 0.00066 | mg/l | 103 | 103 | 90-110 | 0 | 20 |
| Copper | 0.0024 J | 0.0200 | 0.0021 | mg/l | 103 | 102 | 90-112 | 0 | 20 |
| Iron | 0.400 U | 0.400 | 0.0333 | mg/l | 102 | 102 | 90-112 | 1 | 20 |
| Lead | 0.0300 U | 0.0300 | 0.0051 | mg/l | 104 | 104 | 88-110 | 1 | 20 |
| Lithium | 0.0400 U | 0.0400 | 0.0060 | mg/l | 101 | 102 | 90-110 | 1 | 20 |
| Magnesium | 0.200 U | 0.200 | 0.0606 | mg/l | 102 | 102 | 90-110 | 1 | 20 |
| Manganese | 0.0100 U | 0.0100 | 0.00083 | mg/l | 102 | 102 | 90-110 | 0 | 20 |
| Molybdenum | 0.0200 U | 0.0200 | 0.0029 | mg/l | 104 | 106 | 90-110 | 2 | 20 |
| Nickel | 0.0200 U | 0.0200 | 0.0011 | mg/l | 104 | 105 | 90-111 | 1 | 20 |
| Phosphorus | 0.200 U | 0.200 | 0.0052 | mg/l | 101 | 102 | 90-110 | 1 | 20 |
| Potassium | 1.00 U | 1.00 | 0.145 | mg/l | 99 | 99 | 85-115 | 1 | 20 |
| Sodium | 2.00 U | 2.00 | 0.167 | mg/l | 99 | 100 | 87-114 | 1 | 20 |
| Tin | 0.0400 U | 0.0400 | 0.0022 | mg/l | 101 | 102 | 90-110 | 1 | 20 |
| Titanium | 0.0200 U | 0.0200 | 0.0017 | mg/l | 104 | 103 | 90-113 | 0 | 20 |
| Vanadium | 0.0100 U | 0.0100 | 0.0013 | mg/l | 104 | 104 | 90-110 | 1 | 20 |
| Zinc | 0.0400 U | 0.0400 | 0.0020 | mg/l | 102 | 103 | 90-110 | 1 | 20 |
| Zirconium | 0.100 U | 0.100 | 0.0092 | mg/l | 105 | 106 | 90-110 | 1 | 20 |
| Batch number: 131080639002A | Sample number(s): 7020349-7020350 | | | | | | | | |
| Silver | 0.0010 U | 0.0010 | 0.00010 | mg/l | 103 | 107 | 90-115 | 3 | 20 |
| Strontium | 0.0020 U | 0.0020 | 0.00022 | mg/l | 100 | 102 | 80-120 | 2 | 20 |
| Thallium | 0.0010 U | 0.0010 | 0.00015 | mg/l | 101 | 103 | 80-120 | 2 | 20 |
| Batch number: 131080639002B | Sample number(s): 7020349-7020350 | | | | | | | | |
| Selenium | 0.0040 U | 0.0040 | 0.00050 | mg/l | 103 | 104 | 80-120 | 1 | 20 |
| Batch number: 13102621301B | Sample number(s): 7020349-7020350 | | | | | | | | |
| 2b Chromium VI by EPA 7199 | 10.0 U | 10.0 | 5.0 | ug/l | 95 | 94 | 90-110 | 1 | 20 |
| Batch number: 13102655901A | Sample number(s): 7020350 | | | | | | | | |
| 1b Anions by 300.0-Bromide | 0.50 U | 0.50 | 0.40 | mg/l | 99 | 100 | 90-110 | 1 | 20 |
| 1b Anions by 300.0-Chloride | 0.40 U | 0.40 | 0.20 | mg/l | 98 | 99 | 90-110 | 1 | 20 |
| 1b Anions by 300.0-Fluoride | 0.10 U | 0.10 | 0.080 | mg/l | 96 | 97 | 90-110 | 1 | 20 |
| 1b Anions by 300.0-Nitrate | 0.10 U | 0.10 | 0.050 | mg/l | 99 | 102 | 90-110 | 3 | 20 |
| 1b Anions by 300.0-Nitrite | 0.10 U | 0.10 | 0.080 | mg/l | 97 | 97 | 90-110 | 0 | 20 |
| 1b Anions by 300.0-Orthophosph | 0.50 U | 0.50 | 0.20 | mg/l | 93 | 98 | 90-110 | 5 | 20 |
| 1b Anions by 300.0-Sulfate | 1.0 U | 1.0 | 0.30 | mg/l | 99 | 100 | 90-110 | 1 | 20 |
| Batch number: 13107117102A | Sample number(s): 7020350 | | | | | | | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 16b Cyanide by EPA 9012B | 0.010 U | 0.010 | 0.0050 | mg/l | 103 | 104 | 90-110 | 1 | 15 |
| Batch number: 13102007106A | Sample number(s): 7020349-7020350 | | | | | | | | |
| 28b. pH (9040B and 9040C) | | | | | 100 | | 99-103 | | |
| Batch number: 13102039401A | Sample number(s): 7020345-7020348 | | | | | | | | |
| 15a pH by 9045C | | | | | 100 | | 95-105 | | |
| Batch number: 13105008201A | Sample number(s): 7020350 | | | | | | | | |
| 15b Ammonia by EPA 350.3 | 0.070 J | 0.20 | 0.050 | mg/l | 108 | | 90-110 | | |
| Batch number: 13106162401B | Sample number(s): 7020345-7020348 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13106001 | Sample number(s): 7020349-7020350 | | | | | | | | |
| 2378-TCDD | 2.00 U | 2.00 | 0.264 | pg/l | 94 | | 60-150 | | |
| 12378-PeCDD | 0.404 J | 10.0 | 0.273 | pg/l | 95 | | 60-150 | | |
| 123478-HxCDD | 10.0 U | 10.0 | 0.184 | pg/l | 96 | | 60-150 | | |
| 123678-HxCDD | 0.538 J | 10.0 | 0.193 | pg/l | 98 | | 60-150 | | |
| 123789-HxCDD | 0.284 J | 10.0 | 0.193 | pg/l | 97 | | 60-150 | | |
| 1234678-HpCDD | 0.306 J | 10.0 | 0.220 | pg/l | 96 | | 60-150 | | |
| OCDD | 0.635 J | 20.0 | 0.307 | pg/l | 97 | | 60-150 | | |
| 2378-TCDF | 0.231 J | 2.00 | 0.227 | pg/l | 96 | | 60-150 | | |
| 12378-PeCDF | 0.484 J | 10.0 | 0.191 | pg/l | 97 | | 60-150 | | |
| 23478-PeCDF | 0.290 J | 10.0 | 0.177 | pg/l | 96 | | 60-150 | | |
| 123478-HxCDF | 0.338 J | 10.0 | 0.115 | pg/l | 95 | | 60-150 | | |
| 123678-HxCDF | 0.333 J | 10.0 | 0.114 | pg/l | 94 | | 60-150 | | |
| 123789-HxCDF | 0.394 J | 10.0 | 0.101 | pg/l | 96 | | 60-150 | | |
| 234678-HxCDF | 0.281 J | 10.0 | 0.114 | pg/l | 97 | | 60-150 | | |
| 1234678-HpCDF | 0.193 J | 10.0 | 0.0864 | pg/l | 96 | | 60-150 | | |
| 1234789-HpCDF | 0.370 J | 10.0 | 0.0994 | pg/l | 97 | | 60-150 | | |
| OCDF | 0.712 J | 20.0 | 0.282 | pg/l | 97 | | 60-150 | | |
| Batch number: 13106003 | Sample number(s): 7020345-7020348 | | | | | | | | |
| 2378-TCDD | 0.0457 J | 1.00 | 0.0319 | ng/kg | 97 | | 67-158 | | |
| 12378-PeCDD | 5.00 U | 5.00 | 0.0277 | ng/kg | 99 | | 70-142 | | |
| 123478-HxCDD | 0.0315 J | 5.00 | 0.0190 | ng/kg | 106 | | 70-164 | | |
| 123678-HxCDD | 0.0201 J | 5.00 | 0.0194 | ng/kg | 104 | | 76-134 | | |
| 123789-HxCDD | 5.00 U | 5.00 | 0.0188 | ng/kg | 104 | | 64-162 | | |
| 1234678-HpCDD | 0.0840 J | 5.00 | 0.0207 | ng/kg | 101 | | 70-140 | | |
| OCDD | 0.121 J | 10.0 | 0.0175 | ng/kg | 102 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0320 | ng/kg | 102 | | 75-158 | | |
| 12378-PeCDF | 0.0560 J | 5.00 | 0.0169 | ng/kg | 103 | | 80-134 | | |
| 23478-PeCDF | 0.0310 J | 5.00 | 0.0162 | ng/kg | 105 | | 68-160 | | |
| 123478-HxCDF | 0.0446 J | 5.00 | 0.0127 | ng/kg | 105 | | 72-134 | | |
| 123678-HxCDF | 0.0356 J | 5.00 | 0.0121 | ng/kg | 103 | | 84-130 | | |
| 123789-HxCDF | 0.0566 J | 5.00 | 0.0121 | ng/kg | 107 | | 78-130 | | |
| 234678-HxCDF | 0.0222 J | 5.00 | 0.0117 | ng/kg | 105 | | 70-156 | | |
| 1234678-HpCDF | 0.0530 J | 5.00 | 0.00783 | ng/kg | 104 | | 82-122 | | |
| 1234789-HpCDF | 0.0413 J | 5.00 | 0.0103 | ng/kg | 105 | | 78-138 | | |
| OCDF | 0.0815 J | 10.0 | 0.0257 | ng/kg | 104 | | 63-170 | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13106001 | Sample number(s): 7020349-7020350 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.126 | | | pg/l | | | | | |
| Batch number: 13106003 | Sample number(s): 7020345-7020348 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0162 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13105SLA026 | Sample number(s): 7020345-7020348 UNSPK: P016768 | | | | | | | | |
| Acenaphthene | 116 | 110 | 48-127 | 6 | 30 | | | | |
| Acenaphthylene | 112 | 109 | 49-121 | 3 | 30 | | | | |
| Anthracene | 107 | 105 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 103 | 106 | 32-135 | 3 | 30 | | | | |
| Benzo(a)pyrene | 101 | 99 | 36-138 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 111 | 107 | 26-142 | 4 | 30 | | | | |
| Benzo(e)pyrene | 1* | 1* | 70-130 | 1 | 30 | | | | |
| Benzo(g,h,i)perylene | 97 | 93 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 93 | 91 | 47-129 | 2 | 30 | | | | |
| Butylbenzylphthalate | 102 | 99 | 59-153 | 2 | 30 | | | | |
| Di-n-butylphthalate | 123 | 110 | 62-154 | 11 | 30 | | | | |
| Chrysene | 102 | 103 | 29-148 | 1 | 30 | | | | |
| Dibenz(a,h)anthracene | 107 | 103 | 34-125 | 4 | 30 | | | | |
| Diethylphthalate | 135* | 133* | 76-127 | 1 | 30 | | | | |
| Dimethylphthalate | 116 | 110 | 62-136 | 5 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 66 | 69 | 39-167 | 2 | 30 | | | | |
| Fluoranthene | 95 | 91 | 47-135 | 5 | 30 | | | | |
| Fluorene | 109 | 109 | 50-129 | 0 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 107 | 101 | 17-136 | 6 | 30 | | | | |
| 1-Methylnaphthalene | 104 | 102 | 50-131 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 107 | 106 | 28-144 | 1 | 30 | | | | |
| Naphthalene | 101 | 100 | 31-148 | 2 | 30 | | | | |
| N-Nitrosodimethylamine | 79 | 76 | 48-113 | 3 | 30 | | | | |
| Di-n-octylphthalate | 97 | 96 | 52-162 | 2 | 30 | | | | |
| Phenanthrene | 105 | 104 | 29-142 | 1 | 30 | | | | |
| Pyrene | 105 | 108 | 26-143 | 3 | 30 | | | | |
| Batch number: 131060040A | Sample number(s): 7020350 UNSPK: 7020350 | | | | | | | | |
| 6b Perchlorate (Method 6850) | 105 | 103 | 80-120 | 2 | 20 | | | | |
| Batch number: 131050020A | Sample number(s): 7020345-7020348 UNSPK: P016768 | | | | | | | | |
| PCB-1016 | 100 | 72 | 16-146 | 31 | 50 | | | | |
| PCB-1260 | 104 | 70 | 40-134 | 39 | 50 | | | | |
| Batch number: 131080026A | Sample number(s): 7020350 UNSPK: 7020350 | | | | | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Ethanol | 113 | 104 | 62-145 | 8 | 20 | | | | |
| Isopropanol | 106 | 101 | 73-131 | 5 | 20 | | | | |
| Methanol | 111 | 104 | 52-159 | 7 | 20 | | | | |
| Batch number: 131130028A | Sample number(s): 7020350 UNSPK: P024683 | | | | | | | | |
| Diethylene glycol | 91 | 92 | 50-166 | 1 | 20 | | | | |
| Ethylene glycol | 97 | 98 | 50-155 | 2 | 20 | | | | |
| Propylene glycol | 96 | 96 | 54-145 | 0 | 20 | | | | |
| Triethylene glycol | 86 | 88 | 50-133 | 2 | 20 | | | | |
| Batch number: 131060013A | Sample number(s): 7020345-7020348 UNSPK: P022144 | | | | | | | | |
| EFH (C12-C14) | 96 | 113 | 49-123 | 16 | 20 | | | | |
| EFH (C15-C20) | 152* | 217* | 49-123 | 35* | 20 | | | | |
| EFH (C21-C30) | 125* | 235* | 49-123 | 33* | 20 | | | | |
| EFH (C30-C40) | 198* | 401* | 49-123 | 35* | 20 | | | | |
| EFH (C8-C11) | 92 | 108 | 49-123 | 16 | 20 | | | | |
| Batch number: 131050637003 | Sample number(s): 7020345-7020348 UNSPK: P016768 BKG: P016768 | | | | | | | | |
| Aluminum | 1818 (2) | 1689 (2) | 75-125 | 1 | 20 | 12,800 | 13,500 | 5 | 20 |
| Antimony | 48* | 47* | 75-125 | 0 | 20 | 3.96 U | 3.92 U | 0 (1) | 20 |
| Arsenic | 94 | 96 | 75-125 | 3 | 20 | 4.05 | 4.49 | 10 (1) | 20 |
| Barium | 97 | 99 | 75-125 | 3 | 20 | 70.3 | 69.9 | 1 | 20 |
| Beryllium | 102 | 101 | 75-125 | 1 | 20 | 0.538 J | 0.550 J | 2 (1) | 20 |
| Boron | 99 | 106 | 75-125 | 9 | 20 | 9.90 U | 9.80 U | 0 (1) | 20 |
| Cadmium | 94 | 99 | 75-125 | 7 | 20 | 0.0703 J | 0.116 J | 49* (1) | 20 |
| Calcium | 17 (2) | 365 (2) | 75-125 | 37* | 20 | 2,990 | 2,910 | 3 | 20 |
| Chromium | 102 | 104 | 75-125 | 2 | 20 | 14.7 | 14.3 | 3 (1) | 20 |
| Cobalt | 92 | 94 | 75-125 | 3 | 20 | 4.14 | 3.71 | 11 (1) | 20 |
| Copper | 96 | 103 | 75-125 | 7 | 20 | 6.49 | 6.12 | 6 (1) | 20 |
| Iron | -545 (2) | -1097 (2) | 75-125 | 3 | 20 | 18,400 | 17,300 | 7 | 20 |
| Lead | 90 | 93 | 75-125 | 4 | 20 | 5.05 | 5.12 | 2 (1) | 20 |
| Lithium | 100 | 100 | 75-125 | 1 | 20 | 21.7 | 20.4 | 6 | 20 |
| Magnesium | 169 (2) | 78 (2) | 75-125 | 4 | 20 | 3,950 | 3,710 | 6 | 20 |
| Manganese | 131 (2) | 65 (2) | 75-125 | 11 | 20 | 236 | 220 | 7 | 20 |
| Molybdenum | 94 | 95 | 75-125 | 3 | 20 | 0.650 J | 0.234 J | 94* (1) | 20 |
| Nickel | 93 | 97 | 75-125 | 5 | 20 | 8.52 | 8.24 | 3 (1) | 20 |
| Phosphorus | 56* | 127* | 75-125 | 15 | 20 | 385 | 365 | 5 | 20 |
| Potassium | 81 | 65* | 75-125 | 3 | 20 | 3,440 | 3,290 | 5 | 20 |
| Sodium | 98 | 97 | 75-125 | 2 | 20 | 67.0 J | 66.0 J | 2 (1) | 20 |
| Tin | 87 | 89 | 75-125 | 4 | 20 | 2.67 J | 2.57 J | 4 (1) | 20 |
| Titanium | 325 (2) | 208 (2) | 75-125 | 10 | 20 | 859 | 880 | 2 | 20 |
| Vanadium | 106 | 102 | 75-125 | 1 | 20 | 28.8 | 28.6 | 1 | 20 |
| Zinc | 83 | 100 | 75-125 | 9 | 20 | 54.0 | 50.4 | 7 | 20 |
| Zirconium | 98 | 97 | 75-125 | 1 | 20 | 0.891 J | 1.71 J | 63* (1) | 20 |
| Batch number: 131050637003A | Sample number(s): 7020345-7020348 UNSPK: P016768 BKG: P016768 | | | | | | | | |
| Silver | 97 | 101 | 75-125 | 7 | 20 | 0.0232 J | 0.0211 J | 9 (1) | 20 |
| Strontium | 92 | 153* | 75-125 | 17 | 20 | 18.8 | 17.7 | 6 | 20 |
| Thallium | 105 | 113 | 75-125 | 6 | 20 | 0.216 | 0.224 | 3 (1) | 20 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 131050637003B | Sample number(s): 7020345-7020348 UNSPK: P016768 BKG: P016768 | | | | | | | | |
| Selenium | 95 | 89 | 75-125 | 4 | 20 | 0.0990 J | 0.165 J | 50* (1) | 20 |
| Batch number: 131060638003 | Sample number(s): 7020345-7020348 UNSPK: P016768 BKG: P016768 | | | | | | | | |
| 3a Mercury 7471A | 114 | 115 | 65-135 | 1 | 20 | 0.0195 U | 0.0189 U | 0 (1) | 20 |
| Batch number: 13102007106A | Sample number(s): 7020349-7020350 BKG: P018294 | | | | | | | | |
| 28b. pH (9040B and 9040C) | | | | | | 8.0 | 8.2 | 2 | 3 |
| Batch number: 13102039401A | Sample number(s): 7020345-7020348 BKG: 7020345 | | | | | | | | |
| 15a pH by 9045C | | | | | | 7.90 | 7.91 | 0 | 3 |
| Batch number: 13105008201A | Sample number(s): 7020350 UNSPK: P018096 BKG: P018096 | | | | | | | | |
| 15b Ammonia by EPA 350.3 | 107 | 111 | 28-141 | 4 | 10 | 0.51 | 0.66 | 26* (1) | 20 |
| Batch number: 13106162401B | Sample number(s): 7020345-7020348 BKG: P018437 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 1.9 | 2.0 | 3 | 20 |
| Batch number: 13106003 | Sample number(s): 7020345-7020348 UNSPK: P022144 | | | | | | | | |
| 2378-TCDD | 92 | 94 | 40-135 | 3 | 20 | | | | |
| 12378-PeCDD | 98 | 99 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDD | 104 | 106 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDD | 106 | 102 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDD | 105 | 102 | 40-135 | 3 | 20 | | | | |
| 1234678-HpCDD | 134 | 100 | 40-135 | 24* | 20 | | | | |
| OCDD | 266* | 110 | 40-135 | 58* | 20 | | | | |
| 2378-TCDF | 98 | 99 | 40-135 | 2 | 20 | | | | |
| 12378-PeCDF | 102 | 102 | 40-135 | 1 | 20 | | | | |
| 23478-PeCDF | 105 | 103 | 40-135 | 0 | 20 | | | | |
| 123478-HxCDF | 106 | 105 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDF | 102 | 103 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 104 | 104 | 40-135 | 2 | 20 | | | | |
| 234678-HxCDF | 104 | 104 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 109 | 105 | 40-135 | 3 | 20 | | | | |
| 1234789-HpCDF | 104 | 103 | 40-135 | 0 | 20 | | | | |
| OCDF | 108 | 102 | 40-135 | 4 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 13b 1,4-Dioxane by 8260B SIM
Batch number: E131052AA

| | Toluene-d8 |
|---|---|
| 7020350 | 91 |
| Blank | 91 |
| LCS | 91 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

## Surrogate Quality Control

LCSD 91

Limits: 80-120

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y131141AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7020350 | 100 | 100 | 98 | 94 |
| Blank | 101 | 100 | 97 | 95 |
| LCS | 100 | 103 | 99 | 100 |
| LCSD | 100 | 102 | 100 | 100 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13105SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7020345 | 79 | 95 | 92 |
| 7020346 | 77 | 130 | 91 |
| 7020347 | 161* | 178* | 96 |
| 7020348 | 76 | 93 | 91 |
| Blank | 88 | 96 | 124 |
| LCS | 89 | 99 | 97 |
| MS | 83 | 98 | 99 |
| MSD | 80 | 96 | 94 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 13107WAH026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7020349 | 105 | 120 | 101 |
| 7020350 | 101 | 114 | 97 |
| Blank | 79 | 87 | 77 |
| LCS | 105 | 125 | 102 |
| LCSD | 107 | 125 | 102 |
| Limits: | 64-120 | 62-141 | 58-134 |

Analysis Name: 8b SVOCs by EPA 8270D
Batch number: 13107WAI026

| | Phenol-d6 | 2-Fluorophenol | 2,4,6-Tribromophenol | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---|---|---|---|---|---|---|
| 7020350 | 45 | 64 | 86 | 87 | 92 | 99 |
| Blank | 60 | 76 | 100 | 105 | 111 | 105 |
| LCS | 60 | 79 | 105 | 99 | 104 | 107 |
| LCSD | 60 | 78 | 103 | 99 | 103 | 106 |
| Limits: | 20-110 | 20-110 | 30-110 | 40-130 | 45-130 | 45-130 |

Analysis Name: 11b TPH by EPA 8015B GRO

*- Outside of specification
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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

## Surrogate Quality Control

Batch number: 13106A20A

| | Trifluorotoluene-F |
|---|---|
| 7020349 | 88 |
| 7020350 | 88 |
| Blank | 88 |
| LCS | 110 |
| LCSD | 112 |
| Limits: | 63-135 |

Analysis Name: 19b Formaldehyde 8315A
Batch number: 131020013A

| | Butyraldehyde |
|---|---|
| 7020350 | 76 |
| Blank | 77 |
| LCS | 90 |
| LCSD | 65 |
| Limits: | 45-145 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131050020A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7020345 | 122* | 87 |
| 7020346 | 87 | 64 |
| 7020347 | 79 | 55 |
| 7020348 | 116 | 85 |
| Blank | 117 | 87 |
| LCS | 117 | 90 |
| LCSD | 121* | 94 |
| MS | 120 | 93 |
| MSD | 79 | 73 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 24b Herbicides by EPA 8151A
Batch number: 131060002A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7020350 | 91 |
| Blank | 98 |
| LCS | 103 |
| LCSD | 106 |
| Limits: | 50-150 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 131060007A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7020349 | 108 | 73 |
| 7020350 | 90 | 57 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

## Surrogate Quality Control

| | | |
|---|---|---|
| Blank | 95 | 71 |
| LCS | 105 | 46 |
| LCSD | 93 | 67 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 131060008A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7020350 | 92 | 83 |
| Blank | 111 | 104 |
| LCS | 85 | 92 |
| LCSD | 95 | 94 |
| Limits: | 60-140 | 20-120 |

Analysis Name: 18b Energetics by 8330A
Batch number: 131060031A

| | 2-Nitro-m-xylene |
|---|---|
| 7020350 | 95 |
| Blank | 95 |
| LCS | 96 |
| LCSD | 97 |
| Limits: | 80-146 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 131030007A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7020349 | 77 | 79 |
| 7020350 | 78 | 79 |
| Blank | 81 | 78 |
| LCS | 85 | 87 |
| LCSD | 85 | 87 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131060013A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7020345 | 81 | 74 |
| 7020346 | 97 | 88 |
| 7020347 | 109 | 69 |
| 7020348 | 81 | 75 |
| Blank | 84 | 85 |
| LCS | 92 | 83 |
| LCSD | 88 | 81 |
| MS | 86 | 72 |
| MSD | 90 | 66 |
| Limits: | 37-125 | 66-123 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

## Surrogate Quality Control

Analysis Name: 23b Terphenyls by 8015B
Batch number: 131080007A

| | n-Triacontane-d62 |
|---|---|
| 7020350 | 91 |
| Blank | 86 |
| LCS | 86 |
| LCSD | 86 |
| Limits: | 36-160 |

Analysis Name: 14b Alcohols by EPA 8015C
Batch number: 131080026A

| | Acetone |
|---|---|
| 7020350 | 93 |
| Blank | 96 |
| LCS | 93 |
| MS | 95 |
| MSD | 93 |
| Limits: | 71-127 |

Analysis Name: 20b Glycols by EPA 8015C
Batch number: 131130028A

| | Tetramethylene glycol |
|---|---|
| 7020350 | 100 |
| Blank | 96 |
| LCS | 90 |
| MS | 89 |
| MSD | 91 |
| Limits: | 58-141 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 13106001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7020349 | 76 | 77 | 78 | 77 | 76 | 86 |
| 7020350 | 74 | 78 | 79 | 78 | 76 | 75 |
| Blank | 81 | 86 | 85 | 84 | 84 | 99 |
| OPR | 77 | 80 | 81 | 81 | 77 | 85 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7020349 | 74 | 71 | 71 | 81 | 80 | 79 |
| 7020350 | 73 | 70 | 65 | 80 | 81 | 80 |
| Blank | 85 | 84 | 86 | 88 | 87 | 86 |
| OPR | 76 | 71 | 69 | 81 | 82 | 80 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382496
Reported: 05/03/13 at 09:52 AM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7020349 | 77 | 76 | 77 | 73 | 78 | |
| 7020350 | 78 | 74 | 72 | 75 | 79 | |
| Blank | 85 | 88 | 92 | 79 | 85 | |
| OPR | 79 | 76 | 76 | 78 | 82 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13106003

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7020345 | 74 | 85 | 88 | 91 | 88 | 97 |
| 7020346 | 79 | 86 | 85 | 84 | 84 | 85 |
| 7020347 | 86 | 84 | 87 | 87 | 86 | 84 |
| 7020348 | 76 | 85 | 85 | 87 | 85 | 83 |
| Blank | 70 | 82 | 86 | 88 | 88 | 94 |
| MS | 80 | 84 | 86 | 88 | 86 | 93 |
| MSD | 75 | 84 | 86 | 86 | 85 | 91 |
| OPR | 65 | 71 | 78 | 80 | 77 | 79 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7020345 | 101 | 94 | 100 | 86 | 85 | 85 |
| 7020346 | 83 | 80 | 74 | 86 | 80 | 81 |
| 7020347 | 80 | 75 | 66 | 85 | 83 | 82 |
| 7020348 | 89 | 77 | 67 | 85 | 82 | 82 |
| Blank | 108 | 95 | 106 | 86 | 87 | 86 |
| MS | 91 | 86 | 84 | 87 | 85 | 83 |
| MSD | 92 | 84 | 80 | 85 | 84 | 85 |
| OPR | 85 | 73 | 71 | 71 | 75 | 75 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7020345 | 85 | 93 | 101 | 69 | 85 |
| 7020346 | 80 | 79 | 72 | 76 | 84 |
| 7020347 | 82 | 75 | 65 | 80 | 84 |
| 7020348 | 82 | 78 | 70 | 72 | 85 |
| Blank | 84 | 94 | 108 | 64 | 83 |
| MS | 85 | 85 | 83 | 73 | 83 |
| MSD | 86 | 84 | 80 | 69 | 83 |
| OPR | 75 | 76 | 76 | 62 | 71 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

A-13013
G-1382496
S-7020345-50

| | | | | | |
|---|---|---|---|---|---|
| **CDM Smith** | | Contact Name: | Pam Hartman | COC No: | 20130411-02 |
| DateShipped: | 4/11/2013 | Contact Phone: | (818)466-8007 | Cooler #: | 1, 2, 3, 4 |
| CarrierName: | FedEx | | | Lab: | Lancaster |
| AirbillNo: | 7995 0780 9940 | | | Lab Phone: | 717-556-7259 |
| | | | | Lab Address | 2425 New Holland Pike<br>Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-553-SA7-SB-0.0-0.5 | 4/11/13 08:10 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-553-SA7-SB-0.0-0.5 | 4/11/13 08:10 | SO | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-554-SA7-SB-0.0-0.5 | 4/11/13 09:00 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-554-SA7-SB-0.0-0.5 | 4/11/13 09:00 | SO | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-555-SA7-SB-0.0-0.5 | 4/11/13 10:15 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-555-SA7-SB-0.0-0.5 | 4/11/13 10:15 | SO | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-536-SA7-SB-0.0-0.5 | 4/11/13 12:55 | SO | None | 2 - SS-Sleeve | 0 | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-536-SA7-SB-0.0-0.5 | 4/11/13 12:55 | SO | None | 1 - 4 oz glass | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

Special Instructions:

Sampler: Steve Mercer

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Gutz | 4/11/13 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 4/12/13 | 0925 |

A-13013
G-1382496

# SSFL Phase 3 Chain of Custody

S-7020345-50

**CDM Smith**

DateShipped: 4/11/2013
CarrierName: FedEx
AirbillNo: 7995 0780 9940

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130411-03
Cooler #: 4
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB-041113 | 4/11/13 15:15 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 0 | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-041113 | 4/11/13 15:15 | WQ | None | 1 - 250 mL Amber | 0 | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-041113 | 4/11/13 15:15 | WQ | None | 1 - 1 L Amber | 0 | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| EB-041113 | 4/11/13 15:15 | WQ | None | 1 - 250 mL Amber | 0 | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| EB-041113 | 4/11/13 15:15 | WQ | None | 1 - 250 mL Poly | 0 | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| EB-041113 | 4/11/13 15:15 | WQ | None | 1 - 250 mL Poly | 0 | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| EB-041113 | 4/11/13 15:15 | WQ | HCl | 3 - 40 mL Vial | 0 | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| EB-041113 | 4/11/13 15:15 | WQ | HCl | 2 - 1 L Amber | 0 | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |

Special Instructions:

Sampler:

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

4/12/13 0925

A-13013
G-1382496
S-7020345-50

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/11/2013
CarrierName: FedEx
AirbillNo: 7995 0780 9940

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130411-01
Cooler #: 2, 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FB-041113 | 4/11/13 15:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 0 | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | None | 1 - | 0 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | Container is 1 L Poly |
| FB-041113 | 4/11/13 15:00 | WQ | None | 1 - 250 mL Amber | 0 | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | None | 1 - 250 mL Amber | 0 | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | None | 1 - 1 L Amber | 0 | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | None | 1 - 250 mL Amber | 0 | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | None | 1 - 40 mL Vial | 0 | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | None | 1 - 250 mL Poly | 0 | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | None | 1 - 250 mL Poly | 0 | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | None | 1 - 1 L Amber | 0 | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | None | 1 - 250 mL Amber | 0 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | HCl | 3 - 40 mL Vial | 0 | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | HCl | 3 - 40 mL Vial | 0 | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | HCl | 3 - 40 mL Vial | 0 | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | HCl | 2 - 1 L Amber | 0 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | None | 2 - 40 mL Vial | 0 | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | HCl | 2 - 40 mL Vial | 0 | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | HCl | 1 - 1 L Amber | 0 | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | None | 6 - 40 mL Vial | 0 | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | Anions EPA 300.0 \| |
| FB-041113 | 4/11/13 15:00 | WQ | None | 2 - 1 L Amber | 0 | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | NaOH | 1 - 250 mL Poly | 0 | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | None | 1 - 8 oz glass | 0 | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | |
| FB-041113 | 4/11/13 15:00 | WQ | H2SO4 pH<2 | 1 - 16 oz glass | 0 | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | Ammonia EPA 350.3 \| |

# SSFL Phase 3 Chain of Custody

A-13013
G-1382496
S-7020345-50

**CDM Smith**
DateShipped: 4/11/2013
CarrierName: FedEx
AirbillNo: 7995 0780 9940

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130411-01
Cooler #: 2, 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | 1,4 Dioxane 8270 SIM PAHs 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | 1,4 Dioxane 8260 SIM VOCs 8260 | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

Sampler: Vidal Galvez

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Galvez | 4/11/13 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | 4/12/13 | 0925 | |

**Nicole Maljovec**

**From:** Cortes, Vidal A. [cortesva@cdmsmith.com]
**Sent:** Friday, April 12, 2013 3:08 PM
**To:** Nicole Maljovec
**Cc:** Hartman, Pamela; Burgesser, Todd
**Subject:** RE: SSFL 04/11/13

1. Please subsample for Metals and Mercury analysis. No on the Cyanide.

2. Please analyze for Ammonia by EPA 350.3.

3. Please analyze for additional anions (Bromide, Chloride, Nitrite, Phosphate, and Sulfate) by EPA 300.0.

4. We will provide sample in 250 mL poly next time.

5. We will work on this.

---

From: Nicole Maljovec [nmaljovec@lancasterlabs.com]
Sent: Friday, April 12, 2013 1:22 PM
To: Cortes, Vidal A.
Cc: Hartman, Pamela; Burgesser, Todd
Subject: RE: SSFL 04/11/13

Hi Vidal and Pam,
We have a couple of questions for you.

1. We received a cyanide bottle for the equipment blank, but not a metals bottle. We can subsample volume from another unpreserved bottle and preserve it with HNO3 to make a metals bottle, so no problem there.
Do you need cyanide on the EB?

2. We received an Ammonia bottle for the field blank, but it isn't marked off on the COC. Do you need this test? There is a note in the "Other Analysis/Notes" section of the COC that says Ammonia EPA 350.3.

3. Nitrate and Fluoride are marked on the COC for the field blank, but the bottle label has Nitrate, Nitrite, phosphate, chloride, sulfate, and bromide listed. Do you need all of the tests on the label?

4. This is just an FYI. For Fluoride, you can scale this back to a 250mL poly bottle instead of the 1L poly. We only need a few mLs. We can't use glass though because the fluoride will etch it and start to dissolve the glass.

5. One small request: on the COC, can you darken the lines from 1,4-Dioxane to Hex Cr? They're really light. (I know, I'm being picky!)

Thanks,
Nicole

Nicole Maljovec
Eurofins Lancaster Labs
Phone: 717-556-7259

-----Original Message-----
From: Cortes, Vidal A. [mailto:cortesva@cdmsmith.com]
Sent: Thursday, April 11, 2013 7:04 PM
To: !US19_SSFLShip
Cc: Hartman, Pamela
Subject: SSFL 04/11/13

Hello,

Please see the attached COCs for samples collected on 4/11.

Thank you,

Vidal Cortes

CDM Smith

111 Academy, Suite 150
Irvine, CA 92617

(949) 930-9823 - direct | fax
(949) 241-9173 - cell
cortesva@cdmsmith.com<mailto:wallinsl@cdm.com>
cdmsmith.com

eurofins | Lancaster Laboratories

G-1382496

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** CDM Smith

**Date of Receipt:** 4/12/13

**Time of Receipt:** 0925

**Source Code:** 50

**Shipping Container Sealed** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT121 | 1.1 | TB | WI | Y | B | |
| 2 | ↓ | 0.8 | ↓ | ↓ | ↓ | ↓ | |
| 3 | ↓ | 1.8 | | | | | |
| 4 | ↓ | 0.7 | ↓ | ↓ | ↓ | ↓ | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** Ø

**Paperwork Discrepancy/Unpacking Problems:**

metals bottle for EB pres w/Ascorbic Acid not $HNO_3$

2→ Sample volume NM 4/12/13 was subsampled and preserved w/$HNO_3$. Client contacted. NM 4/12/13

**Unpacker Signature/Emp#:** 964 **Date/Time:** 4/12/13 1000

Issued by Dept. 6042 Management

2174.06

eurofins | Lancaster Laboratories

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

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

April 25, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/15/2013
Group Number: 1382816
SDG: PH030
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| TB-041213 Water | 7022142 |
| EB-041213 Water | 7022143 |
| SL-536-SA7-SB-3.0-4.0 Soil | 7022144 |
| SL-536-SA7-SB-3.0-4.0MS Soil | 7022145 |
| SL-536-SA7-SB-3.0-4.0MSD Soil | 7022146 |
| SL-536-SA7-SB-3.0-4.0DUP Soil | 7022147 |
| SL-836-SA7-SB-3.0-4.0 Soil | 7022148 |
| SL-535-SA7-SB-0.0-0.5 Soil | 7022149 |
| SL-535-SA7-SB-4.0-5.0 Soil | 7022150 |
| SL-535-SA7-SB-9.0-10.0 Soil | 7022151 |
| SL-534-SA7-SB-0.0-0.5 Soil | 7022152 |

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

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB-041213 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7022142**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:00

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA7TB SDG#: PH030-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13106A20A | 04/16/2013 12:30 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13106A20A | 04/16/2013 12:30 | Catherine J Schwarz | 1 |

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

**Sample Description: EB-041213 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7022143**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:05 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA7EB SDG#: PH030-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **HPLC Organics** | **SW-846 8315A** | | ug/l | | ug/l | ug/l | |
| 04144 | 19b Formaldehyde 8315A | 50-00-0 | 50 | U | 50 | 30 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 04144 | 19b Formaldehyde 8315A | SW-846 8315A | 1 | 131050014A | 04/16/2013 17:54 | James H Place | 1 |
| 01013 | Formaldehyde Extraction | SW-846 8315A | 1 | 131050014A | 04/15/2013 18:10 | Sally L Appleyard | 1 |

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

**Sample Description:** SL-536-SA7-SB-3.0-4.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022144**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.98 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.1 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 0.89 | J | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.4 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.91 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.6 | | 1.7 | 0.68 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 24.8 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |

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

**Sample Description:** SL-536-SA7-SB-3.0-4.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022144**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 6.7 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 14 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,800 | | 39.5 | 7.61 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.58 | J | 3.95 | 0.494 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.06 | J | 3.95 | 0.326 | 1 |
| 06946 | Barium | 7440-39-3 | 72.1 | | 0.987 | 0.0326 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.482 | J | 0.987 | 0.0661 | 1 |
| 07914 | Boron | 7440-42-8 | 3.20 | J | 9.87 | 0.819 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.420 | J | 0.987 | 0.0326 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,140 | | 19.7 | 3.97 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.5 | | 2.96 | 0.0869 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.11 | | 0.987 | 0.0888 | 1 |
| 06953 | Copper | 7440-50-8 | 5.13 | | 1.97 | 0.178 | 1 |
| 01654 | Iron | 7439-89-6 | 19,000 | | 39.5 | 3.75 | 1 |
| 06955 | Lead | 7439-92-1 | 5.13 | | 2.96 | 0.464 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.5 | | 3.9 | 0.54 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,080 | | 9.87 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 283 | | 0.987 | 0.0819 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 1.23 | J | 1.97 | 0.168 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.67 | | 1.97 | 0.109 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 367 | | 9.87 | 0.503 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,760 | | 98.7 | 13.3 | 1 |
| 01667 | Sodium | 7440-23-5 | 61.3 | J | 98.7 | 16.5 | 1 |
| 06969 | Tin | 7440-31-5 | 2.92 | J | 9.87 | 0.217 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,060 | | 0.987 | 0.168 | 1 |
| 06971 | Vanadium | 7440-62-2 | 28.8 | | 0.987 | 0.109 | 1 |
| 06972 | Zinc | 7440-66-6 | 55.1 | | 3.95 | 0.197 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.11 | J | 4.94 | 0.819 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.395 | U | 0.395 | 0.0987 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0307 | J | 0.197 | 0.0197 | 2 |
| 06144 | Strontium | 7440-24-6 | 12.0 | | 0.395 | 0.0336 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.232 | | 0.197 | 0.0296 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0202 | U | 0.0202 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.71 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |

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

**Sample Description: SL-536-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022144**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03BKG

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

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

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

**Sample Description:** SL-536-SA7-SB-3.0-4.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022144**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.00 | U | 1.00 | 0.0540 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.238 | JQ | 5.02 | 0.0493 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.287 | JB | 5.02 | 0.0472 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.778 | JB | 5.02 | 0.0484 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.575 | J | 5.02 | 0.0440 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 18.2 | B | 5.02 | 0.0430 | 1 |
| 11031 | OCDD | 3268-87-9 | 150 | B | 10.0 | 0.0476 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.00 | U | 1.00 | 0.0483 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0801 | JB | 5.02 | 0.0276 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0632 | JBQ | 5.02 | 0.0262 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0916 | JB | 5.02 | 0.0374 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.157 | JB | 5.02 | 0.0348 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0426 | JBQ | 5.02 | 0.0404 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.189 | JBQ | 5.02 | 0.0364 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.14 | JB | 5.02 | 0.0220 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.194 | JBQ | 5.02 | 0.0284 | 1 |
| 11031 | OCDF | 39001-02-0 | 3.87 | JB | 10.0 | 0.0387 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.441 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 69 | 25 - 164 |
| 13C12-12378-PeCDD | 95 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 97 | 23 - 140 |
| 13C12-OCDD | 106 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 92 | 24 - 185 |
| 13C12-23478-PeCDF | 92 | 21 - 178 |
| 13C12-123478-HxCDF | 82 | 26 - 152 |
| 13C12-123678-HxCDF | 87 | 26 - 123 |
| 13C12-234678-HxCDF | 84 | 28 - 136 |
| 13C12-123789-HxCDF | 85 | 29 - 147 |
| 13C12-1234678-HpCDF | 110 | 28 - 143 |
| 13C12-1234789-HpCDF | 93 | 26 - 138 |
| 13C12-OCDF | 98 | 17 - 157 |

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

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

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

**Sample Description: SL-536-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022144**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03BKG

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-536-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022144**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03BKG

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 07:19 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13106A16A | 04/16/2013 20:44 | Laura M Krieger | 24.8 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201310530763 | 04/15/2013 10:59 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201310530763 | 04/15/2013 11:00 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 3 | 201310530763 | 04/15/2013 11:00 | Larry E Bevins | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131080019A | 04/22/2013 21:55 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131080019A | 04/19/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 11:36 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106003 | 04/18/2013 00:27 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13106003 | 04/16/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |

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

**Sample Description: SL-536-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022144**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:14 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 01:42 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:42 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:42 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:42 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 07:57 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401A | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

**Sample Description:** SL-536-SA7-SB-3.0-4.0MS Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022145**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 33 | | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 35 | | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 35 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 38 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 35 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 39 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 31 | | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 29 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 36 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 36 | | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 30 | | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 38 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 29 | | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 29 | | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 32 | | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 44 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 37 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 38 | | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 30 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 35 | | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 33 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 29 | | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 29 | | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 40 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 40 | | 1.7 | 0.68 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 11 | | 1.1 | 0.2 | 25.77 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 130 | | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 140 | | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.9 | J | 5.1 | 2.1 | 1 |

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

**Sample Description: SL-536-SA7-SB-3.0-4.0MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022145**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 12 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 24 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,500 | | 39.5 | 7.61 | 1 |
| 06944 | Antimony | 7440-36-0 | 36.2 | | 3.95 | 0.494 | 1 |
| 06935 | Arsenic | 7440-38-2 | 18.4 | | 3.95 | 0.326 | 1 |
| 06946 | Barium | 7440-39-3 | 279 | | 0.987 | 0.0326 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.39 | | 0.987 | 0.0661 | 1 |
| 07914 | Boron | 7440-42-8 | 189 | | 9.87 | 0.819 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.61 | | 0.987 | 0.0326 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,400 | | 19.7 | 3.97 | 1 |
| 06951 | Chromium | 7440-47-3 | 38.8 | | 2.96 | 0.0869 | 1 |
| 06952 | Cobalt | 7440-48-4 | 54.8 | | 0.987 | 0.0888 | 1 |
| 06953 | Copper | 7440-50-8 | 30.0 | | 1.97 | 0.178 | 1 |
| 01654 | Iron | 7439-89-6 | 20,500 | | 39.5 | 3.75 | 1 |
| 06955 | Lead | 7439-92-1 | 20.8 | | 2.96 | 0.464 | 1 |
| 01656 | Lithium | 7439-93-2 | 126 | | 3.9 | 0.54 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,630 | | 9.87 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 336 | | 0.987 | 0.0819 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 192 | | 1.97 | 0.168 | 1 |
| 06961 | Nickel | 7440-02-0 | 58.2 | | 1.97 | 0.109 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 463 | | 9.87 | 0.503 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,030 | | 98.7 | 13.3 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,000 | | 98.7 | 16.5 | 1 |
| 06969 | Tin | 7440-31-5 | 366 | | 9.87 | 0.217 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,300 | | 0.987 | 0.168 | 1 |
| 06971 | Vanadium | 7440-62-2 | 78.3 | | 0.987 | 0.109 | 1 |
| 06972 | Zinc | 7440-66-6 | 110 | | 3.95 | 0.197 | 1 |
| 10146 | Zirconium | 7440-67-7 | 94.7 | | 4.94 | 0.819 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.28 | | 0.395 | 0.0987 | 2 |
| 06142 | Silver | 7440-22-4 | 9.87 | | 0.197 | 0.0197 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.0 | | 0.395 | 0.0336 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.645 | | 0.197 | 0.0296 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.187 | | 0.0200 | 0.0103 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |

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

**Sample Description: SL-536-SA7-SB-3.0-4.0MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022145**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 18.6 | B | 1.00 | 0.0309 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 98.6 | | 5.02 | 0.0454 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 104 | B | 5.02 | 0.0410 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 107 | B | 5.02 | 0.0422 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 107 | | 5.02 | 0.0394 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 153 | B | 5.02 | 0.0440 | 1 |
| 11031 | OCDD | 3268-87-9 | 684 | B | 10.0 | 0.0383 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 19.8 | | 1.00 | 0.0325 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 103 | B | 5.02 | 0.0277 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 105 | B | 5.02 | 0.0263 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 107 | B | 5.02 | 0.0561 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 103 | B | 5.02 | 0.0523 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 104 | B | 5.02 | 0.0530 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 105 | B | 5.02 | 0.0512 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 112 | B | 5.02 | 0.0309 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 104 | B | 5.02 | 0.0386 | 1 |
| 11031 | OCDF | 39001-02-0 | 220 | B | 10.0 | 0.0286 | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 87 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 85 | 23 - 140 |
| 13C12-OCDD | 83 | 17 - 157 |
| 13C12-2378-TCDF | 73 | 24 - 169 |
| 13C12-12378-PeCDF | 83 | 24 - 185 |
| 13C12-23478-PeCDF | 84 | 21 - 178 |
| 13C12-123478-HxCDF | 86 | 26 - 152 |
| 13C12-123678-HxCDF | 88 | 26 - 123 |
| 13C12-234678-HxCDF | 86 | 28 - 136 |
| 13C12-123789-HxCDF | 93 | 29 - 147 |
| 13C12-1234678-HpCDF | 91 | 28 - 143 |
| 13C12-1234789-HpCDF | 86 | 26 - 138 |
| 13C12-OCDF | 84 | 17 - 157 |

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

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

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

**Sample Description: SL-536-SA7-SB-3.0-4.0MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022145**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03MS

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 07:48 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13106A16A | 04/16/2013 21:22 | Laura M Krieger | 25.77 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201310530763 | 04/15/2013 11:03 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201310530763 | 04/15/2013 11:04 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 3 | 201310530763 | 04/15/2013 11:04 | Larry E Bevins | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131080019A | 04/22/2013 22:13 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131080019A | 04/19/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 11:57 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106003 | 04/18/2013 01:24 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13106003 | 04/16/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |

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

**Sample Description: SL-536-SA7-SB-3.0-4.0MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022145**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:25 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 2 | 131070637001B | 04/24/2013 11:40 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:49 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:49 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:49 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:03 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

**Sample Description:** SL-536-SA7-SB-3.0-4.0MSD Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022146**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 31 | | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 33 | | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 33 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 33 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 30 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 32 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 26 | | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 29 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 32 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 30 | | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 27 | | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 31 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 30 | | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 30 | | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 30 | | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 39 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 27 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 37 | | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 30 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 33 | | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 31 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 37 | | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 25 | | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 35 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 24 | | 1.7 | 0.68 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 12 | | 1.1 | 0.2 | 25.93 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 150 | | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 170 | | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.6 | | 5.1 | 2.1 | 1 |

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

**Sample Description: SL-536-SA7-SB-3.0-4.0MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022146**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 17 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 35 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,000 | | 39.5 | 7.61 | 1 |
| 06944 | Antimony | 7440-36-0 | 37.5 | | 3.95 | 0.494 | 1 |
| 06935 | Arsenic | 7440-38-2 | 18.1 | | 3.95 | 0.326 | 1 |
| 06946 | Barium | 7440-39-3 | 269 | | 0.987 | 0.0326 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.35 | | 0.987 | 0.0661 | 1 |
| 07914 | Boron | 7440-42-8 | 190 | | 9.87 | 0.819 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.56 | | 0.987 | 0.0326 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,540 | | 19.7 | 3.97 | 1 |
| 06951 | Chromium | 7440-47-3 | 41.9 | | 2.96 | 0.0869 | 1 |
| 06952 | Cobalt | 7440-48-4 | 54.4 | | 0.987 | 0.0888 | 1 |
| 06953 | Copper | 7440-50-8 | 30.0 | | 1.97 | 0.178 | 1 |
| 01654 | Iron | 7439-89-6 | 20,500 | | 39.5 | 3.75 | 1 |
| 06955 | Lead | 7439-92-1 | 20.5 | | 2.96 | 0.464 | 1 |
| 01656 | Lithium | 7439-93-2 | 127 | | 3.9 | 0.54 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,610 | | 9.87 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 334 | | 0.987 | 0.0819 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 191 | | 1.97 | 0.168 | 1 |
| 06961 | Nickel | 7440-02-0 | 57.5 | | 1.97 | 0.109 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 497 | | 9.87 | 0.503 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,980 | | 98.7 | 13.3 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,020 | | 98.7 | 16.5 | 1 |
| 06969 | Tin | 7440-31-5 | 364 | | 9.87 | 0.217 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,290 | | 0.987 | 0.168 | 1 |
| 06971 | Vanadium | 7440-62-2 | 77.5 | | 0.987 | 0.109 | 1 |
| 06972 | Zinc | 7440-66-6 | 110 | | 3.95 | 0.197 | 1 |
| 10146 | Zirconium | 7440-67-7 | 94.1 | | 4.94 | 0.819 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.20 | | 0.395 | 0.0987 | 2 |
| 06142 | Silver | 7440-22-4 | 9.97 | | 0.197 | 0.0197 | 2 |
| 06144 | Strontium | 7440-24-6 | 20.2 | | 0.395 | 0.0336 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.617 | | 0.197 | 0.0296 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.185 | | 0.0200 | 0.0104 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |

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

**Sample Description:** SL-536-SA7-SB-3.0-4.0MSD Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022146**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 19.1 | B | 1.02 | 0.0372 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 101 | | 5.09 | 0.0323 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 108 | B | 5.09 | 0.0411 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 105 | B | 5.09 | 0.0413 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 104 | | 5.09 | 0.0407 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 120 | B | 5.09 | 0.0423 | 1 |
| 11031 | OCDD | 3268-87-9 | 375 | B | 10.2 | 0.0327 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.2 | | 1.02 | 0.0286 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 104 | B | 5.09 | 0.0251 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 105 | B | 5.09 | 0.0232 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 107 | B | 5.09 | 0.0436 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 105 | B | 5.09 | 0.0415 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 106 | B | 5.09 | 0.0449 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 106 | B | 5.09 | 0.0425 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 109 | B | 5.09 | 0.0332 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 105 | B | 5.09 | 0.0425 | 1 |
| 11031 | OCDF | 39001-02-0 | 212 | B | 10.2 | 0.0322 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 75 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 84 | 23 - 140 |
| 13C12-OCDD | 80 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 83 | 24 - 185 |
| 13C12-23478-PeCDF | 84 | 21 - 178 |
| 13C12-123478-HxCDF | 86 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 85 | 28 - 136 |
| 13C12-123789-HxCDF | 91 | 29 - 147 |
| 13C12-1234678-HpCDF | 92 | 28 - 143 |
| 13C12-1234789-HpCDF | 84 | 26 - 138 |
| 13C12-OCDF | 80 | 17 - 157 |

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

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

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

**Sample Description: SL-536-SA7-SB-3.0-4.0MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022146**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03MSD

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 08:17 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13106A16A | 04/16/2013 22:00 | Laura M Krieger | 25.93 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201310530763 | 04/15/2013 11:01 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201310530763 | 04/15/2013 11:02 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 3 | 201310530763 | 04/15/2013 11:02 | Larry E Bevins | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131080019A | 04/22/2013 22:32 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131080019A | 04/19/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 12:38 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106003 | 04/18/2013 02:20 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13106003 | 04/16/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |

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

**Sample Description: SL-536-SA7-SB-3.0-4.0MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022146**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:29 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/24/2013 11:42 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:52 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:52 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:52 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:05 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

**Sample Description: SL-536-SA7-SB-3.0-4.0DUP Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022147**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,100 | | 39.5 | 7.61 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.52 | J | 3.95 | 0.494 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.86 | J | 3.95 | 0.326 | 1 |
| 06946 | Barium | 7440-39-3 | 70.5 | | 0.987 | 0.0326 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.485 | J | 0.987 | 0.0661 | 1 |
| 07914 | Boron | 7440-42-8 | 3.08 | J | 9.87 | 0.819 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.448 | J | 0.987 | 0.0326 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,940 | | 19.7 | 3.97 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.3 | | 2.96 | 0.0869 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.99 | | 0.987 | 0.0888 | 1 |
| 06953 | Copper | 7440-50-8 | 5.26 | | 1.97 | 0.178 | 1 |
| 01654 | Iron | 7439-89-6 | 19,500 | | 39.5 | 3.75 | 1 |
| 06955 | Lead | 7439-92-1 | 5.51 | | 2.96 | 0.464 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.4 | | 3.9 | 0.54 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,070 | | 9.87 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 276 | | 0.987 | 0.0819 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.445 | J | 1.97 | 0.168 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.69 | | 1.97 | 0.109 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 378 | | 9.87 | 0.503 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,820 | | 98.7 | 13.3 | 1 |
| 01667 | Sodium | 7440-23-5 | 62.6 | J | 98.7 | 16.5 | 1 |
| 06969 | Tin | 7440-31-5 | 2.75 | J | 9.87 | 0.217 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,080 | | 0.987 | 0.168 | 1 |
| 06971 | Vanadium | 7440-62-2 | 28.9 | | 0.987 | 0.109 | 1 |
| 06972 | Zinc | 7440-66-6 | 55.7 | | 3.95 | 0.197 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.01 | J | 4.94 | 0.819 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.395 | U | 0.395 | 0.0987 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0331 | J | 0.197 | 0.0197 | 2 |
| 06144 | Strontium | 7440-24-6 | 11.7 | | 0.395 | 0.0336 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.225 | | 0.197 | 0.0296 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0203 | U | 0.0203 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.69 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 2.8 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

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

**Sample Description: SL-536-SA7-SB-3.0-4.0DUP Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022147**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 08:50 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

SA736 SDG#: PH030-03DUP

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:22 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 01:47 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:47 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:47 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:47 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:01 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401A | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

**Sample Description:** SL-836-SA7-SB-3.0-4.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022148**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 09:00 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

78363 SDG#: PH030-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.91 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.5 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.6 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.5 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.3 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.0 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.8 | | 1.7 | 0.68 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 25.35 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |

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

**Sample Description:** SL-836-SA7-SB-3.0-4.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7022148
**LLI Group #** 1382816
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 04/12/2013 09:00 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

78363 SDG#: PH030-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,800 | | 39.6 | 7.63 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.47 | J | 3.96 | 0.495 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.38 | J | 3.96 | 0.326 | 1 |
| 06946 | Barium | 7440-39-3 | 66.7 | | 0.989 | 0.0326 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.501 | J | 0.989 | 0.0663 | 1 |
| 07914 | Boron | 7440-42-8 | 2.90 | J | 9.89 | 0.821 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.453 | J | 0.989 | 0.0326 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,540 | | 19.8 | 3.98 | 1 |
| 06951 | Chromium | 7440-47-3 | 14.0 | | 2.97 | 0.0871 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.93 | | 0.989 | 0.0890 | 1 |
| 06953 | Copper | 7440-50-8 | 4.57 | | 1.98 | 0.178 | 1 |
| 01654 | Iron | 7439-89-6 | 19,600 | | 39.6 | 3.76 | 1 |
| 06955 | Lead | 7439-92-1 | 5.13 | | 2.97 | 0.465 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.8 | | 4.0 | 0.54 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,870 | | 9.89 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 276 | | 0.989 | 0.0821 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.271 | J | 1.98 | 0.168 | 1 |
| 06961 | Nickel | 7440-02-0 | 7.16 | | 1.98 | 0.109 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 344 | | 9.89 | 0.505 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,710 | | 98.9 | 13.4 | 1 |
| 01667 | Sodium | 7440-23-5 | 59.4 | J | 98.9 | 16.5 | 1 |
| 06969 | Tin | 7440-31-5 | 2.71 | J | 9.89 | 0.218 | 1 |
| 06970 | Titanium | 7440-32-6 | 979 | | 0.989 | 0.168 | 1 |
| 06971 | Vanadium | 7440-62-2 | 26.8 | | 0.989 | 0.109 | 1 |
| 06972 | Zinc | 7440-66-6 | 54.9 | | 3.96 | 0.198 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.95 | U | 4.95 | 0.821 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.396 | U | 0.396 | 0.0989 | 2 |
| 06142 | Silver | 7440-22-4 | 0.198 | U | 0.198 | 0.0198 | 2 |
| 06144 | Strontium | 7440-24-6 | 10.9 | | 0.396 | 0.0336 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.248 | | 0.198 | 0.0297 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0200 | U | 0.0200 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.92 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.8 | | 0.10 | 0.10 | 1 |

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

**Sample Description: SL-836-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022148**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 09:00 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

78363 SDG#: PH030-04

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

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

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

**Sample Description: SL-836-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022148**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 09:00 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

78363 SDG#: PH030-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0709 JBQ | 1.03 | 0.0244 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.380 J | 5.13 | 0.0346 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.724 JB | 5.13 | 0.0326 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.87 JB | 5.13 | 0.0322 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.41 J | 5.13 | 0.0302 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 38.9 B | 5.13 | 0.0387 | 1 |
| 11031 | OCDD | 3268-87-9 | 358 B | 10.3 | 0.0358 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0308 JQ | 1.03 | 0.0269 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.260 JBQ | 5.13 | 0.0187 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.231 JB | 5.13 | 0.0179 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.302 JB | 5.13 | 0.0306 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.396 JB | 5.13 | 0.0285 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.187 JB | 5.13 | 0.0297 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.439 JB | 5.13 | 0.0267 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 5.29 B | 5.13 | 0.0198 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.529 JB | 5.13 | 0.0274 | 1 |
| 11031 | OCDF | 39001-02-0 | 9.39 JB | 10.3 | 0.0276 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.54 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 85 | 25 - 164 |
| 13C12-12378-PeCDD | 96 | 25 - 181 |
| 13C12-123478-HxCDD | 96 | 32 - 141 |
| 13C12-123678-HxCDD | 99 | 28 - 130 |
| 13C12-123789-HxCDD | 101 | 28 - 130 |
| 13C12-1234678-HpCDD | 98 | 23 - 140 |
| 13C12-OCDD | 95 | 17 - 157 |
| 13C12-2378-TCDF | 79 | 24 - 169 |
| 13C12-12378-PeCDF | 95 | 24 - 185 |
| 13C12-23478-PeCDF | 94 | 21 - 178 |
| 13C12-123478-HxCDF | 99 | 26 - 152 |
| 13C12-123678-HxCDF | 101 | 26 - 123 |
| 13C12-234678-HxCDF | 99 | 28 - 136 |
| 13C12-123789-HxCDF | 101 | 29 - 147 |
| 13C12-1234678-HpCDF | 115 | 28 - 143 |
| 13C12-1234789-HpCDF | 93 | 26 - 138 |
| 13C12-OCDF | 90 | 17 - 157 |

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

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

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

**Sample Description: SL-836-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022148**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 09:00 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

78363 SDG#: PH030-04

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-836-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022148**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 09:00 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

78363 SDG#: PH030-04

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 08:46 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13106A16A | 04/16/2013 18:12 | Laura M Krieger | 25.35 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201310530763 | 04/15/2013 11:09 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201310530763 | 04/15/2013 11:10 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 3 | 201310530763 | 04/15/2013 11:10 | Larry E Bevins | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131080019A | 04/22/2013 22:50 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131080019A | 04/19/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 10:34 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106003 | 04/18/2013 03:17 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13106003 | 04/16/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |

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

**Sample Description: SL-836-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022148**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 09:00 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

78363 SDG#: PH030-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:40 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 01:59 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:59 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:59 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 01:59 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:07 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401A | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

**Sample Description:** SL-535-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022149**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 10:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75350 SDG#: PH030-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.1 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 6.3 | J | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 0.79 | J | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.76 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.2 | J | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.5 | J | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 13 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 28 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description:** SL-535-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022149**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 10:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75350 SDG#: PH030-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,800 | | 39.9 | 7.69 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.78 | J | 3.99 | 0.499 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.11 | J | 3.99 | 0.329 | 1 |
| 06946 | Barium | 7440-39-3 | 80.6 | | 0.998 | 0.0329 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.521 | J | 0.998 | 0.0669 | 1 |
| 07914 | Boron | 7440-42-8 | 3.82 | J | 9.98 | 0.828 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.541 | J | 0.998 | 0.0329 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,510 | | 20.0 | 4.01 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.9 | | 2.99 | 0.0878 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.40 | | 0.998 | 0.0898 | 1 |
| 06953 | Copper | 7440-50-8 | 6.46 | | 2.00 | 0.180 | 1 |
| 01654 | Iron | 7439-89-6 | 21,600 | | 39.9 | 3.79 | 1 |
| 06955 | Lead | 7439-92-1 | 7.03 | | 2.99 | 0.469 | 1 |
| 01656 | Lithium | 7439-93-2 | 27.7 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,660 | | 9.98 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 299 | | 0.998 | 0.0828 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.281 | J | 2.00 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.04 | | 2.00 | 0.110 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 484 | | 9.98 | 0.509 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,110 | | 99.8 | 13.5 | 1 |
| 01667 | Sodium | 7440-23-5 | 61.6 | J | 99.8 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.69 | J | 9.98 | 0.220 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,150 | | 0.998 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 31.7 | | 0.998 | 0.110 | 1 |
| 06972 | Zinc | 7440-66-6 | 66.5 | | 3.99 | 0.200 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.99 | U | 4.99 | 0.828 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.399 | U | 0.399 | 0.0998 | 2 |
| 06142 | Silver | 7440-22-4 | 0.200 | U | 0.200 | 0.0200 | 2 |
| 06144 | Strontium | 7440-24-6 | 15.1 | | 0.399 | 0.0339 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.258 | | 0.200 | 0.0299 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0151 | J | 0.0202 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.53 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.7 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

**Sample Description: SL-535-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022149**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 10:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75350 SDG#: PH030-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.166 | JB | 1.02 | 0.0277 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.576 | JQ | 5.10 | 0.0373 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.853 | JB | 5.10 | 0.0383 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.87 | JB | 5.10 | 0.0392 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.51 | J | 5.10 | 0.0366 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 33.4 | B | 5.10 | 0.0468 | 1 |
| 11031 | OCDD | 3268-87-9 | 299 | B | 10.2 | 0.0289 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.197 | JQ | 1.02 | 0.0411 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.421 | JB | 5.10 | 0.0209 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.380 | JB | 5.10 | 0.0197 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.329 | JB | 5.10 | 0.0294 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.323 | JBQ | 5.10 | 0.0286 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.215 | JBQ | 5.10 | 0.0289 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.359 | JB | 5.10 | 0.0286 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 3.82 | JB | 5.10 | 0.0221 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.319 | JB | 5.10 | 0.0258 | 1 |
| 11031 | OCDF | 39001-02-0 | 7.05 | JB | 10.2 | 0.0215 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.25 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 79 | 25 - 164 |
| 13C12-12378-PeCDD | 90 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 88 | 23 - 140 |
| 13C12-OCDD | 90 | 17 - 157 |
| 13C12-2378-TCDF | 73 | 24 - 169 |
| 13C12-12378-PeCDF | 87 | 24 - 185 |
| 13C12-23478-PeCDF | 87 | 21 - 178 |
| 13C12-123478-HxCDF | 88 | 26 - 152 |
| 13C12-123678-HxCDF | 90 | 26 - 123 |
| 13C12-234678-HxCDF | 87 | 28 - 136 |
| 13C12-123789-HxCDF | 95 | 29 - 147 |
| 13C12-1234678-HpCDF | 97 | 28 - 143 |
| 13C12-1234789-HpCDF | 88 | 26 - 138 |
| 13C12-OCDF | 87 | 17 - 157 |

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

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

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

**Sample Description: SL-535-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022149**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 10:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75350 SDG#: PH030-05

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-535-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022149**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 10:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75350 SDG#: PH030-05

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 09:16 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131080019A | 04/22/2013 23:09 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131080019A | 04/19/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 13:20 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106003 | 04/18/2013 07:11 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13106003 | 04/16/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:51 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:06 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:06 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:06 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:06 | David K Beck | 2 |

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

**Sample Description: SL-535-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022149**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 10:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75350 SDG#: PH030-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:09 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401A | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

**Sample Description:** SL-535-SA7-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7022150
**LLI Group #** 1382816
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 04/12/2013 10:57 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75354 SDG#: PH030-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.72 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

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

**Sample Description: SL-535-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022150**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 10:57 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75354 SDG#: PH030-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,900 | | 40.5 | 7.81 | 1 |
| 06944 | Antimony | 7440-36-0 | 2.47 | J | 4.05 | 0.506 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.17 | J | 4.05 | 0.334 | 1 |
| 06946 | Barium | 7440-39-3 | 96.9 | | 1.01 | 0.0334 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.596 | J | 1.01 | 0.0678 | 1 |
| 07914 | Boron | 7440-42-8 | 2.92 | J | 10.1 | 0.840 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.603 | J | 1.01 | 0.0334 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,360 | | 20.2 | 4.07 | 1 |
| 06951 | Chromium | 7440-47-3 | 22.3 | | 3.04 | 0.0891 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.49 | | 1.01 | 0.0911 | 1 |
| 06953 | Copper | 7440-50-8 | 9.09 | | 2.02 | 0.182 | 1 |
| 01654 | Iron | 7439-89-6 | 24,000 | | 40.5 | 3.85 | 1 |
| 06955 | Lead | 7439-92-1 | 6.08 | | 3.04 | 0.476 | 1 |
| 01656 | Lithium | 7439-93-2 | 30.3 | | 4.0 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,420 | | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 346 | | 1.01 | 0.0840 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.331 | J | 2.02 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.9 | | 2.02 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 531 | | 10.1 | 0.516 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,100 | | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 70.7 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.73 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,300 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.8 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 63.2 | | 4.05 | 0.202 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.05 | J | 5.06 | 0.840 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.166 | J | 0.405 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0452 | J | 0.202 | 0.0202 | 2 |
| 06144 | Strontium | 7440-24-6 | 14.3 | | 0.405 | 0.0344 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.262 | | 0.202 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0108 | J | 0.0201 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C<br>The pH was measured in water at 22 C. | n.a. | 7.40 | | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.1 | | 0.10 | 0.10 | 1 |

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

**Sample Description: SL-535-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022150**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 10:57 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75354 SDG#: PH030-06

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

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

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

**Sample Description: SL-535-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022150**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 10:57 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75354 SDG#: PH030-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0215 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0750 | JQ | 5.19 | 0.0227 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0713 | JB | 5.19 | 0.0228 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.110 | JB | 5.19 | 0.0232 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.108 | J | 5.19 | 0.0214 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.55 | JB | 5.19 | 0.0229 | 1 |
| 11031 | OCDD | 3268-87-9 | 14.6 | B | 10.4 | 0.0168 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0363 | JQ | 1.04 | 0.0212 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.124 | JBQ | 5.19 | 0.0117 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.124 | JB | 5.19 | 0.0111 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0686 | JB | 5.19 | 0.0148 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0431 | JB | 5.19 | 0.0142 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.110 | JBQ | 5.19 | 0.0145 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0628 | JB | 5.19 | 0.0137 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.220 | JB | 5.19 | 0.00945 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0491 | JBQ | 5.19 | 0.0125 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.470 | JB | 10.4 | 0.0214 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.106 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 66 | 25 - 164 |
| 13C12-12378-PeCDD | 78 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 83 | 17 - 157 |
| 13C12-2378-TCDF | 63 | 24 - 169 |
| 13C12-12378-PeCDF | 76 | 24 - 185 |
| 13C12-23478-PeCDF | 77 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 82 | 28 - 136 |
| 13C12-123789-HxCDF | 87 | 29 - 147 |
| 13C12-1234678-HpCDF | 95 | 28 - 143 |
| 13C12-1234789-HpCDF | 82 | 26 - 138 |
| 13C12-OCDF | 81 | 17 - 157 |

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

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

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

**Sample Description: SL-535-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022150**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 10:57 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75354 SDG#: PH030-06

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-535-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022150**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 10:57 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75354 SDG#: PH030-06

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 09:45 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13106A16A | 04/16/2013 18:50 | Laura M Krieger | 25.72 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201310530763 | 04/15/2013 11:05 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201310530763 | 04/15/2013 11:05 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 3 | 201310530763 | 04/15/2013 11:06 | Larry E Bevins | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131080019A | 04/22/2013 23:27 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131080019A | 04/19/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 09:53 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106003 | 04/18/2013 08:08 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13106003 | 04/16/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |

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

**Sample Description: SL-535-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022150**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 10:57 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75354 SDG#: PH030-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:55 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:08 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:08 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:08 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:08 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:15 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401A | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

**Sample Description:** SL-535-SA7-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022151**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 11:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75359 SDG#: PH030-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.25 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

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

**Sample Description:** SL-535-SA7-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7022151
**LLI Group #** 1382816
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 04/12/2013 11:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75359 SDG#: PH030-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,400 | | 40.6 | 7.83 | 1 |
| 06944 | Antimony | 7440-36-0 | 2.10 | J | 4.06 | 0.508 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.20 | J | 4.06 | 0.335 | 1 |
| 06946 | Barium | 7440-39-3 | 82.8 | | 1.02 | 0.0335 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.546 | J | 1.02 | 0.0680 | 1 |
| 07914 | Boron | 7440-42-8 | 2.37 | J | 10.2 | 0.843 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.511 | J | 1.02 | 0.0335 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,890 | | 20.3 | 4.08 | 1 |
| 06951 | Chromium | 7440-47-3 | 27.8 | | 3.05 | 0.0894 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.43 | | 1.02 | 0.0914 | 1 |
| 06953 | Copper | 7440-50-8 | 6.96 | | 2.03 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 22,500 | | 40.6 | 3.86 | 1 |
| 06955 | Lead | 7439-92-1 | 6.56 | | 3.05 | 0.477 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.9 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,060 | | 10.2 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 347 | | 1.02 | 0.0843 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.486 | J | 2.03 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.6 | | 2.03 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 470 | | 10.2 | 0.518 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,650 | | 102 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 71.3 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.86 | J | 10.2 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,210 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 37.0 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 60.5 | | 4.06 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.08 | U | 5.08 | 0.843 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.119 | J | 0.406 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0260 | J | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 15.0 | | 0.406 | 0.0345 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.273 | | 0.203 | 0.0305 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0149 | J | 0.0208 | 0.0108 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.45 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.4 | | 0.10 | 0.10 | 1 |

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

**Sample Description: SL-535-SA7-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022151**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 11:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75359 SDG#: PH030-07

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

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

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

**Sample Description:** SL-535-SA7-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022151**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 11:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75359 SDG#: PH030-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0291 JBQ | 1.04 | 0.0235 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0562 JQ | 5.18 | 0.0229 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0280 JBQ | 5.18 | 0.0171 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0413 JBQ | 5.18 | 0.0177 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 5.18 U | 5.18 | 0.0168 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.256 JB | 5.18 | 0.0200 | 1 |
| 11031 | OCDD | 3268-87-9 | 1.74 JB | 10.4 | 0.0185 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 U | 1.04 | 0.0198 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0848 JBQ | 5.18 | 0.0107 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0548 JB | 5.18 | 0.00993 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0419 JBQ | 5.18 | 0.00984 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0241 JBQ | 5.18 | 0.00914 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0462 JBQ | 5.18 | 0.0102 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0231 JBQ | 5.18 | 0.00947 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0660 JBQ | 5.18 | 0.00688 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0401 JBQ | 5.18 | 0.0101 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.121 JBQ | 10.4 | 0.0196 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0195 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 68 | 25 - 164 |
| 13C12-12378-PeCDD | 78 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 76 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 77 | 24 - 185 |
| 13C12-23478-PeCDF | 78 | 21 - 178 |
| 13C12-123478-HxCDF | 78 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 79 | 29 - 147 |
| 13C12-1234678-HpCDF | 91 | 28 - 143 |
| 13C12-1234789-HpCDF | 74 | 26 - 138 |
| 13C12-OCDF | 71 | 17 - 157 |

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

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

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

**Sample Description: SL-535-SA7-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022151**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 11:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75359 SDG#: PH030-07

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-535-SA7-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022151**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 11:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75359 SDG#: PH030-07

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 10:14 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13106A16A | 04/16/2013 19:28 | Laura M Krieger | 25.25 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201310530763 | 04/15/2013 11:07 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201310530763 | 04/15/2013 11:07 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 3 | 201310530763 | 04/15/2013 11:08 | Larry E Bevins | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131080019A | 04/22/2013 23:45 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131080019A | 04/19/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 10:13 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106003 | 04/18/2013 09:04 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13106003 | 04/16/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |

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

**Sample Description: SL-535-SA7-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022151**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 11:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75359 SDG#: PH030-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 19:59 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:10 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:10 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:10 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:10 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:17 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401A | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

**Sample Description:** SL-534-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022152**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 14:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75340 SDG#: PH030-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.91 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.4 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.5 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 9.3 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.4 | J | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.83 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.1 | J | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | J | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.6 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 13 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 32 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description: SL-534-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022152**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 14:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75340 SDG#: PH030-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,300 | | 41.5 | 8.01 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.96 | J | 4.15 | 0.519 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.83 | J | 4.15 | 0.343 | 1 |
| 06946 | Barium | 7440-39-3 | 90.9 | | 1.04 | 0.0343 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.592 | J | 1.04 | 0.0696 | 1 |
| 07914 | Boron | 7440-42-8 | 4.80 | J | 10.4 | 0.862 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.533 | J | 1.04 | 0.0343 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,600 | | 20.8 | 4.17 | 1 |
| 06951 | Chromium | 7440-47-3 | 20.7 | | 3.12 | 0.0914 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.36 | | 1.04 | 0.0935 | 1 |
| 06953 | Copper | 7440-50-8 | 8.38 | | 2.08 | 0.187 | 1 |
| 01654 | Iron | 7439-89-6 | 22,800 | | 41.5 | 3.95 | 1 |
| 06955 | Lead | 7439-92-1 | 6.81 | | 3.12 | 0.488 | 1 |
| 01656 | Lithium | 7439-93-2 | 27.8 | | 4.2 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,130 | | 10.4 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 323 | | 1.04 | 0.0862 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.335 | J | 2.08 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.8 | | 2.08 | 0.114 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 532 | | 10.4 | 0.530 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,390 | | 104 | 14.0 | 1 |
| 01667 | Sodium | 7440-23-5 | 60.8 | J | 104 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.76 | J | 10.4 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,230 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 39.4 | | 1.04 | 0.114 | 1 |
| 06972 | Zinc | 7440-66-6 | 59.4 | | 4.15 | 0.208 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.13 | J | 5.19 | 0.862 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.415 | U | 0.415 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0407 | J | 0.208 | 0.0208 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.7 | | 0.415 | 0.0353 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.272 | | 0.208 | 0.0312 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0188 | J | 0.0207 | 0.0107 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.58 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.7 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

**Sample Description:** SL-534-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7022152**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 14:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75340 SDG#: PH030-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0346 JBQ | 1.03 | 0.0296 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.344 J | 5.15 | 0.0346 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.336 JB | 5.15 | 0.0407 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.701 JB | 5.15 | 0.0411 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.976 J | 5.15 | 0.0392 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 15.0 B | 5.15 | 0.0392 | 1 |
| 11031 | OCDD | 3268-87-9 | 198 B | 10.3 | 0.0309 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0508 JQ | 1.03 | 0.0409 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.118 JBQ | 5.15 | 0.0188 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.156 JBQ | 5.15 | 0.0173 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.253 JB | 5.15 | 0.0291 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.204 JBQ | 5.15 | 0.0278 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.166 JBQ | 5.15 | 0.0303 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.349 JBQ | 5.15 | 0.0275 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.74 JB | 5.15 | 0.0189 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.289 JB | 5.15 | 0.0248 | 1 |
| 11031 | OCDF | 39001-02-0 | 5.52 JB | 10.3 | 0.0250 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.812 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 76 | 25 - 164 |
| 13C12-12378-PeCDD | 84 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 89 | 23 - 140 |
| 13C12-OCDD | 89 | 17 - 157 |
| 13C12-2378-TCDF | 72 | 24 - 169 |
| 13C12-12378-PeCDF | 85 | 24 - 185 |
| 13C12-23478-PeCDF | 84 | 21 - 178 |
| 13C12-123478-HxCDF | 87 | 26 - 152 |
| 13C12-123678-HxCDF | 90 | 26 - 123 |
| 13C12-234678-HxCDF | 88 | 28 - 136 |
| 13C12-123789-HxCDF | 90 | 29 - 147 |
| 13C12-1234678-HpCDF | 104 | 28 - 143 |
| 13C12-1234789-HpCDF | 85 | 26 - 138 |
| 13C12-OCDF | 85 | 17 - 157 |

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

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

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

**Sample Description: SL-534-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022152**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 14:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75340 SDG#: PH030-08*

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-534-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022152**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 14:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75340 SDG#: PH030-08*

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 10:43 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131080019A | 04/23/2013 00:04 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131080019A | 04/19/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131060013A | 04/19/2013 14:01 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131060013A | 04/16/2013 13:00 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13106003 | 04/18/2013 10:01 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13106003 | 04/16/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:02 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:13 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:13 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:13 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:13 | David K Beck | 2 |

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

**Sample Description: SL-534-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7022152**
**LLI Group # 1382816**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/12/2013 14:30 by SM

Submitted: 04/15/2013 09:00
Reported: 04/25/2013 14:24

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

75340 SDG#: PH030-08*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:19 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401A | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382816
Reported: 04/25/13 at 02:24 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13110SLA026 | Sample number(s): 7022144-7022146,7022148-7022152 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 90 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 85 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 95 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 91 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 95 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 116 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 121 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 88 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 71-120 | | |
| Batch number: 13106A16A | Sample number(s): 7022144-7022146,7022148,7022150-7022151 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 90 | | 67-119 | | |
| Batch number: 13106A20A | Sample number(s): 7022142 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 99 | 98 | 75-135 | 2 | 30 |
| Batch number: 131050014A | Sample number(s): 7022143 | | | | | | | | | |
| 19b Formaldehyde 8315A | 50 | U | 50. | 30 | ug/l | 74 | 91 | 60-140 | 21* | 20 |
| Batch number: 131080019A | Sample number(s): 7022144-7022146,7022148-7022152 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 70 | 72 | 36-106 | 2 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 94 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382816
Reported: 04/25/13 at 02:24 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 114 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131060013A | Sample number(s): 7022144-7022146,7022148-7022152 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 98 | 95 | 70-123 | 3 | 20 |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 113 | 110 | 75-128 | 3 | 20 |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 110 | 108 | 64-134 | 2 | 20 |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 79 | 70 | 65-128 | 12 | 20 |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 82 | 79 | 49-107 | 4 | 20 |
| Batch number: 131070637001 | Sample number(s): 7022144-7022152 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 99 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 101 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 109 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 96 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 106 | | 80-120 | | |
| Calcium | 20.0 | U | 20.0 | 4.02 | mg/kg | 101 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 100 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 106 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 103 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 103 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 1.82 | J | 10.0 | 1.73 | mg/kg | 99 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 100 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 10.9 | | 10.0 | 0.510 | mg/kg | 116 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 99 | | 80-120 | | |
| Tin | 1.40 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 98 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 108 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 101 | | 80-120 | | |
| Batch number: 131070637001A | Sample number(s): 7022144-7022152 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 110 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0340 | mg/kg | 111 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 97 | | 80-120 | | |
| Batch number: 131070637001B | Sample number(s): 7022144-7022152 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 117 | | 80-120 | | |
| Batch number: 131070638001 | Sample number(s): 7022144-7022152 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0103 | mg/kg | 109 | | 85-120 | | |
| Batch number: 13107039401A | Sample number(s): 7022144,7022147-7022152 | | | | | | | | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382816
Reported: 04/25/13 at 02:24 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 15a pH by 9045C | | | | | 100 | | 95-105 | | |
| Batch number: 13112162401A | Sample number(s): 7022144-7022152 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13106003 | Sample number(s): 7022144-7022146,7022148-7022152 | | | | | | | | |
| 2378-TCDD | 0.0457 J | 1.00 | 0.0319 | ng/kg | 97 | | 67-158 | | |
| 12378-PeCDD | 5.00 U | 5.00 | 0.0277 | ng/kg | 99 | | 70-142 | | |
| 123478-HxCDD | 0.0315 J | 5.00 | 0.0190 | ng/kg | 106 | | 70-164 | | |
| 123678-HxCDD | 0.0201 J | 5.00 | 0.0194 | ng/kg | 104 | | 76-134 | | |
| 123789-HxCDD | 5.00 U | 5.00 | 0.0188 | ng/kg | 104 | | 64-162 | | |
| 1234678-HpCDD | 0.0840 J | 5.00 | 0.0207 | ng/kg | 101 | | 70-140 | | |
| OCDD | 0.121 J | 10.0 | 0.0175 | ng/kg | 102 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0320 | ng/kg | 102 | | 75-158 | | |
| 12378-PeCDF | 0.0560 J | 5.00 | 0.0169 | ng/kg | 103 | | 80-134 | | |
| 23478-PeCDF | 0.0310 J | 5.00 | 0.0162 | ng/kg | 105 | | 68-160 | | |
| 123478-HxCDF | 0.0446 J | 5.00 | 0.0127 | ng/kg | 105 | | 72-134 | | |
| 123678-HxCDF | 0.0356 J | 5.00 | 0.0121 | ng/kg | 103 | | 84-130 | | |
| 123789-HxCDF | 0.0566 J | 5.00 | 0.0121 | ng/kg | 107 | | 78-130 | | |
| 234678-HxCDF | 0.0222 J | 5.00 | 0.0117 | ng/kg | 105 | | 70-156 | | |
| 1234678-HpCDF | 0.0530 J | 5.00 | 0.00783 | ng/kg | 104 | | 82-122 | | |
| 1234789-HpCDF | 0.0413 J | 5.00 | 0.0103 | ng/kg | 105 | | 78-138 | | |
| OCDF | 0.0815 J | 10.0 | 0.0257 | ng/kg | 104 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0162 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13110SLA026 | Sample number(s): 7022144-7022146,7022148-7022152 UNSPK: 7022144 | | | | | | | | |
| Acenaphthene | 97 | 92 | 48-127 | 5 | 30 | | | | |
| Acenaphthylene | 104 | 96 | 49-121 | 7 | 30 | | | | |
| Anthracene | 102 | 97 | 52-126 | 5 | 30 | | | | |
| Benzo(a)anthracene | 108 | 93 | 32-135 | 15 | 30 | | | | |
| Benzo(a)pyrene | 100 | 86 | 36-138 | 15 | 30 | | | | |
| Benzo(b)fluoranthene | 109 | 88 | 26-142 | 20 | 30 | | | | |
| Benzo(e)pyrene | 91 | 77 | 70-130 | 17 | 30 | | | | |
| Benzo(g,h,i)perylene | 81 | 82 | 33-141 | 2 | 30 | | | | |
| Benzo(k)fluoranthene | 103 | 90 | 47-129 | 13 | 30 | | | | |
| Butylbenzylphthalate | 107 | 88 | 59-153 | 19 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382816
Reported: 04/25/13 at 02:24 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Di-n-butylphthalate | 88 | 79 | 62-154 | 10 | 30 | | | | |
| Chrysene | 107 | 86 | 29-148 | 21 | 30 | | | | |
| Dibenz(a,h)anthracene | 86 | 89 | 34-125 | 4 | 30 | | | | |
| Diethylphthalate | 84 | 88 | 76-127 | 5 | 30 | | | | |
| Dimethylphthalate | 93 | 88 | 62-136 | 6 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 129 | 116 | 39-167 | 11 | 30 | | | | |
| Fluoranthene | 100 | 72 | 47-135 | 30 | 30 | | | | |
| Fluorene | 110 | 108 | 50-129 | 3 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 84 | 86 | 17-136 | 2 | 30 | | | | |
| 1-Methylnaphthalene | 102 | 98 | 50-131 | 4 | 30 | | | | |
| 2-Methylnaphthalene | 100 | 98 | 28-144 | 2 | 30 | | | | |
| Naphthalene | 95 | 91 | 31-148 | 4 | 30 | | | | |
| N-Nitrosodimethylamine | 85 | 108 | 48-113 | 23 | 30 | | | | |
| Di-n-octylphthalate | 85 | 72 | 52-162 | 16 | 30 | | | | |
| Phenanthrene | 115 | 99 | 29-142 | 15 | 30 | | | | |
| Pyrene | 110 | 64 | 26-143 | 49* | 30 | | | | |
| Batch number: 13106A16A | Sample number(s): 7022144-7022146,7022148,7022150-7022151 UNSPK: 7022144 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 92 | 100 | 39-118 | 9 | 30 | | | | |
| Batch number: 131080019A | Sample number(s): 7022144-7022146,7022148-7022152 UNSPK: 7022144 | | | | | | | | |
| PCB-1016 | 76 | 87 | 16-146 | 13 | 50 | | | | |
| PCB-1260 | 81 | 99 | 40-134 | 20 | 50 | | | | |
| Batch number: 131060013A | Sample number(s): 7022144-7022146,7022148-7022152 UNSPK: 7022144 | | | | | | | | |
| EFH (C12-C14) | 96 | 113 | 49-123 | 16 | 20 | | | | |
| EFH (C15-C20) | 152* | 217* | 49-123 | 35* | 20 | | | | |
| EFH (C21-C30) | 125* | 235* | 49-123 | 33* | 20 | | | | |
| EFH (C30-C40) | 198* | 401* | 49-123 | 35* | 20 | | | | |
| EFH (C8-C11) | 92 | 108 | 49-123 | 16 | 20 | | | | |
| Batch number: 131070637001 | Sample number(s): 7022144-7022152 UNSPK: 7022144 BKG: 7022144 | | | | | | | | |
| Aluminum | 1359 (2) | 1600 (2) | 75-125 | 3 | 20 | 10,500 | 10,800 | 2 | 20 |
| Antimony | 70* | 73* | 75-125 | 4 | 20 | 1.54 J | 1.48 J | 4 (1) | 20 |
| Arsenic | 111 | 108 | 75-125 | 2 | 20 | 2.01 J | 2.79 J | 32* (1) | 20 |
| Barium | 105 | 100 | 75-125 | 3 | 20 | 70.2 | 68.6 | 2 | 20 |
| Beryllium | 99 | 99 | 75-125 | 1 | 20 | 0.469 J | 0.472 J | 1 (1) | 20 |
| Boron | 94 | 95 | 75-125 | 0 | 20 | 3.12 J | 3.00 J | 4 (1) | 20 |
| Cadmium | 105 | 104 | 75-125 | 1 | 20 | 0.409 J | 0.437 J | 7 (1) | 20 |
| Calcium | 67 (2) | 102 (2) | 75-125 | 4 | 20 | 3,060 | 2,860 | 7 | 20 |
| Chromium | 103 | 118 | 75-125 | 8 | 20 | 18.0 | 17.9 | 1 | 20 |
| Cobalt | 101 | 100 | 75-125 | 1 | 20 | 4.98 | 4.86 | 3 | 20 |
| Copper | 101 | 101 | 75-125 | 0 | 20 | 5.00 | 5.12 | 2 (1) | 20 |
| Iron | 1525 (2) | 1576 (2) | 75-125 | 0 | 20 | 18,500 | 19,000 | 3 | 20 |
| Lead | 106 | 104 | 75-125 | 1 | 20 | 5.00 | 5.37 | 7 (1) | 20 |
| Lithium | 104 | 105 | 75-125 | 1 | 20 | 22.9 | 23.7 | 3 | 20 |
| Magnesium | 277 (2) | 267 (2) | 75-125 | 0 | 20 | 3,970 | 3,970 | 0 | 20 |
| Manganese | 107 (2) | 104 (2) | 75-125 | 0 | 20 | 275 | 269 | 2 | 20 |
| Molybdenum | 96 | 96 | 75-125 | 0 | 20 | 1.19 J | 0.434 J | 93* (1) | 20 |
| Nickel | 100 | 99 | 75-125 | 1 | 20 | 8.44 | 8.47 | 0 (1) | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382816
Reported: 04/25/13 at 02:24 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Phosphorus | 98 | 132* | 75-125 | 7 | 20 | 357 | 368 | 3 | 20 |
| Potassium | 129* | 124 | 75-125 | 1 | 20 | 2,680 | 2,750 | 2 | 20 |
| Sodium | 96 | 97 | 75-125 | 2 | 20 | 59.7 J | 60.9 J | 2 (1) | 20 |
| Tin | 92 | 91 | 75-125 | 0 | 20 | 2.85 J | 2.68 J | 6 (1) | 20 |
| Titanium | 243 (2) | 230 (2) | 75-125 | 1 | 20 | 1,030 | 1,050 | 2 | 20 |
| Vanadium | 100 | 99 | 75-125 | 1 | 20 | 28.1 | 28.2 | 0 | 20 |
| Zinc | 112 | 111 | 75-125 | 0 | 20 | 53.7 | 54.2 | 1 | 20 |
| Zirconium | 95 | 94 | 75-125 | 1 | 20 | 1.08 J | 1.96 J | 57* (1) | 20 |
| Batch number: 131070637001A | Sample number(s): 7022144-7022152 UNSPK: 7022144 BKG: 7022144 | | | | | | | | |
| Silver | 100 | 101 | 75-125 | 1 | 20 | 0.0299 J | 0.0323 J | 8 (1) | 20 |
| Strontium | 89 | 103 | 75-125 | 6 | 20 | 11.7 | 11.4 | 2 | 20 |
| Thallium | 105 | 98 | 75-125 | 5 | 20 | 0.226 | 0.220 | 3 (1) | 20 |
| Batch number: 131070637001B | Sample number(s): 7022144-7022152 UNSPK: 7022144 BKG: 7022144 | | | | | | | | |
| Selenium | 116 | 111 | 75-125 | 4 | 20 | 0.385 U | 0.385 U | 0 (1) | 20 |
| Batch number: 131070638001 | Sample number(s): 7022144-7022152 UNSPK: 7022144 BKG: 7022144 | | | | | | | | |
| 3a Mercury 7471A | 112 | 111 | 65-135 | 1 | 20 | 0.0197 U | 0.0198 U | 0 (1) | 20 |
| Batch number: 13107039401A | Sample number(s): 7022144,7022147-7022152 BKG: 7022144 | | | | | | | | |
| 15a pH by 9045C | | | | | | 7.71 | 7.69 | 0 | 3 |
| Batch number: 13112162401A | Sample number(s): 7022144-7022152 BKG: 7022144 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 2.6 | 2.8 | 5 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 2.6 | 2.8 | 5 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 2.6 | 2.8 | 5 | 20 |
| Batch number: 13106003 | Sample number(s): 7022144-7022146,7022148-7022152 UNSPK: 7022144 | | | | | | | | |
| 2378-TCDD | 92 | 94 | 40-135 | 3 | 20 | | | | |
| 12378-PeCDD | 98 | 99 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDD | 104 | 106 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDD | 106 | 102 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDD | 105 | 102 | 40-135 | 3 | 20 | | | | |
| 1234678-HpCDD | 134 | 100 | 40-135 | 24* | 20 | | | | |
| OCDD | 266* | 110 | 40-135 | 58* | 20 | | | | |
| 2378-TCDF | 98 | 99 | 40-135 | 2 | 20 | | | | |
| 12378-PeCDF | 102 | 102 | 40-135 | 1 | 20 | | | | |
| 23478-PeCDF | 105 | 103 | 40-135 | 0 | 20 | | | | |
| 123478-HxCDF | 106 | 105 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDF | 102 | 103 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 104 | 104 | 40-135 | 2 | 20 | | | | |
| 234678-HxCDF | 104 | 104 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 109 | 105 | 40-135 | 3 | 20 | | | | |
| 1234789-HpCDF | 104 | 103 | 40-135 | 0 | 20 | | | | |
| OCDF | 108 | 102 | 40-135 | 4 | 20 | | | | |

## Surrogate Quality Control

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382816
Reported: 04/25/13 at 02:24 PM

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13110SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7022144 | 78 | 89 | 95 |
| 7022145 | 78 | 92 | 95 |
| 7022146 | 69 | 89 | 97 |
| 7022148 | 75 | 95 | 98 |
| 7022149 | 64 | 85 | 92 |
| 7022150 | 77 | 92 | 96 |
| 7022151 | 78 | 90 | 96 |
| 7022152 | 68 | 88 | 92 |
| Blank | 83 | 91 | 96 |
| LCS | 82 | 91 | 101 |
| MS | 78 | 92 | 95 |
| MSD | 69 | 89 | 97 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13106A16A

| | Trifluorotoluene-F |
|---|---|
| 7022144 | 85 |
| 7022145 | 80 |
| 7022146 | 80 |
| 7022148 | 84 |
| 7022150 | 80 |
| 7022151 | 83 |
| Blank | 89 |
| LCS | 84 |
| MS | 80 |
| MSD | 80 |
| Limits: | 61-122 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13106A20A

| | Trifluorotoluene-F |
|---|---|
| 7022142 | 89 |
| Blank | 88 |
| LCS | 110 |
| LCSD | 112 |
| Limits: | 63-135 |

Analysis Name: 19b Formaldehyde 8315A
Batch number: 131050014A

| | Butyraldehyde |
|---|---|
| 7022143 | 114 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382816
Reported: 04/25/13 at 02:24 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| Blank | 79 | |
| LCS | 80 | |
| LCSD | 108 | |
| Limits: | 45-145 | |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131080019A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7022144 | 117 | 98 |
| 7022145 | 113 | 86 |
| 7022146 | 121* | 108 |
| 7022148 | 117 | 104 |
| 7022149 | 110 | 101 |
| 7022150 | 118 | 100 |
| 7022151 | 101 | 93 |
| 7022152 | 109 | 94 |
| Blank | 128* | 117 |
| LCS | 127* | 119 |
| LCSD | 131* | 121* |
| MS | 113 | 86 |
| MSD | 121* | 108 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131060013A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7022144 | 89 | 83 |
| 7022145 | 86 | 72 |
| 7022146 | 90 | 66 |
| 7022148 | 82 | 80 |
| 7022149 | 83 | 70 |
| 7022150 | 91 | 91 |
| 7022151 | 87 | 88 |
| 7022152 | 93 | 76 |
| Blank | 84 | 85 |
| LCS | 92 | 83 |
| LCSD | 88 | 81 |
| MS | 86 | 72 |
| MSD | 90 | 66 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13106003

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7022144 | 69 | 92 | 82 | 87 | 84 | 85 |
| 7022145 | 80 | 84 | 86 | 88 | 86 | 93 |
| 7022146 | 75 | 84 | 86 | 86 | 85 | 91 |
| 7022148 | 85 | 94 | 99 | 101 | 99 | 101 |
| 7022149 | 79 | 87 | 88 | 90 | 87 | 95 |
| 7022150 | 66 | 77 | 81 | 82 | 82 | 87 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1382816
Reported: 04/25/13 at 02:24 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7022151 | 68 | 78 | 78 | 81 | 78 | 79 |
| 7022152 | 76 | 84 | 87 | 90 | 88 | 90 |
| Blank | 70 | 82 | 86 | 88 | 88 | 94 |
| MS | 80 | 84 | 86 | 88 | 86 | 93 |
| MSD | 75 | 84 | 86 | 86 | 85 | 91 |
| OPR | 65 | 71 | 78 | 80 | 77 | 79 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |
| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
| 7022144 | 110 | 93 | 98 | 95 | 85 | 85 |
| 7022145 | 91 | 86 | 84 | 87 | 85 | 83 |
| 7022146 | 92 | 84 | 80 | 85 | 84 | 85 |
| 7022148 | 115 | 93 | 90 | 96 | 96 | 99 |
| 7022149 | 97 | 88 | 87 | 90 | 85 | 85 |
| 7022150 | 95 | 82 | 81 | 78 | 78 | 80 |
| 7022151 | 91 | 74 | 71 | 78 | 77 | 76 |
| 7022152 | 104 | 85 | 85 | 84 | 85 | 86 |
| Blank | 108 | 95 | 106 | 86 | 87 | 86 |
| MS | 91 | 86 | 84 | 87 | 85 | 83 |
| MSD | 92 | 84 | 80 | 85 | 84 | 85 |
| OPR | 85 | 73 | 71 | 71 | 75 | 75 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |
| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
| 7022144 | 86 | 97 | 106 | 64 | 92 | |
| 7022145 | 85 | 85 | 83 | 73 | 83 | |
| 7022146 | 86 | 84 | 80 | 69 | 83 | |
| 7022148 | 101 | 98 | 95 | 79 | 95 | |
| 7022149 | 86 | 88 | 90 | 73 | 87 | |
| 7022150 | 85 | 81 | 83 | 63 | 76 | |
| 7022151 | 77 | 76 | 77 | 64 | 77 | |
| 7022152 | 86 | 89 | 89 | 72 | 85 | |
| Blank | 84 | 94 | 108 | 64 | 83 | |
| MS | 85 | 85 | 83 | 73 | 83 | |
| MSD | 86 | 84 | 80 | 69 | 83 | |
| OPR | 75 | 76 | 76 | 62 | 71 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

Acct# 13013
Grp# 1382816

Sample# 7022142-52

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/12/2013
CarrierName: FedEx
AirbillNo: 7995 1854 7712

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130412-01
Cooler #: 1, 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7470 (Water) Mercury 7471 (Soil) | Fluoride 300.0/9056 | SVOC 8270 TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM Dioxins 1613 | PCBs/PCTs 8082 Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-041213 | 4/12/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| EB-041213 | 4/12/13 08:05 | WQ | None | 1 - 250 mL Amber | 10 | | | | | | | | | | | | | | | | | | | | | | | | X | | | | |
| SL-536-SA7-SB-3.0-4.0MS | 4/12/13 08:50 | SO | None | 6 - SS-Sleeve | 10 | X | X | | | X | X | X | | | | | | | | | | X | | | | | | | | | | | MS/MSD |
| SL-536-SA7-SB-3.0-4.0MS | 4/12/13 08:50 | SO | None | 1 - 8 oz glass | 10 | | | | | | | | | X | | | | | | | | | | | | | | | | | | | MS/MSD |
| SL-536-SA7-SB-3.0-4.0MS | 4/12/13 08:50 | SO | None | 9 - Encore | 10 | | | | | | | | | | | | | | | | X | | | | | | | | | | | | MS/MSD |
| SL-836-SA7-SB-3.0-4.0 | 4/12/13 09:00 | SO | None | 2 - SS-Sleeve | 10 | X | X | | | X | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-836-SA7-SB-3.0-4.0 | 4/12/13 09:00 | SO | None | 1 - 4 oz glass | 10 | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-836-SA7-SB-3.0-4.0 | 4/12/13 09:00 | SO | None | 3 - Encore | 10 | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-535-SA7-SB-0.0-0.5 | 4/12/13 10:30 | SO | None | 2 - SS-Sleeve | 10 | X | X | | | X | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-535-SA7-SB-0.0-0.5 | 4/12/13 10:30 | SO | None | 1 - 4 oz glass | 10 | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-535-SA7-SB-4.0-5.0 | 4/12/13 10:57 | SO | None | 2 - SS-Sleeve | 10 | X | X | | | X | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-535-SA7-SB-4.0-5.0 | 4/12/13 10:57 | SO | None | 1 - 4 oz glass | 10 | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-535-SA7-SB-4.0-5.0 | 4/12/13 10:57 | SO | None | 3 - Encore | 10 | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-535-SA7-SB-9.0-10.0 | 4/12/13 11:30 | SO | None | 2 - 16 oz glass | 10 | X | X | | | X | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-535-SA7-SB-9.0-10.0 | 4/12/13 11:30 | SO | None | 1 - 4 oz glass | 10 | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-535-SA7-SB-9.0-10.0 | 4/12/13 11:30 | SO | None | 3 - Encore | 10 | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-534-SA7-SB-0.0-0.5 | 4/12/13 14:30 | SO | None | 2 - SS-Sleeve | 10 | X | X | | | X | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-534-SA7-SB-0.0-0.5 | 4/12/13 14:30 | SO | None | 1 - 4 oz glass | 10 | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |

Acct# 13013
Grp# 1382816

Sample# 7022142-52

# SSFL Phase 3 Chain of Custody

**CDM Smith**

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 4/12/2013 | Contact Name: | Pam Hartman | COC No: | 20130412-01 |
| CarrierName: | FedEx | Contact Phone: | (818)466-8007 | Cooler #: | 1, 2 |
| AirbillNo: | 7995 1854 7712 | | | Lab: | Lancaster |
| | | | | Lab Phone: | 717-556-7259 |
| | | | | Lab Address | 2425 New Holland Pike<br>Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Steven Mercer

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Cortez | 4/12/13 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | Bruny [signature] | 4-15-13 | 900 | | | | | | |

**From:** Burgesser, Todd [BurgesserTE@cdmsmith.com]
**Sent:** Monday, April 15, 2013 9:54 AM
**To:** Nicole Maljovec; Hartman, Pamela; Cortes, Vidal A.
**Cc:** Zakowski, Cherie
**Subject:** RE: Friday's Samples arrived this AM, Encores past HT, run?

Please run the pH and GRO

-----Original Message-----
From: Nicole Maljovec [mailto:nmaljovec@lancasterlabs.com]
Sent: Monday, April 15, 2013 7:53 AM
To: Hartman, Pamela; Cortes, Vidal A.
Cc: Burgesser, Todd; Zakowski, Cherie
Subject: Friday's Samples arrived this AM, Encores past HT, run?
Importance: High

Good morning all,
Friday's samples arrived this morning instead of Saturday. The temperature is fine and the bottles are intact. The pH in soil and encores for TPH-GRO are past hold by ~1 day. Do you want to run these?

Formaldehyde in water (EB sample) is still in hold. We'll have it extracted today and meet HT.

Thanks,
Nicole

Nicole Maljovec
Eurofins Lancaster Labs
Phone: 717-556-7259

-----Original Message-----
From: Cortes, Vidal A. [mailto:cortesva@cdmsmith.com]
Sent: Friday, April 12, 2013 6:41 PM
To: !US19_SSFLShip
Cc: Hartman, Pamela
Subject: RE: SSFL 04/11/13

Hello,

Please see the attached COCs for samples collected on 4/12.

Thank you,

Vidal Cortes

CDM Smith
111 Academy, Suite 150
Irvine, CA 92617

(949) 930-9823 - direct | fax
(949) 241-9173 - cell
cortesva@cdmsmith.com<mailto:wallinsl@cdm.com>
cdmsmith.com

eurofins | Lancaster Laboratories

Grp # 1382816

# Environmental Sample Administration
# Receipt Documentation Log

**Client/Project:** CDM

**Date of Receipt:** 4.15.13

**Time of Receipt:** 900

**Source Code:** 50.1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT121 | 1.9 | TB | WI | Y | B | |
| 2 | ↓ | 1.5 | ↓ | ↓ | ↓ | ↓ | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

very little ice in bags

**Unpacker Signature/Emp#:** 2299 **Date/Time:** 4.15.13 9:25

Issued by Dept. 6042 Management

2174.06

eurofins | Lancaster Laboratories

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

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

April 26, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/16/2013
Group Number: 1383064
SDG: PH031
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| TB-041513 Water | 7023135 |
| SL-534-SA7-SB-5.5-6.5 Soil | 7023136 |
| SL-537-SA7-SB-0.0-0.5 Soil | 7023137 |
| SL-538-SA7-SB-0.0-0.5 Soil | 7023138 |
| SL-522-SA7-SB-0.0-0.5 Soil | 7023139 |
| SL-521-SA7-SB-0.0-0.5 Soil | 7023140 |

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

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB-041513 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7023135**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 08:00

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

CTB15 SDG#: PH031-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13106A20B | 04/17/2013 10:32 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13106A20B | 04/17/2013 10:32 | Catherine J Schwarz | 1 |

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

**Sample Description:** SL-534-SA7-SB-5.5-6.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7023136**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 08:45 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53456 SDG#: PH031-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 8.0 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.77 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.8 | J | 5.2 | 2.1 | 1 |

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

**Sample Description:** SL-534-SA7-SB-5.5-6.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7023136
**LLI Group #** 1383064
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 04/15/2013 08:45 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53456 SDG#: PH031-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 8.1 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 12 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,300 | | 40.3 | 7.77 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.87 | J | 4.03 | 0.504 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.46 | J | 4.03 | 0.333 | 1 |
| 06946 | Barium | 7440-39-3 | 81.0 | | 1.01 | 0.0333 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.582 | J | 1.01 | 0.0675 | 1 |
| 07914 | Boron | 7440-42-8 | 1.47 | J | 10.1 | 0.837 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.418 | J | 1.01 | 0.0333 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,510 | | 20.2 | 4.05 | 1 |
| 06951 | Chromium | 7440-47-3 | 24.5 | | 3.02 | 0.0887 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.81 | | 1.01 | 0.0907 | 1 |
| 06953 | Copper | 7440-50-8 | 6.24 | | 2.02 | 0.181 | 1 |
| 01654 | Iron | 7439-89-6 | 23,300 | | 40.3 | 3.83 | 1 |
| 06955 | Lead | 7439-92-1 | 5.42 | | 3.02 | 0.474 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.2 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,260 | | 10.1 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 289 | | 1.01 | 0.0837 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.441 | J | 2.02 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.9 | | 2.02 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 295 | | 10.1 | 0.514 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,570 | | 101 | 13.6 | 1 |
| 01667 | Sodium | 7440-23-5 | 67.8 | J | 101 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 2.63 | J | 10.1 | 0.222 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,200 | | 1.01 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 39.4 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 50.4 | | 4.03 | 0.202 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.04 | U | 5.04 | 0.837 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.403 | U | 0.403 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0330 | J | 0.202 | 0.0202 | 2 |
| 06144 | Strontium | 7440-24-6 | 13.8 | | 0.403 | 0.0343 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.227 | | 0.202 | 0.0302 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0125 | J | 0.0206 | 0.0106 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.09 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.6 | | 0.10 | 0.10 | 1 |

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

**Sample Description: SL-534-SA7-SB-5.5-6.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023136**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 08:45 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53456 SDG#: PH031-02

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

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

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

**Sample Description:** SL-534-SA7-SB-5.5-6.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7023136**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 08:45 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53456 SDG#: PH031-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0290 J | 1.04 | 0.0229 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0653 JBQ | 5.19 | 0.0223 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0331 JBQ | 5.19 | 0.0222 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0745 JBQ | 5.19 | 0.0226 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0901 JBQ | 5.19 | 0.0212 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.643 JBQ | 5.19 | 0.0258 | 1 |
| 11031 | OCDD | 3268-87-9 | 7.49 JB | 10.4 | 0.0224 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 U | 1.04 | 0.0215 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.134 JBQ | 5.19 | 0.0125 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0780 JBQ | 5.19 | 0.0126 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0810 JBQ | 5.19 | 0.0143 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0694 JBQ | 5.19 | 0.0128 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0773 JBQ | 5.19 | 0.0169 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0541 JBQ | 5.19 | 0.0143 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.154 JB | 5.19 | 0.00718 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0444 JBQ | 5.19 | 0.0137 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.327 JBQ | 10.4 | 0.0373 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0327 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 87 | 25 - 164 |
| 13C12-12378-PeCDD | 91 | 25 - 181 |
| 13C12-123478-HxCDD | 92 | 32 - 141 |
| 13C12-123678-HxCDD | 93 | 28 - 130 |
| 13C12-123789-HxCDD | 91 | 28 - 130 |
| 13C12-1234678-HpCDD | 92 | 23 - 140 |
| 13C12-OCDD | 86 | 17 - 157 |
| 13C12-2378-TCDF | 80 | 24 - 169 |
| 13C12-12378-PeCDF | 94 | 24 - 185 |
| 13C12-23478-PeCDF | 88 | 21 - 178 |
| 13C12-123478-HxCDF | 90 | 26 - 152 |
| 13C12-123678-HxCDF | 100 | 26 - 123 |
| 13C12-234678-HxCDF | 91 | 28 - 136 |
| 13C12-123789-HxCDF | 85 | 29 - 147 |
| 13C12-1234678-HpCDF | 117 | 28 - 143 |
| 13C12-1234789-HpCDF | 70 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

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

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

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

**Sample Description: SL-534-SA7-SB-5.5-6.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023136**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 08:45 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53456 SDG#: PH031-02

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-534-SA7-SB-5.5-6.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023136**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 08:45 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53456 SDG#: PH031-02

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 11:13 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13106A16A | 04/16/2013 20:06 | Laura M Krieger | 25.77 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201310630774 | 04/16/2013 15:03 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201310630774 | 04/16/2013 15:03 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 3 | 201310630774 | 04/16/2013 15:04 | Lisa J Cooke | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 02:50 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 05:08 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13107001 | 04/18/2013 19:34 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13107001 | 04/17/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |

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

**Sample Description: SL-534-SA7-SB-5.5-6.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023136**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 08:45 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53456 SDG#: PH031-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:06 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:15 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:15 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:15 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:15 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:21 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401A | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

**Sample Description:** SL-537-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7023137**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 09:50 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53700 SDG#: PH031-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.0 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.6 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.4 | J | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.8 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 32 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.5 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.97 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.72 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.84 | J | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 3.4 | | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.1 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.1 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 11 | J | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 6.0 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 12 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description: SL-537-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023137**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 09:50 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53700 SDG#: PH031-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,000 | | 40.5 | 7.81 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.73 | J | 4.05 | 0.507 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.50 | J | 4.05 | 0.334 | 1 |
| 06946 | Barium | 7440-39-3 | 73.3 | | 1.01 | 0.0334 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.477 | J | 1.01 | 0.0679 | 1 |
| 07914 | Boron | 7440-42-8 | 2.96 | J | 10.1 | 0.841 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.511 | J | 1.01 | 0.0334 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,020 | | 20.3 | 4.07 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.5 | | 3.04 | 0.0892 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.33 | | 1.01 | 0.0912 | 1 |
| 06953 | Copper | 7440-50-8 | 6.31 | | 2.03 | 0.182 | 1 |
| 01654 | Iron | 7439-89-6 | 20,600 | | 40.5 | 3.85 | 1 |
| 06955 | Lead | 7439-92-1 | 11.8 | | 3.04 | 0.476 | 1 |
| 01656 | Lithium | 7439-93-2 | 27.2 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,640 | | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 296 | | 1.01 | 0.0841 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.03 | U | 2.03 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.37 | | 2.03 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 466 | | 10.1 | 0.517 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,900 | | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 62.0 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.78 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,110 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 31.0 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 62.8 | | 4.05 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 0.916 | J | 5.07 | 0.841 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.405 | U | 0.405 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0361 | J | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 11.3 | | 0.405 | 0.0345 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.250 | | 0.203 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0156 | J | 0.0203 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.43 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

**Sample Description:** SL-537-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7023137**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 09:50 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53700 SDG#: PH031-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0372 | JQ | 1.02 | 0.0242 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.288 | JB | 5.09 | 0.0326 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.340 | JBQ | 5.09 | 0.0340 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.969 | JB | 5.09 | 0.0336 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.814 | JB | 5.09 | 0.0337 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 22.5 | B | 5.09 | 0.0389 | 1 |
| 11031 | OCDD | 3268-87-9 | 193 | B | 10.2 | 0.0347 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0992 | J | 1.02 | 0.0323 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.169 | JB | 5.09 | 0.0193 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.138 | JBQ | 5.09 | 0.0187 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.201 | JB | 5.09 | 0.0282 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.167 | JB | 5.09 | 0.0243 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0382 | JBQ | 5.09 | 0.0326 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.173 | JB | 5.09 | 0.0273 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.91 | JB | 5.09 | 0.0149 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.261 | JBQ | 5.09 | 0.0273 | 1 |
| 11031 | OCDF | 39001-02-0 | 7.37 | JB | 10.2 | 0.0392 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.850 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 77 | 25 - 164 |
| 13C12-12378-PeCDD | 81 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 78 | 23 - 140 |
| 13C12-OCDD | 71 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 82 | 24 - 185 |
| 13C12-23478-PeCDF | 77 | 21 - 178 |
| 13C12-123478-HxCDF | 77 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 99 | 28 - 143 |
| 13C12-1234789-HpCDF | 60 | 26 - 138 |
| 13C12-OCDF | 51 | 17 - 157 |

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

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

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

**Sample Description: SL-537-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023137**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 09:50 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53700 SDG#: PH031-03

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-537-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023137**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 09:50 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53700 SDG#: PH031-03

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 11:42 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 03:08 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 04:27 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13107001 | 04/18/2013 20:31 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13107001 | 04/17/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:10 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:17 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:17 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:17 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:17 | David K Beck | 2 |

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

**Sample Description: SL-537-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023137**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 09:50 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53700 SDG#: PH031-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:23 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401A | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

**Sample Description:** SL-538-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7023138**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 10:50 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53800 SDG#: PH031-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.50 | J | 1.7 | 0.33 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 3.4 | | 1.7 | 0.67 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 4.4 | | 1.7 | 0.67 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 8.8 | | 1.7 | 0.67 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 3.9 | J | 17 | 3.3 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 3.7 | | 1.7 | 0.67 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 3.2 | | 1.7 | 0.67 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Chrysene | 218-01-9 | 6.4 | | 1.7 | 0.33 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 0.89 | J | 1.7 | 0.67 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 8.2 | | 1.7 | 0.67 | 1 |
| 12969 | Fluorene | 86-73-7 | 0.79 | J | 1.7 | 0.67 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 3.1 | | 1.7 | 0.67 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.93 | J | 1.7 | 0.67 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.88 | J | 1.7 | 0.67 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 4.8 | | 1.7 | 0.67 | 1 |
| 12969 | Pyrene | 129-00-0 | 9.6 | | 1.7 | 0.67 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 18 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 34 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description:** SL-538-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7023138**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 10:50 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53800 SDG#: PH031-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,600 | | 40.2 | 7.75 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.49 | J | 4.02 | 0.503 | 1 |
| 06935 | Arsenic | 7440-38-2 | 1.83 | J | 4.02 | 0.332 | 1 |
| 06946 | Barium | 7440-39-3 | 81.1 | | 1.01 | 0.0332 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.492 | J | 1.01 | 0.0673 | 1 |
| 07914 | Boron | 7440-42-8 | 3.01 | J | 10.1 | 0.834 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.445 | J | 1.01 | 0.0332 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,470 | | 20.1 | 4.04 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.0 | | 3.02 | 0.0885 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.87 | | 1.01 | 0.0905 | 1 |
| 06953 | Copper | 7440-50-8 | 5.72 | | 2.01 | 0.181 | 1 |
| 01654 | Iron | 7439-89-6 | 19,500 | | 40.2 | 3.82 | 1 |
| 06955 | Lead | 7439-92-1 | 10.6 | | 3.02 | 0.472 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.5 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,030 | | 10.1 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 281 | | 1.01 | 0.0834 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.266 | J | 2.01 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.86 | | 2.01 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 409 | | 10.1 | 0.513 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,600 | | 101 | 13.6 | 1 |
| 01667 | Sodium | 7440-23-5 | 60.1 | J | 101 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 2.62 | J | 10.1 | 0.221 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,060 | | 1.01 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 28.9 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 76.1 | | 4.02 | 0.201 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.03 | U | 5.03 | 0.834 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.402 | U | 0.402 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0394 | J | 0.201 | 0.0201 | 2 |
| 06144 | Strontium | 7440-24-6 | 13.6 | | 0.402 | 0.0342 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.267 | | 0.201 | 0.0302 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0152 | J | 0.0195 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.50 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

**Sample Description:** SL-538-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7023138**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 10:50 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53800 SDG#: PH031-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0426 | J | 0.971 | 0.0247 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.319 | JBQ | 4.85 | 0.0351 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.533 | JB | 4.85 | 0.0354 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.59 | JB | 4.85 | 0.0355 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.20 | JB | 4.85 | 0.0308 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 42.8 | B | 4.85 | 0.0494 | 1 |
| 11031 | OCDD | 3268-87-9 | 490 | B | 9.71 | 0.0357 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.116 | J | 0.971 | 0.0336 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.281 | JB | 4.85 | 0.0189 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.207 | JB | 4.85 | 0.0185 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.270 | JBQ | 4.85 | 0.0300 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.254 | JB | 4.85 | 0.0273 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.147 | JBQ | 4.85 | 0.0335 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.302 | JB | 4.85 | 0.0300 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 5.37 | B | 4.85 | 0.0173 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.416 | JB | 4.85 | 0.0295 | 1 |
| 11031 | OCDF | 39001-02-0 | 13.2 | B | 9.71 | 0.0318 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.15 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 77 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 78 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 67 | 24 - 169 |
| 13C12-12378-PeCDF | 80 | 24 - 185 |
| 13C12-23478-PeCDF | 74 | 21 - 178 |
| 13C12-123478-HxCDF | 77 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 76 | 29 - 147 |
| 13C12-1234678-HpCDF | 98 | 28 - 143 |
| 13C12-1234789-HpCDF | 65 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

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

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

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

**Sample Description: SL-538-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023138**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 10:50 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53800 SDG#: PH031-04

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-538-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023138**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 10:50 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53800 SDG#: PH031-04

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 12:11 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 04:04 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 06:10 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13107001 | 04/18/2013 21:27 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13107001 | 04/17/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:14 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:20 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:20 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:20 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:20 | David K Beck | 2 |

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

**Sample Description: SL-538-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023138**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 10:50 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

53800 SDG#: PH031-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:25 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401A | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

**Sample Description:** SL-522-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7023139
**LLI Group #** 1383064
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 04/15/2013 13:30 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52200 SDG#: PH031-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 0.40 | J | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.6 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 2.7 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 2.1 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 7.8 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 3.5 | J | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.5 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 9.3 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 16 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.2 | J | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.4 | J | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.94 | J | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.5 | J | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.6 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 14 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 13 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.5 | J | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | J | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.30 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 12 | 1 |

Reporting limits were raised due to interference from the sample matrix.

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

**Sample Description:** SL-522-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7023139**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 13:30 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52200 SDG#: PH031-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.2 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 16 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 32 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,800 | | 41.5 | 8.00 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.89 | J | 4.15 | 0.519 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.40 | J | 4.15 | 0.342 | 1 |
| 06946 | Barium | 7440-39-3 | 88.8 | | 1.04 | 0.0342 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.537 | J | 1.04 | 0.0695 | 1 |
| 07914 | Boron | 7440-42-8 | 3.26 | J | 10.4 | 0.861 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.468 | J | 1.04 | 0.0342 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,600 | | 20.7 | 4.17 | 1 |
| 06951 | Chromium | 7440-47-3 | 14.7 | | 3.11 | 0.0913 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.75 | | 1.04 | 0.0934 | 1 |
| 06953 | Copper | 7440-50-8 | 6.52 | | 2.07 | 0.187 | 1 |
| 01654 | Iron | 7439-89-6 | 18,300 | | 41.5 | 3.94 | 1 |
| 06955 | Lead | 7439-92-1 | 13.3 | | 3.11 | 0.488 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.6 | | 4.1 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,780 | | 10.4 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 304 | | 1.04 | 0.0861 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.349 | J | 2.07 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.48 | | 2.07 | 0.114 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 406 | | 10.4 | 0.529 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,900 | | 104 | 14.0 | 1 |
| 01667 | Sodium | 7440-23-5 | 70.7 | J | 104 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.44 | J | 10.4 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 973 | | 1.04 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.1 | | 1.04 | 0.114 | 1 |
| 06972 | Zinc | 7440-66-6 | 59.4 | | 4.15 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.19 | U | 5.19 | 0.861 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description: SL-522-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023139**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 13:30 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52200 SDG#: PH031-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.145 J | 0.415 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0296 J | 0.207 | 0.0207 | 2 |
| 06144 | Strontium | 7440-24-6 | 22.5 | 0.415 | 0.0353 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.236 | 0.207 | 0.0311 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0217 | 0.0204 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.84 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.6 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

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

**Sample Description: SL-522-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023139**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 13:30 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52200 SDG#: PH031-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0534 | J | 1.03 | 0.0269 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.263 | JBQ | 5.17 | 0.0371 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.474 | JBQ | 5.17 | 0.0370 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.31 | JB | 5.17 | 0.0361 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.961 | JB | 5.17 | 0.0340 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 32.0 | B | 5.17 | 0.0442 | 1 |
| 11031 | OCDD | 3268-87-9 | 274 | B | 10.3 | 0.0370 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.339 | J | 1.03 | 0.0460 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.359 | JBQ | 5.17 | 0.0249 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.457 | JB | 5.17 | 0.0245 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.295 | JB | 5.17 | 0.0312 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.244 | JB | 5.17 | 0.0270 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.148 | JBQ | 5.17 | 0.0325 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.259 | JBQ | 5.17 | 0.0282 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.24 | JB | 5.17 | 0.0165 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.223 | JBQ | 5.17 | 0.0304 | 1 |
| 11031 | OCDF | 39001-02-0 | 4.20 | JB | 10.3 | 0.0367 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.932 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 78 | 25 - 164 |
| 13C12-12378-PeCDD | 80 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 88 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 75 | 17 - 157 |
| 13C12-2378-TCDF | 73 | 24 - 169 |
| 13C12-12378-PeCDF | 83 | 24 - 185 |
| 13C12-23478-PeCDF | 77 | 21 - 178 |
| 13C12-123478-HxCDF | 80 | 26 - 152 |
| 13C12-123678-HxCDF | 87 | 26 - 123 |
| 13C12-234678-HxCDF | 80 | 28 - 136 |
| 13C12-123789-HxCDF | 76 | 29 - 147 |
| 13C12-1234678-HpCDF | 99 | 28 - 143 |
| 13C12-1234789-HpCDF | 65 | 26 - 138 |
| 13C12-OCDF | 56 | 17 - 157 |

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

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

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

**Sample Description: SL-522-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023139**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 13:30 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52200 SDG#: PH031-05

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-522-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023139**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 13:30 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52200 SDG#: PH031-05

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 12:40 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131080012A | 04/24/2013 01:30 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 04:22 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131080012A | 04/18/2013 18:20 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 06:31 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13107001 | 04/18/2013 22:24 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13107001 | 04/17/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:18 | Tara L Snyder | 1 |

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

**Sample Description: SL-522-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023139**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 13:30 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52200 SDG#: PH031-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:22 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:22 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:22 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:22 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:27 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401B | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

**Sample Description: SL-521-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023140**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 14:15 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52100 SDG#: PH031-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.0 | J | 1.7 | 0.33 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.5 | J | 1.7 | 0.67 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.1 | J | 1.7 | 0.67 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 6.4 | | 1.7 | 0.67 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.3 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.3 | J | 1.7 | 0.67 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.7 | | 1.7 | 0.67 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Chrysene | 218-01-9 | 7.6 | | 1.7 | 0.33 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 8.4 | J | 18 | 6.0 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 11 | | 1.7 | 0.67 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.1 | J | 1.7 | 0.67 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 3.2 | | 1.7 | 0.67 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 5.9 | | 1.7 | 0.67 | 1 |
| 12969 | Pyrene | 129-00-0 | 8.1 | | 1.7 | 0.67 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 0.80 | J | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.62 | J | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 12 | 1 |

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

**Sample Description:** SL-521-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7023140**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 14:15 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52100 SDG#: PH031-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 17 | J | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 6.7 | J | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 7.0 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 14 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,700 | | 39.2 | 7.55 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.52 | J | 3.92 | 0.490 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.85 | J | 3.92 | 0.323 | 1 |
| 06946 | Barium | 7440-39-3 | 79.6 | | 0.979 | 0.0323 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.618 | J | 0.979 | 0.0656 | 1 |
| 07914 | Boron | 7440-42-8 | 2.86 | J | 9.79 | 0.813 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.379 | J | 0.979 | 0.0323 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,210 | | 19.6 | 3.94 | 1 |
| 06951 | Chromium | 7440-47-3 | 14.8 | | 2.94 | 0.0862 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.71 | | 0.979 | 0.0881 | 1 |
| 06953 | Copper | 7440-50-8 | 5.01 | | 1.96 | 0.176 | 1 |
| 01654 | Iron | 7439-89-6 | 19,500 | | 39.2 | 3.72 | 1 |
| 06955 | Lead | 7439-92-1 | 8.40 | | 2.94 | 0.460 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.0 | | 3.9 | 0.54 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,830 | | 9.79 | 1.69 | 1 |
| 06958 | Manganese | 7439-96-5 | 249 | | 0.979 | 0.0813 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.491 | J | 1.96 | 0.166 | 1 |
| 06961 | Nickel | 7440-02-0 | 7.54 | | 1.96 | 0.108 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 363 | | 9.79 | 0.499 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,990 | | 97.9 | 13.2 | 1 |
| 01667 | Sodium | 7440-23-5 | 64.5 | J | 97.9 | 16.4 | 1 |
| 06969 | Tin | 7440-31-5 | 2.81 | J | 9.79 | 0.215 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,140 | | 0.979 | 0.166 | 1 |
| 06971 | Vanadium | 7440-62-2 | 29.5 | | 0.979 | 0.108 | 1 |
| 06972 | Zinc | 7440-66-6 | 80.4 | | 3.92 | 0.196 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.90 | U | 4.90 | 0.813 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description: SL-521-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023140**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 14:15 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52100 SDG#: PH031-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.173 J | 0.392 | 0.0979 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0272 J | 0.196 | 0.0196 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.3 | 0.392 | 0.0333 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.245 | 0.196 | 0.0294 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0176 J | 0.0195 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.85 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.5 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.8 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

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

**Sample Description: SL-521-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023140**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 14:15 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52100 SDG#: PH031-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0697 | JQ | 1.02 | 0.0330 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.367 | JBQ | 5.09 | 0.0491 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.12 | JB | 5.09 | 0.0368 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 2.92 | JB | 5.09 | 0.0362 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.89 | JB | 5.09 | 0.0346 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 84.5 | B | 5.09 | 0.0691 | 1 |
| 11031 | OCDD | 3268-87-9 | 909 | B | 10.2 | 0.0487 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.142 | J | 1.02 | 0.0506 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.588 | JB | 5.09 | 0.0438 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.246 | JB | 5.09 | 0.0437 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.429 | JB | 5.09 | 0.0274 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.305 | JB | 5.09 | 0.0270 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.133 | JBQ | 5.09 | 0.0289 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.338 | JB | 5.09 | 0.0269 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 5.24 | B | 5.09 | 0.0195 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.317 | JB | 5.09 | 0.0259 | 1 |
| 11031 | OCDF | 39001-02-0 | 11.5 | B | 10.2 | 0.0332 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.98 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 75 | 17 - 157 |
| 13C12-2378-TCDF | 73 | 24 - 169 |
| 13C12-12378-PeCDF | 76 | 24 - 185 |
| 13C12-23478-PeCDF | 76 | 21 - 178 |
| 13C12-123478-HxCDF | 85 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 83 | 28 - 136 |
| 13C12-123789-HxCDF | 87 | 29 - 147 |
| 13C12-1234678-HpCDF | 83 | 28 - 143 |
| 13C12-1234789-HpCDF | 73 | 26 - 138 |
| 13C12-OCDF | 68 | 17 - 157 |

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

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

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

**Sample Description: SL-521-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023140**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 14:15 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52100 SDG#: PH031-06*

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-521-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023140**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 14:15 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52100 SDG#: PH031-06*

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 13:10 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131080012A | 04/24/2013 02:06 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 04:41 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131080012A | 04/18/2013 18:20 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 04:47 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13107001 | 04/18/2013 23:21 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13107001 | 04/17/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:21 | Tara L Snyder | 1 |

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

**Sample Description: SL-521-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7023140**
**LLI Group # 1383064**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/15/2013 14:15 by SM

Submitted: 04/16/2013 09:15
Reported: 04/26/2013 11:10

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

52100 SDG#: PH031-06*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:25 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:25 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:25 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:25 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:29 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401B | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401A | 04/23/2013 22:37 | Scott W Freisher | 1 |

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

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383064
Reported: 04/26/13 at 11:10 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13110SLA026 | Sample number(s): 7023136-7023140 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 90 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 85 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 95 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 91 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 95 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 116 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 121 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 88 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 71-120 | | |
| Batch number: 13106A16A | Sample number(s): 7023136 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 90 | | 67-119 | | |
| Batch number: 13106A20B | Sample number(s): 7023135 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 99 | 98 | 75-135 | 2 | 30 |
| Batch number: 131080012A | Sample number(s): 7023139-7023140 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 80 | | 73-119 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 86 | | 72-126 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 84 | | 76-123 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 87 | | 72-128 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 87 | | 76-138 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 90 | | 76-126 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 87 | | 72-131 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 87 | | 73-128 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383064
Reported: 04/26/13 at 11:10 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 88 | | 78-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 87 | | 62-125 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 84 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 81 | | 72-138 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 87 | | 75-130 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 74 | | 55-132 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 77 | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 83 | | 69-125 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 85 | | 78-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 90 | | 59-125 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 12 | ug/kg | | | | | |
| Batch number: 131100011A | Sample number(s): 7023136-7023140 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 75 | 75 | 36-106 | 0 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 103 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 115 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131090007A | Sample number(s): 7023136-7023140 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 67 | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 76 | | 49-107 | | |
| Batch number: 131070637001 | Sample number(s): 7023136-7023140 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 99 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 101 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 109 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 96 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 106 | | 80-120 | | |
| Calcium | 20.0 | U | 20.0 | 4.02 | mg/kg | 101 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 100 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 106 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 103 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 103 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 1.82 | J | 10.0 | 1.73 | mg/kg | 99 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 100 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 10.9 | | 10.0 | 0.510 | mg/kg | 116 | | 80-120 | | |
| Potassium | 100 | U | 100. | 13.5 | mg/kg | 101 | | 80-120 | | |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383064
Reported: 04/26/13 at 11:10 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 99 | | 80-120 | | |
| Tin | 1.40 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 98 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 108 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 101 | | 80-120 | | |
| Batch number: 131070637001A | Sample number(s): 7023136-7023140 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 110 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0340 | mg/kg | 111 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 97 | | 80-120 | | |
| Batch number: 131070637001B | Sample number(s): 7023136-7023140 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 117 | | 80-120 | | |
| Batch number: 131070638001 | Sample number(s): 7023136-7023140 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0103 | mg/kg | 109 | | 85-120 | | |
| Batch number: 13107039401A | Sample number(s): 7023136-7023138 | | | | | | | | | |
| 15a pH by 9045C | | | | | | 100 | | 95-105 | | |
| Batch number: 13107039401B | Sample number(s): 7023139-7023140 | | | | | | | | | |
| 15a pH by 9045C | | | | | | 100 | | 95-105 | | |
| Batch number: 13112162401A | Sample number(s): 7023136-7023140 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13107001 | Sample number(s): 7023136-7023140 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0192 | ng/kg | 90 | | 67-158 | | |
| 12378-PeCDD | 0.0350 | J | 5.00 | 0.0205 | ng/kg | 94 | | 70-142 | | |
| 123478-HxCDD | 0.0185 | J | 5.00 | 0.0151 | ng/kg | 99 | | 70-164 | | |
| 123678-HxCDD | 0.0275 | J | 5.00 | 0.0157 | ng/kg | 95 | | 76-134 | | |
| 123789-HxCDD | 0.0437 | J | 5.00 | 0.0155 | ng/kg | 98 | | 64-162 | | |
| 1234678-HpCDD | 0.0818 | J | 5.00 | 0.0175 | ng/kg | 95 | | 70-140 | | |
| OCDD | 0.151 | J | 10.0 | 0.0174 | ng/kg | 97 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0177 | ng/kg | 96 | | 75-158 | | |
| 12378-PeCDF | 0.0538 | J | 5.00 | 0.0111 | ng/kg | 96 | | 80-134 | | |
| 23478-PeCDF | 0.0482 | J | 5.00 | 0.0112 | ng/kg | 98 | | 68-160 | | |
| 123478-HxCDF | 0.0425 | J | 5.00 | 0.0107 | ng/kg | 100 | | 72-134 | | |
| 123678-HxCDF | 0.0316 | J | 5.00 | 0.00978 | ng/kg | 95 | | 84-130 | | |
| 123789-HxCDF | 0.0663 | J | 5.00 | 0.0122 | ng/kg | 98 | | 78-130 | | |
| 234678-HxCDF | 0.0359 | J | 5.00 | 0.0103 | ng/kg | 98 | | 70-156 | | |
| 1234678-HpCDF | 0.0623 | J | 5.00 | 0.00596 | ng/kg | 97 | | 82-122 | | |
| 1234789-HpCDF | 0.0596 | J | 5.00 | 0.0104 | ng/kg | 98 | | 78-138 | | |
| OCDF | 0.164 | J | 10.0 | 0.0311 | ng/kg | 98 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0205 | | | | ng/kg | | | | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383064
Reported: 04/26/13 at 11:10 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13110SLA026 | Sample number(s): 7023136-7023140 UNSPK: P022144 | | | | | | | | |
| Acenaphthene | 97 | 92 | 48-127 | 5 | 30 | | | | |
| Acenaphthylene | 104 | 96 | 49-121 | 7 | 30 | | | | |
| Anthracene | 102 | 97 | 52-126 | 5 | 30 | | | | |
| Benzo(a)anthracene | 108 | 93 | 32-135 | 15 | 30 | | | | |
| Benzo(a)pyrene | 100 | 86 | 36-138 | 15 | 30 | | | | |
| Benzo(b)fluoranthene | 109 | 88 | 26-142 | 20 | 30 | | | | |
| Benzo(e)pyrene | 91 | 77 | 70-130 | 17 | 30 | | | | |
| Benzo(g,h,i)perylene | 81 | 82 | 33-141 | 2 | 30 | | | | |
| Benzo(k)fluoranthene | 103 | 90 | 47-129 | 13 | 30 | | | | |
| Butylbenzylphthalate | 107 | 88 | 59-153 | 19 | 30 | | | | |
| Di-n-butylphthalate | 88 | 79 | 62-154 | 10 | 30 | | | | |
| Chrysene | 107 | 86 | 29-148 | 21 | 30 | | | | |
| Dibenz(a,h)anthracene | 86 | 89 | 34-125 | 4 | 30 | | | | |
| Diethylphthalate | 84 | 88 | 76-127 | 5 | 30 | | | | |
| Dimethylphthalate | 93 | 88 | 62-136 | 6 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 129 | 116 | 39-167 | 11 | 30 | | | | |
| Fluoranthene | 100 | 72 | 47-135 | 30 | 30 | | | | |
| Fluorene | 110 | 108 | 50-129 | 3 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 84 | 86 | 17-136 | 2 | 30 | | | | |
| 1-Methylnaphthalene | 102 | 98 | 50-131 | 4 | 30 | | | | |
| 2-Methylnaphthalene | 100 | 98 | 28-144 | 2 | 30 | | | | |
| Naphthalene | 95 | 91 | 31-148 | 4 | 30 | | | | |
| N-Nitrosodimethylamine | 85 | 108 | 48-113 | 23 | 30 | | | | |
| Di-n-octylphthalate | 85 | 72 | 52-162 | 16 | 30 | | | | |
| Phenanthrene | 115 | 99 | 29-142 | 15 | 30 | | | | |
| Pyrene | 110 | 64 | 26-143 | 49* | 30 | | | | |
| Batch number: 13106A16A | Sample number(s): 7023136 UNSPK: P022144 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 92 | 100 | 39-118 | 9 | 30 | | | | |
| Batch number: 131080012A | Sample number(s): 7023139-7023140 UNSPK: 7023139 | | | | | | | | |
| Aldrin | 96 | 86 | 16-126 | 12 | 50 | | | | |
| Alpha BHC | 88 | 87 | 14-140 | 1 | 50 | | | | |
| Beta BHC | 86 | 85 | 10-173 | 0 | 50 | | | | |
| Gamma BHC - Lindane | 89 | 89 | 30-137 | 1 | 50 | | | | |
| p,p-DDD | 77 | 70 | 43-149 | 9 | 50 | | | | |
| p,p-DDE | 90 | 91 | 18-161 | 1 | 50 | | | | |
| p,p-DDT | 91 | 91 | 12-193 | 0 | 50 | | | | |
| Delta BHC | 120 | 129 | 13-153 | 7 | 50 | | | | |
| Dieldrin | 91 | 90 | 19-154 | 1 | 50 | | | | |
| Endosulfan I | 0* | 90 | 16-137 | 200* | 50 | | | | |
| Endosulfan II | 74 | 77 | 10-156 | 4 | 50 | | | | |
| Endosulfan Sulfate | 86 | 86 | 10-181 | 0 | 50 | | | | |
| Endrin | 102 | 70 | 30-152 | 36 | 50 | | | | |
| Endrin Aldehyde | 85 | 86 | 10-152 | 1 | 35 | | | | |
| Endrin Ketone | 54 | 55 | 10-160 | 3 | 50 | | | | |
| Heptachlor | 95 | 98 | 16-152 | 3 | 50 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383064
Reported: 04/26/13 at 11:10 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Heptachlor Epoxide | 87 | 85 | 17-167 | 3 | 50 | | | | |
| Methoxychlor | 105 | 106 | 34-168 | 1 | 50 | | | | |
| Batch number: 131100011A | Sample number(s): 7023136-7023140 UNSPK: 7023137 | | | | | | | | |
| PCB-1016 | 94 | 93 | 16-146 | 1 | 50 | | | | |
| PCB-1260 | 99 | 99 | 40-134 | 1 | 50 | | | | |
| Batch number: 131090007A | Sample number(s): 7023136-7023140 UNSPK: 7023136 | | | | | | | | |
| EFH (C12-C14) | 101 | 94 | 49-123 | 7 | 20 | | | | |
| EFH (C15-C20) | 81 | 58 | 49-123 | 13 | 20 | | | | |
| EFH (C21-C30) | 130* | 52 | 49-123 | 28* | 20 | | | | |
| EFH (C30-C40) | 163* | 98 | 49-123 | 19 | 20 | | | | |
| EFH (C8-C11) | 88 | 88 | 49-123 | 0 | 20 | | | | |
| Batch number: 131070637001 | Sample number(s): 7023136-7023140 UNSPK: P022144 BKG: P022144 | | | | | | | | |
| Aluminum | 1359 (2) | 1600 (2) | 75-125 | 3 | 20 | 10,500 | 10,800 | 2 | 20 |
| Antimony | 70* | 73* | 75-125 | 4 | 20 | 1.54 J | 1.48 J | 4 (1) | 20 |
| Arsenic | 111 | 108 | 75-125 | 2 | 20 | 2.01 J | 2.79 J | 32* (1) | 20 |
| Barium | 105 | 100 | 75-125 | 3 | 20 | 70.2 | 68.6 | 2 | 20 |
| Beryllium | 99 | 99 | 75-125 | 1 | 20 | 0.469 J | 0.472 J | 1 (1) | 20 |
| Boron | 94 | 95 | 75-125 | 0 | 20 | 3.12 J | 3.00 J | 4 (1) | 20 |
| Cadmium | 105 | 104 | 75-125 | 1 | 20 | 0.409 J | 0.437 J | 7 (1) | 20 |
| Calcium | 67 (2) | 102 (2) | 75-125 | 4 | 20 | 3,060 | 2,860 | 7 | 20 |
| Chromium | 103 | 118 | 75-125 | 8 | 20 | 18.0 | 17.9 | 1 | 20 |
| Cobalt | 101 | 100 | 75-125 | 1 | 20 | 4.98 | 4.86 | 3 | 20 |
| Copper | 101 | 101 | 75-125 | 0 | 20 | 5.00 | 5.12 | 2 (1) | 20 |
| Iron | 1525 (2) | 1576 (2) | 75-125 | 0 | 20 | 18,500 | 19,000 | 3 | 20 |
| Lead | 106 | 104 | 75-125 | 1 | 20 | 5.00 | 5.37 | 7 (1) | 20 |
| Lithium | 104 | 105 | 75-125 | 1 | 20 | 22.9 | 23.7 | 3 | 20 |
| Magnesium | 277 (2) | 267 (2) | 75-125 | 0 | 20 | 3,970 | 3,970 | 0 | 20 |
| Manganese | 107 (2) | 104 (2) | 75-125 | 0 | 20 | 275 | 269 | 2 | 20 |
| Molybdenum | 96 | 96 | 75-125 | 0 | 20 | 1.19 J | 0.434 J | 93* (1) | 20 |
| Nickel | 100 | 99 | 75-125 | 1 | 20 | 8.44 | 8.47 | 0 (1) | 20 |
| Phosphorus | 98 | 132* | 75-125 | 7 | 20 | 357 | 368 | 3 | 20 |
| Potassium | 129* | 124 | 75-125 | 1 | 20 | 2,680 | 2,750 | 2 | 20 |
| Sodium | 96 | 97 | 75-125 | 2 | 20 | 59.7 J | 60.9 J | 2 (1) | 20 |
| Tin | 92 | 91 | 75-125 | 0 | 20 | 2.85 J | 2.68 J | 6 (1) | 20 |
| Titanium | 243 (2) | 230 (2) | 75-125 | 1 | 20 | 1,030 | 1,050 | 2 | 20 |
| Vanadium | 100 | 99 | 75-125 | 1 | 20 | 28.1 | 28.2 | 0 | 20 |
| Zinc | 112 | 111 | 75-125 | 0 | 20 | 53.7 | 54.2 | 1 | 20 |
| Zirconium | 95 | 94 | 75-125 | 1 | 20 | 1.08 J | 1.96 J | 57* (1) | 20 |
| Batch number: 131070637001A | Sample number(s): 7023136-7023140 UNSPK: P022144 BKG: P022144 | | | | | | | | |
| Silver | 100 | 101 | 75-125 | 1 | 20 | 0.0299 J | 0.0323 J | 8 (1) | 20 |
| Strontium | 89 | 103 | 75-125 | 6 | 20 | 11.7 | 11.4 | 2 | 20 |
| Thallium | 105 | 98 | 75-125 | 5 | 20 | 0.226 | 0.220 | 3 (1) | 20 |
| Batch number: 131070637001B | Sample number(s): 7023136-7023140 UNSPK: P022144 BKG: P022144 | | | | | | | | |
| Selenium | 116 | 111 | 75-125 | 4 | 20 | 0.385 U | 0.385 U | 0 (1) | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383064
Reported: 04/26/13 at 11:10 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 131070638001 | Sample number(s): 7023136-7023140 UNSPK: P022144 BKG: P022144 | | | | | | | | |
| 3a Mercury 7471A | 112 | 111 | 65-135 | 1 | 20 | 0.0197 U | 0.0198 U | 0 (1) | 20 |
| Batch number: 13107039401A | Sample number(s): 7023136-7023138 BKG: P022144 | | | | | | | | |
| 15a pH by 9045C | | | | | | 7.71 | 7.69 | 0 | 3 |
| Batch number: 13107039401B | Sample number(s): 7023139-7023140 BKG: 7023140 | | | | | | | | |
| 15a pH by 9045C | | | | | | 6.85 | 6.87 | 0 | 3 |
| Batch number: 13112162401A | Sample number(s): 7023136-7023140 BKG: P022144 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 2.6 | 2.8 | 5 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13110SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7023136 | 73 | 89 | 97 |
| 7023137 | 68 | 91 | 98 |
| 7023138 | 61 | 86 | 97 |
| 7023139 | 78 | 84 | 97 |
| 7023140 | 67 | 90 | 98 |
| Blank | 83 | 91 | 96 |
| LCS | 82 | 91 | 101 |
| MS | 78 | 92 | 95 |
| MSD | 69 | 89 | 97 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13106A16A

| | Trifluorotoluene-F |
|---|---|
| 7023136 | 76 |
| Blank | 89 |
| LCS | 84 |
| MS | 80 |
| MSD | 80 |
| Limits: | 61-122 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13106A20B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383064
Reported: 04/26/13 at 11:10 AM

## Surrogate Quality Control

| | Trifluorotoluene-F |
|---|---|
| 7023135 | 87 |
| Blank | 88 |
| LCS | 110 |
| LCSD | 112 |
| Limits: | 63-135 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 131080012A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7023139 | 91 | 109 |
| 7023140 | 88 | 94 |
| Blank | 92 | 97 |
| LCS | 91 | 102 |
| MS | 89 | 99 |
| MSD | 88 | 104 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131100011A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7023136 | 116 | 96 |
| 7023137 | 122* | 109 |
| 7023138 | 109 | 95 |
| 7023139 | 122* | 102 |
| 7023140 | 116 | 98 |
| Blank | 129* | 111 |
| LCS | 130* | 120 |
| LCSD | 130* | 122* |
| MS | 122* | 107 |
| MSD | 125* | 108 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131090007A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7023136 | 95 | 94 |
| 7023137 | 85 | 84 |
| 7023138 | 85 | 85 |
| 7023139 | 88 | 86 |
| 7023140 | 85 | 83 |
| Blank | 90 | 90 |
| LCS | 87 | 87 |
| MS | 88 | 86 |
| MSD | 83 | 82 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383064
Reported: 04/26/13 at 11:10 AM

## Surrogate Quality Control

Batch number: 13107001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7023136 | 87 | 88 | 90 | 100 | 91 | 85 |
| 7023137 | 77 | 77 | 77 | 85 | 77 | 72 |
| 7023138 | 72 | 74 | 77 | 85 | 77 | 76 |
| 7023139 | 78 | 77 | 80 | 87 | 80 | 76 |
| 7023140 | 80 | 76 | 85 | 82 | 83 | 87 |
| Blank | 71 | 69 | 75 | 81 | 75 | 71 |
| OPR | 65 | 66 | 72 | 80 | 73 | 72 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7023136 | 117 | 70 | 61 | 91 | 92 | 93 |
| 7023137 | 99 | 60 | 51 | 81 | 80 | 83 |
| 7023138 | 98 | 65 | 61 | 77 | 79 | 81 |
| 7023139 | 99 | 65 | 56 | 80 | 81 | 86 |
| 7023140 | 83 | 73 | 68 | 76 | 81 | 84 |
| Blank | 94 | 62 | 57 | 74 | 79 | 77 |
| OPR | 100 | 62 | 58 | 72 | 77 | 78 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7023136 | 91 | 92 | 86 | 80 | 94 |
| 7023137 | 83 | 78 | 71 | 69 | 82 |
| 7023138 | 85 | 78 | 77 | 67 | 80 |
| 7023139 | 88 | 79 | 75 | 73 | 83 |
| 7023140 | 84 | 77 | 75 | 73 | 76 |
| Blank | 77 | 75 | 72 | 63 | 73 |
| OPR | 77 | 79 | 79 | 59 | 73 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

13013 1383064 702135-40

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/15/2013
CarrierName: FedEx
AirbillNo: 7995 3119 4130

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130415-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-041513 | 4/15/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-534-SA7-SB-5.5-6.5 | 4/15/13 08:45 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-534-SA7-SB-5.5-6.5 | 4/15/13 08:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-534-SA7-SB-5.5-6.5 | 4/15/13 08:45 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-537-SA7-SB-0.0-0.5 | 4/15/13 09:50 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-537-SA7-SB-0.0-0.5 | 4/15/13 09:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-538-SA7-SB-0.0-0.5 | 4/15/13 10:50 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-538-SA7-SB-0.0-0.5 | 4/15/13 10:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-522-SA7-SB-0.0-0.5 | 4/15/13 13:30 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | X | | | X | | | | | | | | | | | |
| SL-522-SA7-SB-0.0-0.5 | 4/15/13 13:30 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-521-SA7-SB-0.0-0.5 | 4/15/13 14:15 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | X | | | X | | | | | | | | | | | |
| SL-521-SA7-SB-0.0-0.5 | 4/15/13 14:15 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Steven Mercer

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Cruz | 4/15/13 | | | | | | | | | | |
| | | | | | | | | | Pat Gh | 4/16/13 | 0915 |

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# Environmental Sample Administration Receipt Documentation Log

1383064

**Client/Project:** CDM Smith

**Date of Receipt:** 4/16/13

**Time of Receipt:** 0915

**Source Code:** SO

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | 2737 | 1.4 | TB | WI | Y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** Pat Gh 3472 **Date/Time:** 4/16/13 1021

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

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

May 03, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/17/2013
Group Number: 1383412
SDG: PH032
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| FB-041613 Water | 7024683 |
| SL-559-SA7-SB-0.0-0.5 Soil | 7024684 |
| SL-559-SA7-SB-2.0-3.0 Soil | 7024685 |
| SL-560-SA7-SB-0.0-0.5 Soil | 7024686 |
| SL-560-SA7-SB-3.0-4.0 Soil | 7024687 |
| SL-561-SA7-SB-0.0-0.5 Soil | 7024688 |
| TB-041613 Water | 7024689 |
| SL-558-SA7-SB-0.0-0.5 Soil | 7024690 |

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

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 1 | | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 10 | | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 1 | | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | | |
| 10335 | Chloroform | 67-66-3 | 3 | J | 5 | 0.8 | | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 1 | | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 18 | | 5 | 2 | | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.7 | | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.8 | | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.8 | | 1 |
| **GC/MS Volatiles** | **SW-846 8260B SIM** | | ug/l | | ug/l | ug/l | ug/l | |
| 00527 | 1,4-Dioxane | 123-91-1 | 2.0 | U | 2.0 | 0.5 | | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270D** | | ug/l | | ug/l | ug/l | ug/l | |
| 10461 | Acenaphthene | 83-32-9 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Acenaphthylene | 208-96-8 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Aniline | 62-53-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Anthracene | 120-12-7 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzidine | 92-87-5 | 62 | U | 62 | 21 | | 1 |
| 10461 | Benzo(a)anthracene | 56-55-3 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(a)pyrene | 50-32-8 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(b)fluoranthene | 205-99-2 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(g,h,i)perylene | 191-24-2 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(k)fluoranthene | 207-08-9 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzoic acid | 65-85-0 | 16 | U | 16 | 6 | | 1 |
| 10461 | Benzyl alcohol | 100-51-6 | 16 | U | 16 | 5 | | 1 |
| 10461 | 1,1'-Biphenyl | 92-52-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Bromophenyl-phenylether | 101-55-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Butylbenzylphthalate | 85-68-7 | 5 | U | 5 | 2 | | 1 |
| 10461 | Di-n-butylphthalate | 84-74-2 | 5 | U | 5 | 2 | | 1 |
| 10461 | Carbazole | 86-74-8 | 1 | U | 1 | 0.5 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/l | | ug/l | ug/l | ug/l | |
| 10461 | 4-Chloro-3-methylphenol | 59-50-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Chloroaniline | 106-47-8 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Chloroethoxy)methane | 111-91-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Chloroethyl)ether | 111-44-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 1 | U | 1 | 0.5 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10461 | 2-Chloronaphthalene | 91-58-7 | 1 | U | 1 | 0.4 | | 1 |
| 10461 | 2-Chlorophenol | 95-57-8 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Chlorophenyl-phenylether | 7005-72-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Chrysene | 218-01-9 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Dibenz(a,h)anthracene | 53-70-3 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Dibenzofuran | 132-64-9 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1,2-Dichlorobenzene | 95-50-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1,3-Dichlorobenzene | 541-73-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1,4-Dichlorobenzene | 106-46-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 3,3'-Dichlorobenzidine | 91-94-1 | 5 | U | 5 | 2 | | 1 |
| 10461 | 2,4-Dichlorophenol | 120-83-2 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2,6-Dichlorophenol | 87-65-0 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Diethylphthalate | 84-66-2 | 5 | U | 5 | 2 | | 1 |
| 10461 | 2,4-Dimethylphenol | 105-67-9 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 3,5-Dimethylphenol | 108-68-9 | 10 | U | 10 | 3 | | 1 |
| 10461 | Dimethylphthalate | 131-11-3 | 5 | U | 5 | 2 | | 1 |
| 10461 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 16 | U | 16 | 5 | | 1 |
| 10461 | 2,4-Dinitrophenol | 51-28-5 | 31 | U | 31 | 10 | | 1 |
| 10461 | 1,2-Diphenylhydrazine | 122-66-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Ethylhexyl)phthalate | 117-81-7 | 5 | U | 5 | 2 | | 1 |
| 10461 | Fluoranthene | 206-44-0 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Fluorene | 86-73-7 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Hexachlorobenzene | 118-74-1 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Hexachlorobutadiene | 87-68-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Hexachlorocyclopentadiene | 77-47-4 | 16 | U | 16 | 5 | | 1 |
| 10461 | Hexachloroethane | 67-72-1 | 5 | U | 5 | 1 | | 1 |
| 10461 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Isophorone | 78-59-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1-Methylnaphthalene | 90-12-0 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | 2-Methylnaphthalene | 91-57-6 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | 2-Methylphenol | 95-48-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Methylphenol | 106-44-5 | 1 | U | 1 | 0.5 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10461 | Naphthalene | 91-20-3 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | NDPA as diphenylamine | n.a. | 5 | U | 5 | 2 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10461 | 2-Nitroaniline | 88-74-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 3-Nitroaniline | 99-09-2 | 1 | U | 1 | 0.5 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10461 | 4-Nitroaniline | 100-01-6 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Nitrobenzene | 98-95-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2-Nitrophenol | 88-75-5 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Nitrophenol | 100-02-7 | 31 | U | 31 | 10 | | 1 |
| 10461 | N-Nitrosodimethylamine | 62-75-9 | 5 | U | 5 | 2 | | 1 |
| 10461 | N-Nitroso-di-n-propylamine | 621-64-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | N-Nitrosodiphenylamine | 86-30-6 | 1 | U | 1 | 0.5 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10461 | Di-n-octylphthalate | 117-84-0 | 5 | U | 5 | 2 | | 1 |
| 10461 | Pentachlorophenol | 87-86-5 | 5 | U | 5 | 1 | | 1 |
| 10461 | Phenanthrene | 85-01-8 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Phenol | 108-95-2 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Pyrene | 129-00-0 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Pyridine | 110-86-1 | 5 | U | 5 | 2 | | 1 |
| 10461 | 1,2,4-Trichlorobenzene | 120-82-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2,4,5-Trichlorophenol | 95-95-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2,4,6-Trichlorophenol | 88-06-2 | 1 | U | 1 | 0.5 | | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 12971 | Acenaphthene | 83-32-9 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Anthracene | 120-12-7 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.052 | | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.11 | J | 1.0 | 0.052 | | 1 |
| 12971 | Chrysene | 218-01-9 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 1.0 | U | 1.0 | 0.052 | | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.052 | | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.25 | J | 1.0 | 0.052 | | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Fluorene | 86-73-7 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.012 | J | 0.052 | 0.010 | | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.052 | U | 0.052 | 0.031 | | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.052 | U | 0.052 | 0.010 | | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.052 | | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.052 | U | 0.052 | 0.031 | | 1 |
| 12971 | Pyrene | 129-00-0 | 0.052 | U | 0.052 | 0.010 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| | di-n-octylphthalate | | | | | | | |
| | Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported. | | | | | | | |
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | | 1 |
| **Explosives** | **SW-846 8330A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10131 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 0.60 | U | 0.60 | 0.30 | 10000000 | 1 |
| 10131 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 1,3-Dinitrobenzene | 99-65-0 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4-Dinitrotoluene | 121-14-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,6-Dinitrotoluene | 606-20-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | HMX | 2691-41-0 | 2.0 | U | 2.0 | 0.65 | 10000000 | 1 |
| 10131 | Nitrobenzene | 98-95-3 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | Nitroglycerin | 55-63-0 | 15 | U | 15 | 5.2 | 10000000 | 1 |
| 10131 | 2-Nitrotoluene | 88-72-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 3-Nitrotoluene | 99-08-1 | 1.2 | U | 1.2 | 0.40 | 10000000 | 1 |
| 10131 | 4-Nitrotoluene | 99-99-0 | 1.2 | U | 1.2 | 0.60 | 10000000 | 1 |
| 10131 | PETN | 78-11-5 | 18 | U | 18 | 6.0 | 10000000 | 1 |
| 10131 | RDX | 121-82-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | Tetryl | 479-45-8 | 0.60 | U | 0.60 | 0.40 | 10000000 | 1 |
| 10131 | 1,3,5-Trinitrobenzene | 99-35-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4,6-Trinitrotoluene | 118-96-7 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10407 | 2,4-D | 94-75-7 | 0.49 | U | 0.49 | 0.16 | | 1 |
| 10407 | Dalapon | 75-99-0 | 1.2 | U | 1.2 | 0.25 | | 1 |
| 10407 | 2,4-DB | 94-82-6 | 0.98 | U | 0.98 | 0.29 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10407 | Dicamba | 1918-00-9 | 0.29 | U | 0.29 | 0.079 | | 1 |
| 10407 | Dinoseb | 88-85-7 | 0.49 | U | 0.49 | 0.12 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10407 | 2,4-DP (Dichlorprop) | 120-36-5 | 0.49 | U | 0.49 | 0.16 | | 1 |
| 10407 | MCPA | 94-74-6 | 200 | U | 200 | 49 | | 1 |
| 10407 | MCPP | 93-65-2 | 200 | U | 200 | 49 | | 1 |
| 10407 | 2,4,5-T | 93-76-5 | 0.049 | U | 0.049 | 0.015 | | 1 |
| 10407 | 2,4,5-TP | 93-72-1 | 0.049 | U | 0.049 | 0.0098 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 2,4-DP | | | | | | | |
| **HPLC Organics** | **SW-846 8315A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 04144 | 19b Formaldehyde 8315A | 50-00-0 | 50 | U | 50 | 30 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 06386 | 6b Perchlorate (Method 6850) | 14797-73-0 | 1.0 | U | 1.0 | 0.20 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10589 | Aldrin | 309-00-2 | 0.0086 | U | 0.0086 | 0.0017 | | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0086 | U | 0.0086 | 0.0026 | | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0086 | U | 0.0086 | 0.0029 | | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0086 | U | 0.0086 | 0.0017 | | 1 |
| 10589 | Chlordane | 57-74-9 | 0.43 | U | 0.43 | 0.14 | | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.017 | U | 0.017 | 0.0043 | | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.017 | U | 0.017 | 0.0043 | | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.017 | U | 0.017 | 0.0045 | | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0086 | U | 0.0086 | 0.0029 | | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.017 | U | 0.017 | 0.0046 | | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0086 | U | 0.0086 | 0.0037 | | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.017 | U | 0.017 | 0.013 | | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.017 | U | 0.017 | 0.0050 | | 1 |
| 10589 | Endrin | 72-20-8 | 0.017 | U | 0.017 | 0.0070 | | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.086 | U | 0.086 | 0.017 | | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.017 | U | 0.017 | 0.0043 | | 1 |
| 10589 | Heptachlor | 76-44-8 | 0.0086 | U | 0.0086 | 0.0017 | | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0086 | U | 0.0086 | 0.0020 | | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.086 | U | 0.086 | 0.026 | | 1 |
| 10589 | Mirex | 2385-85-5 | 0.22 | U | 0.22 | 0.073 | | 1 |
| 10589 | Toxaphene | 8001-35-2 | 2.6 | U | 2.6 | 0.86 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10591 | Aroclor 5432 | 63496-31-1 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | Aroclor 5442 | 12642-23-8 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | Aroclor 5460 | 11126-42-4 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | PCB-1016 | 12674-11-2 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | PCB-1221 | 11104-28-2 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | PCB-1232 | 11141-16-5 | 0.43 | U | 0.43 | 0.17 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10591 | PCB-1242 | 53469-21-9 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | PCB-1248 | 12672-29-6 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | PCB-1254 | 11097-69-1 | 0.43 | U | 0.43 | 0.086 | | 1 |
| 10591 | PCB-1260 | 11096-82-5 | 0.43 | U | 0.43 | 0.13 | | 1 |
| 10591 | PCB-1262 | 37324-23-5 | 0.43 | U | 0.43 | 0.17 | | 1 |
| 10591 | PCB-1268 | 11100-14-4 | 0.43 | U | 0.43 | 0.14 | | 1 |
| **GC Miscellaneous** | **SW-846 8015C** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10603 | Ethanol | 64-17-5 | 1,000 | U | 1,000 | 200 | | 1 |
| 10603 | Isopropanol | 67-63-0 | 1,000 | U | 1,000 | 200 | | 1 |
| 10603 | Methanol | 67-56-1 | 1,000 | U | 1,000 | 200 | | 1 |
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 12926 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Propylene glycol | 57-55-6 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 8.0 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 10319 | m-Terphenyl | 92-06-8 | 0.0049 | U | 0.0049 | 0.0020 | | 1 |
| 10319 | o-Terphenyl | 84-15-1 | 0.0049 | U | 0.0049 | 0.0020 | | 1 |
| 10319 | p-Terphenyl | 92-94-4 | 0.0049 | U | 0.0049 | 0.0020 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.59 | U | 0.59 | 0.098 | | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.59 | U | 0.59 | 0.098 | | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.59 | U | 0.59 | 0.098 | | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.59 | U | 0.59 | 0.098 | | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.59 | U | 0.59 | 0.098 | | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0743 | | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0035 | | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 | U | 0.100 | 0.0083 | | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00036 | | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 | U | 0.400 | 0.0640 | | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0011 | | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 | U | 0.0100 | 0.00066 | | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 | U | 0.0200 | 0.0021 | | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 | U | 0.400 | 0.0333 | | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 | U | 0.0300 | 0.0051 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0060 | | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0606 | | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0132 J | 0.0200 | 0.0029 | | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0011 | | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0052 | | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.145 | | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | | 1 |
| 07069 | Tin | 7440-31-5 | 0.0029 J | 0.0400 | 0.0022 | | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0013 | | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0092 | | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00010 | | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00022 | | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000070 | | 1 |
| **Wet Chemistry** | **EPA 300.0** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 01505 | 1b Anions by 300.0-Bromide | 24959-67-9 | 0.50 U | 0.50 | 0.40 | | 1 |
| 00224 | 1b Anions by 300.0-Chloride | 16887-00-6 | 0.40 U | 0.40 | 0.20 | | 1 |
| 01504 | 1b Anions by 300.0-Fluoride | 16984-48-8 | 0.10 U | 0.10 | 0.080 | | 1 |
| 00368 | 1b Anions by 300.0-Nitrate | 14797-55-8 | 0.10 U | 0.10 | 0.050 | | 1 |
| 01506 | 1b Anions by 300.0-Nitrite | 14797-65-0 | 0.10 U | 0.10 | 0.080 | | 1 |
| 07322 | 1b Anions by 300.0-Orthophosph | 7723-14-0 | 0.50 U | 0.50 | 0.20 | | 1 |
| 00228 | 1b Anions by 300.0-Sulfate | 14808-79-8 | 1.0 U | 1.0 | 0.30 | | 1 |
| | **SW-846 7199** | | **ug/l** | **ug/l** | **ug/l** | **ug/l** | |
| 06467 | 2b Chromium VI by EPA 7199 | 18540-29-9 | 10.0 U | 10.0 | 5.0 | | 1 |
| | **SW-846 9012B** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 08255 | 16b Cyanide by EPA 9012B | 57-12-5 | 0.010 U | 0.010 | 0.0050 | | 1 |
| | **EPA 350.3** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 12677 | 15b Ammonia by EPA 350.3 | 7664-41-7 | 0.20 U | 0.20 | 0.050 | | 1 |
| | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b. pH (9040B and 9040C) | n.a. | 5.7 | 0.010 | 0.010 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.94 | U | 1.94 | 0.217 | | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 0.434 | JBQ | 9.71 | 0.301 | | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 9.71 | U | 9.71 | 0.152 | | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.71 | U | 9.71 | 0.155 | | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.71 | U | 9.71 | 0.160 | | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.309 | JBQ | 9.71 | 0.184 | | 1 |
| 10915 | OCDD | 3268-87-9 | 0.838 | JBQ | 19.4 | 0.311 | | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.94 | U | 1.94 | 0.184 | | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.324 | JB | 9.71 | 0.160 | | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.429 | JBQ | 9.71 | 0.144 | | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.257 | J | 9.71 | 0.103 | | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 9.71 | U | 9.71 | 0.106 | | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.241 | JBQ | 9.71 | 0.111 | | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.284 | JBQ | 9.71 | 0.101 | | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.314 | JBQ | 9.71 | 0.0861 | | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 9.71 | U | 9.71 | 0.0961 | | 1 |
| 10915 | OCDF | 39001-02-0 | 0.357 | JBQ | 19.4 | 0.257 | | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0354 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 67 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 76 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 76 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 80 | 17 - 157 |
| 13C12-2378-TCDF | 65 | 24 - 169 |
| 13C12-12378-PeCDF | 71 | 24 - 185 |
| 13C12-23478-PeCDF | 72 | 21 - 178 |
| 13C12-123478-HxCDF | 71 | 26 - 152 |
| 13C12-123678-HxCDF | 69 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 70 | 29 - 147 |
| 13C12-1234678-HpCDF | 69 | 28 - 143 |
| 13C12-1234789-HpCDF | 71 | 26 - 138 |
| 13C12-OCDF | 72 | 17 - 157 |

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y131141AA | 04/24/2013 12:59 | Angela D Sneeringer | 1 |
| 00527 | 13b 1,4-Dioxane by 8260B SIM | SW-846 8260B SIM | 1 | E131111AA | 04/21/2013 19:42 | Sara E Johnson | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | E131111AA | 04/21/2013 19:42 | Sara E Johnson | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 2 | Y131141AA | 04/24/2013 12:59 | Angela D Sneeringer | 1 |
| 10461 | 8b SVOCs by EPA 8270D | SW-846 8270D | 1 | 13107WAI026 | 04/23/2013 19:15 | Chad A Moline | 1 |
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13107WAH026 | 04/28/2013 23:47 | Holly Berry | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13107WAH026 | 04/18/2013 01:30 | Karen L Beyer | 1 |
| 11010 | 8270D BNA Extraction | SW-846 3510C | 1 | 13107WAI026 | 04/18/2013 01:30 | Karen L Beyer | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13108B20A | 04/19/2013 13:32 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13108B20A | 04/19/2013 13:32 | Catherine J Schwarz | 1 |
| 10131 | 18b Energetics by 8330A | SW-846 8330A | 1 | 131120017A | 04/26/2013 11:01 | James H Place | 1 |
| 04144 | 19b Formaldehyde 8315A | SW-846 8315A | 1 | 131080014A | 04/19/2013 17:32 | James H Place | 1 |
| 10407 | 24b Herbicides by EPA 8151A | SW-846 8151A | 1 | 131120003A | 04/23/2013 18:54 | Matthew S Listner | 1 |
| 06386 | 6b Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 131130024A | 04/25/2013 21:05 | Richard A Shober | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 131120022A | 04/24/2013 11:51 | Jamie L Brillhart | 1 |
| 10591 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 131120021A | 04/24/2013 02:19 | Monica M Souders | 1 |
| 11121 | PCB Waters Update IV Ext | SW-846 3510C | 1 | 131120021A | 04/23/2013 10:00 | William H Saadeh | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 131120022A | 04/23/2013 10:00 | William H Saadeh | 1 |
| 00816 | Water Sample Herbicide Extract | SW-846 8151A | 1 | 131120003A | 04/22/2013 14:30 | Seth A Farrier | 1 |
| 01013 | Formaldehyde Extraction | SW-846 8315A | 1 | 131080014A | 04/19/2013 09:15 | Denise L Trimby | 1 |
| 11122 | Energetics Extraction | SW-846 8330 | 1 | 131120017A | 04/23/2013 15:30 | Edwin Ortiz | 1 |
| 10603 | 14b Alcohols by EPA 8015C | SW-846 8015C | 1 | 131140019A | 04/24/2013 17:58 | Elizabeth J Marin | 1 |
| 12926 | 20b Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 131130028A | 04/23/2013 23:11 | Tyler O Griffin | 1 |
| 10319 | 23b Terphenyls by 8015B | SW-846 8015B | 1 | 131080007A | 04/23/2013 20:37 | Glorines Suarez-Rivera | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131070015A | 04/18/2013 15:22 | Heather E Williams | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 131070015A | 04/17/2013 20:30 | Karen L Beyer | 1 |
| 10304 | Terphenyls water prep | SW-846 3510C | 1 | 131080007A | 04/18/2013 16:30 | Seth A Farrier | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13112001 | 04/24/2013 03:30 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13112001 | 04/22/2013 10:15 | Ginelle L McQuaid | 1 |
| 01743 | Aluminum | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07044 | Antimony | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07035 | Arsenic | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07046 | Barium | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07047 | Beryllium | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 08014 | Boron | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07049 | Cadmium | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 01750 | Calcium | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07051 | Chromium | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07052 | Cobalt | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07053 | Copper | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 01754 | Iron | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07055 | Lead | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 01756 | Lithium | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 01757 | Magnesium | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07058 | Manganese | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07060 | Molybdenum | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07061 | Nickel | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 10143 | Phosphorus | SW-846 6010C | 2 | 131180635001 | 04/29/2013 18:30 | Katlin N Cataldi | 1 |
| 01762 | Potassium | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 01767 | Sodium | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07069 | Tin | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07070 | Titanium | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07071 | Vanadium | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 07072 | Zinc | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 10144 | Zirconium | SW-846 6010C | 2 | 131140635001 | 04/26/2013 18:50 | Katlin N Cataldi | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 131080639002B | 04/23/2013 22:26 | David K Beck | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 131080639002A | 04/23/2013 22:26 | David K Beck | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 131080639002A | 04/23/2013 22:26 | David K Beck | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 131080639002A | 04/23/2013 22:26 | David K Beck | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 131125713006 | 04/24/2013 08:11 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 131080635001 | 04/19/2013 10:15 | James L Mertz | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 2 | 131140635001 | 04/24/2013 23:30 | Annamaria Stipkovits | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 3 | 131180635001 | 04/29/2013 09:52 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 131080639002 | 04/19/2013 10:15 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131125713006 | 04/23/2013 15:20 | Nelli S Markaryan | 1 |
| 01505 | 1b Anions by 300.0-Bromide | EPA 300.0 | 1 | 13107655902A | 04/17/2013 22:12 | Christopher D Meeks | 1 |
| 00224 | 1b Anions by 300.0-Chloride | EPA 300.0 | 1 | 13107655902A | 04/17/2013 22:12 | Christopher D Meeks | 1 |
| 01504 | 1b Anions by 300.0-Fluoride | EPA 300.0 | 1 | 13107655902A | 04/17/2013 22:12 | Christopher D Meeks | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024683**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 15:15 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

559FB SDG#: PH032-01FB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00368 | 1b Anions by 300.0-Nitrate | EPA 300.0 | 1 | 13107655902A | 04/17/2013 22:12 | Christopher D Meeks | 1 |
| 01506 | 1b Anions by 300.0-Nitrite | EPA 300.0 | 1 | 13107655902A | 04/17/2013 22:12 | Christopher D Meeks | 1 |
| 07322 | 1b Anions by 300.0-Orthophosph | EPA 300.0 | 1 | 13107655902A | 04/17/2013 22:12 | Christopher D Meeks | 1 |
| 00228 | 1b Anions by 300.0-Sulfate | EPA 300.0 | 1 | 13107655902A | 04/17/2013 22:12 | Christopher D Meeks | 1 |
| 06467 | 2b Chromium VI by EPA 7199 | SW-846 7199 | 1 | 13107495301B | 04/17/2013 12:07 | William L Hamaker Jr | 1 |
| 08255 | 16b Cyanide by EPA 9012B | SW-846 9012B | 1 | 13113117101A | 04/24/2013 09:59 | K Robert Caulfeild-James | 1 |
| 08256 | Cyanide Water Distillation | SW-846 9012B | 1 | 13113117101A | 04/23/2013 09:45 | Nancy J Shoop | 1 |
| 12677 | 15b Ammonia by EPA 350.3 | EPA 350.3 | 1 | 13122003201A | 05/02/2013 12:01 | Kenneth A Bell | 1 |
| 12152 | 28b. pH (9040B and 9040C) | SW-846 9040C | 1 | 13107002101A | 04/17/2013 21:22 | Clayton C Litchmore | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-559-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7024684**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 08:45 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55900 SDG#: PH032-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.8 | | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.4 | | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.4 | | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 6.8 | | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 7.8 | J | 17 | 6.8 | | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 18 | | 17 | 6.8 | | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 170 | U | 170 | 34 | | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 9.5 | J | 17 | 6.8 | | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 17 | U | 17 | 6.8 | | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 180 | U | 180 | 62 | | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 180 | U | 180 | 62 | | 10 |
| 12969 | Chrysene | 218-01-9 | 23 | | 17 | 3.4 | | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 6.8 | | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 180 | U | 180 | 62 | | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 180 | U | 180 | 62 | | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 180 | U | 180 | 62 | | 10 |
| 12969 | Fluoranthene | 206-44-0 | 9.1 | J | 17 | 6.8 | | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.8 | | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | U | 17 | 6.8 | | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.8 | | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 17 | U | 17 | 6.8 | | 10 |
| 12969 | Naphthalene | 91-20-3 | 17 | U | 17 | 6.8 | | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.8 | | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 180 | U | 180 | 62 | | 10 |
| 12969 | Phenanthrene | 85-01-8 | 8.2 | J | 17 | 6.8 | | 10 |
| 12969 | Pyrene | 129-00-0 | 11 | J | 17 | 6.8 | | 10 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 17 | J | 34 | 10 | | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 13 | J | 17 | 4.5 | | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | mg/kg | | mg/kg | mg/kg | mg/kg | |
| 12952 | EFH (C12-C14) | n.a. | 100 | U | 100 | 41 | | 20 |
| 12952 | EFH (C15-C20) | n.a. | 100 | U | 100 | 41 | | 20 |
| 12952 | EFH (C21-C30) | n.a. | 140 | | 100 | 41 | | 20 |
| 12952 | EFH (C30-C40) | n.a. | 440 | | 210 | 83 | | 20 |
| 12952 | EFH (C8-C11) | n.a. | 100 | U | 100 | 41 | | 20 |
| **Metals** | **SW-846 6010C** | | mg/kg | | mg/kg | mg/kg | mg/kg | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-559-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024684**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 08:45 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55900 SDG#: PH032-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,500 | | 40.1 | 7.73 | | 1 |
| 06944 | Antimony | 7440-36-0 | 2.12 | J | 4.01 | 0.501 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.48 | J | 4.01 | 0.331 | | 1 |
| 06946 | Barium | 7440-39-3 | 91.2 | | 1.00 | 0.0331 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.650 | J | 1.00 | 0.0672 | | 1 |
| 07914 | Boron | 7440-42-8 | 3.07 | J | 10.0 | 0.832 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.469 | J | 1.00 | 0.0331 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,670 | | 20.1 | 4.03 | | 1 |
| 06951 | Chromium | 7440-47-3 | 20.2 | | 3.01 | 0.0883 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.07 | | 1.00 | 0.0903 | | 1 |
| 06953 | Copper | 7440-50-8 | 8.86 | | 2.01 | 0.181 | | 1 |
| 01654 | Iron | 7439-89-6 | 21,500 | | 40.1 | 3.81 | | 1 |
| 06955 | Lead | 7439-92-1 | 10.2 | | 3.01 | 0.471 | | 1 |
| 01656 | Lithium | 7439-93-2 | 19.7 | | 4.0 | 0.55 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,950 | | 10.0 | 1.74 | | 1 |
| 06958 | Manganese | 7439-96-5 | 288 | | 1.00 | 0.0832 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.327 | J | 2.01 | 0.171 | | 1 |
| 06961 | Nickel | 7440-02-0 | 10.5 | | 2.01 | 0.110 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 412 | | 10.0 | 0.512 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,800 | | 100 | 13.5 | | 1 |
| 01667 | Sodium | 7440-23-5 | 82.6 | J | 100 | 16.7 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.89 | J | 10.0 | 0.221 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,100 | | 1.00 | 0.171 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 38.4 | | 1.00 | 0.110 | | 1 |
| 06972 | Zinc | 7440-66-6 | 59.0 | | 4.01 | 0.201 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.39 | J | 5.01 | 0.832 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.401 | U | 0.401 | 0.100 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0648 | J | 0.201 | 0.0201 | | 2 |
| 06144 | Strontium | 7440-24-6 | 18.9 | | 0.401 | 0.0341 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.263 | | 0.201 | 0.0301 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0200 | | 0.0194 | 0.0100 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.48 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 22.2 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.2 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-559-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7024684**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 08:45 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55900 SDG#: PH032-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.0292 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.713 | JB | 5.12 | 0.0589 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.34 | JB | 5.12 | 0.0352 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 3.90 | JB | 5.12 | 0.0353 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 2.68 | JB | 5.12 | 0.0338 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 105 | B | 5.12 | 0.0718 | | 1 |
| 11031 | OCDD | 3268-87-9 | 871 | B | 10.2 | 0.0626 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.318 | J | 1.02 | 0.0687 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.09 | JBQ | 5.12 | 0.0350 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.869 | JB | 5.12 | 0.0325 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.794 | JB | 5.12 | 0.0351 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.689 | JB | 5.12 | 0.0343 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.351 | JB | 5.12 | 0.0367 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.818 | JB | 5.12 | 0.0325 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 16.1 | B | 5.12 | 0.0344 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 1.13 | JBQ | 5.12 | 0.0458 | | 1 |
| 11031 | OCDF | 39001-02-0 | 47.2 | B | 10.2 | 0.0434 | | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 3.55 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 78 | 25 - 164 |
| 13C12-12378-PeCDD | 77 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 68 | 17 - 157 |
| 13C12-2378-TCDF | 76 | 24 - 169 |
| 13C12-12378-PeCDF | 77 | 24 - 185 |
| 13C12-23478-PeCDF | 77 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 80 | 29 - 147 |
| 13C12-1234678-HpCDF | 80 | 28 - 143 |
| 13C12-1234789-HpCDF | 68 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-559-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024684**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 08:45 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55900 SDG#: PH032-02

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

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-559-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024684**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 08:45 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55900 SDG#: PH032-02

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 13:39 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 04:59 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 11:00 | Heather E Williams | 20 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13107001 | 04/19/2013 00:17 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13107001 | 04/17/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:25 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:27 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:27 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:27 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:27 | David K Beck | 2 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-559-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024684**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 08:45 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55900 SDG#: PH032-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:31 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401B | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401B | 04/23/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-559-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024685**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 09:25 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55902 SDG#: PH032-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 7.8 | J | 17 | 7.0 | | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 9.2 | J | 17 | 3.5 | | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.5 | | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 7.0 | | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 17 | U | 17 | 7.0 | | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 17 | U | 17 | 7.0 | | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 180 | U | 180 | 35 | | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | U | 17 | 7.0 | | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 17 | U | 17 | 7.0 | | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 190 | U | 190 | 63 | | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 190 | U | 190 | 63 | | 10 |
| 12969 | Chrysene | 218-01-9 | 14 | J | 17 | 3.5 | | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 7.0 | | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 190 | U | 190 | 63 | | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 190 | U | 190 | 63 | | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 78 | J | 190 | 63 | | 10 |
| 12969 | Fluoranthene | 206-44-0 | 17 | U | 17 | 7.0 | | 10 |
| 12969 | Fluorene | 86-73-7 | 28 | | 17 | 7.0 | | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | U | 17 | 7.0 | | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 560 | | 17 | 7.0 | | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 690 | | 17 | 7.0 | | 10 |
| 12969 | Naphthalene | 91-20-3 | 200 | | 17 | 7.0 | | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 7.0 | | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 190 | U | 190 | 63 | | 10 |
| 12969 | Phenanthrene | 85-01-8 | 16 | J | 17 | 7.0 | | 10 |
| 12969 | Pyrene | 129-00-0 | 17 | U | 17 | 7.0 | | 10 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | | 26.6 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 15 | J | 34 | 10 | | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 12 | J | 18 | 4.6 | | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 110 | U | 110 | 42 | | 20 |
| 12952 | EFH (C15-C20) | n.a. | 110 | U | 110 | 42 | | 20 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-559-SA7-SB-2.0-3.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7024685**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 09:25 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55902 SDG#: PH032-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 84 | J | 110 | 42 | | 20 |
| 12952 | EFH (C30-C40) | n.a. | 420 | | 210 | 84 | | 20 |
| 12952 | EFH (C8-C11) | n.a. | 110 | U | 110 | 42 | | 20 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,600 | | 41.3 | 7.96 | | 1 |
| 06944 | Antimony | 7440-36-0 | 2.08 | J | 4.13 | 0.516 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.18 | J | 4.13 | 0.341 | | 1 |
| 06946 | Barium | 7440-39-3 | 90.5 | | 1.03 | 0.0341 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.673 | J | 1.03 | 0.0691 | | 1 |
| 07914 | Boron | 7440-42-8 | 3.55 | J | 10.3 | 0.857 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.467 | J | 1.03 | 0.0341 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,990 | | 20.6 | 4.15 | | 1 |
| 06951 | Chromium | 7440-47-3 | 21.3 | | 3.10 | 0.0908 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.51 | | 1.03 | 0.0929 | | 1 |
| 06953 | Copper | 7440-50-8 | 7.90 | | 2.06 | 0.186 | | 1 |
| 01654 | Iron | 7439-89-6 | 21,200 | | 41.3 | 3.92 | | 1 |
| 06955 | Lead | 7439-92-1 | 10.0 | | 3.10 | 0.485 | | 1 |
| 01656 | Lithium | 7439-93-2 | 19.6 | | 4.1 | 0.57 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,820 | | 10.3 | 1.79 | | 1 |
| 06958 | Manganese | 7439-96-5 | 328 | | 1.03 | 0.0857 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.397 | J | 2.06 | 0.175 | | 1 |
| 06961 | Nickel | 7440-02-0 | 10.8 | | 2.06 | 0.114 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 363 | | 10.3 | 0.526 | | 1 |
| 01662 | Potassium | 7440-09-7 | 2,920 | | 103 | 13.9 | | 1 |
| 01667 | Sodium | 7440-23-5 | 82.0 | J | 103 | 17.2 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.50 | J | 10.3 | 0.227 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,080 | | 1.03 | 0.175 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.0 | | 1.03 | 0.114 | | 1 |
| 06972 | Zinc | 7440-66-6 | 53.9 | | 4.13 | 0.206 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.37 | J | 5.16 | 0.857 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.413 | U | 0.413 | 0.103 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0625 | J | 0.206 | 0.0206 | | 2 |
| 06144 | Strontium | 7440-24-6 | 19.7 | | 0.413 | 0.0351 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.273 | | 0.206 | 0.0310 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0172 | J | 0.0208 | 0.0107 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.87 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 22.1 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.0 | | 0.10 | 0.10 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-559-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024685**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 09:25 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55902 SDG#: PH032-03

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-559-SA7-SB-2.0-3.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7024685**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 09:25 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55902 SDG#: PH032-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0238 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.255 | JBQ | 5.18 | 0.0333 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.462 | JB | 5.18 | 0.0381 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.49 | JB | 5.18 | 0.0375 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.07 | JBQ | 5.18 | 0.0364 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 40.5 | B | 5.18 | 0.0456 | | 1 |
| 11031 | OCDD | 3268-87-9 | 368 | B | 10.4 | 0.0432 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0699 | JQ | 1.04 | 0.0525 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.08 | JB | 5.18 | 0.0280 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.452 | JB | 5.18 | 0.0270 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.399 | JB | 5.18 | 0.0313 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.368 | JBQ | 5.18 | 0.0306 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.235 | JB | 5.18 | 0.0330 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.361 | JB | 5.18 | 0.0291 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 5.91 | B | 5.18 | 0.0243 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.479 | JB | 5.18 | 0.0305 | | 1 |
| 11031 | OCDF | 39001-02-0 | 18.4 | B | 10.4 | 0.0325 | | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.05 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 81 | 25 - 164 |
| 13C12-12378-PeCDD | 77 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 72 | 17 - 157 |
| 13C12-2378-TCDF | 76 | 24 - 169 |
| 13C12-12378-PeCDF | 79 | 24 - 185 |
| 13C12-23478-PeCDF | 77 | 21 - 178 |
| 13C12-123478-HxCDF | 83 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 82 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 86 | 28 - 143 |
| 13C12-1234789-HpCDF | 77 | 26 - 138 |
| 13C12-OCDF | 73 | 17 - 157 |

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-559-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024685**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 09:25 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55902 SDG#: PH032-03

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

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-559-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024685**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 09:25 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55902 SDG#: PH032-03

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 14:08 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13108A16A | 04/19/2013 00:05 | Laura M Krieger | 26.6 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201310730788 | 04/17/2013 15:14 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 05:18 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 12:02 | Heather E Williams | 20 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13107001 | 04/19/2013 01:14 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13107001 | 04/17/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:36 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:34 | David K Beck | 2 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-559-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024685**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 09:25 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55902 SDG#: PH032-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:34 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:34 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:34 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:33 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401B | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401B | 04/23/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-560-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7024686**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 10:20 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56000 SDG#: PH032-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 4.6 | | 1.7 | 0.35 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 42 | | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 41 | | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 62 | | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 25 | | 18 | 3.5 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 12 | | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 26 | | 1.7 | 0.70 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 7.4 | J | 19 | 6.3 | | 1 |
| 12969 | Chrysene | 218-01-9 | 47 | | 1.7 | 0.35 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 4.4 | | 1.7 | 0.70 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 6.6 | J | 19 | 6.3 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 54 | | 1.7 | 0.70 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 13 | | 1.7 | 0.70 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.94 | J | 1.7 | 0.70 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.93 | J | 1.7 | 0.70 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 8.6 | | 1.7 | 0.70 | | 1 |
| 12969 | Pyrene | 129-00-0 | 62 | | 1.7 | 0.70 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | mg/kg | | mg/kg | mg/kg | mg/kg | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.0 | J | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 22 | | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 72 | | 11 | 4.2 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| **Metals** | **SW-846 6010C** | | mg/kg | | mg/kg | mg/kg | mg/kg | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-560-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7024686**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 10:20 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56000 SDG#: PH032-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,900 | | 41.3 | 7.96 | | 1 |
| 06944 | Antimony | 7440-36-0 | 1.91 | J | 4.13 | 0.516 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.31 | J | 4.13 | 0.341 | | 1 |
| 06946 | Barium | 7440-39-3 | 99.2 | | 1.03 | 0.0341 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.579 | J | 1.03 | 0.0691 | | 1 |
| 07914 | Boron | 7440-42-8 | 4.59 | J | 10.3 | 0.857 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.445 | J | 1.03 | 0.0341 | | 1 |
| 01650 | Calcium | 7440-70-2 | 3,670 | | 20.6 | 4.15 | | 1 |
| 06951 | Chromium | 7440-47-3 | 18.7 | | 3.10 | 0.0908 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.20 | | 1.03 | 0.0929 | | 1 |
| 06953 | Copper | 7440-50-8 | 9.98 | | 2.06 | 0.186 | | 1 |
| 01654 | Iron | 7439-89-6 | 22,100 | | 41.3 | 3.92 | | 1 |
| 06955 | Lead | 7439-92-1 | 30.2 | | 3.10 | 0.485 | | 1 |
| 01656 | Lithium | 7439-93-2 | 19.5 | | 4.1 | 0.57 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,410 | | 10.3 | 1.79 | | 1 |
| 06958 | Manganese | 7439-96-5 | 297 | | 1.03 | 0.0857 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.216 | J | 2.06 | 0.175 | | 1 |
| 06961 | Nickel | 7440-02-0 | 9.38 | | 2.06 | 0.114 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 419 | | 10.3 | 0.526 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,210 | | 103 | 13.9 | | 1 |
| 01667 | Sodium | 7440-23-5 | 99.7 | J | 103 | 17.2 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.60 | J | 10.3 | 0.227 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,170 | | 1.03 | 0.175 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 39.6 | | 1.03 | 0.114 | | 1 |
| 06972 | Zinc | 7440-66-6 | 66.1 | | 4.13 | 0.206 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 0.971 | J | 5.16 | 0.857 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.413 | U | 0.413 | 0.103 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0303 | J | 0.206 | 0.0206 | | 2 |
| 06144 | Strontium | 7440-24-6 | 20.4 | | 0.413 | 0.0351 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.256 | | 0.206 | 0.0310 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0259 | | 0.0198 | 0.0103 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.94 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 22.2 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.0 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-560-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7024686**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 10:20 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56000 SDG#: PH032-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.105 | J | 1.01 | 0.0293 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.937 | JB | 5.04 | 0.0599 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.65 | JB | 5.04 | 0.0530 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 7.63 | B | 5.04 | 0.0524 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 4.01 | JB | 5.04 | 0.0497 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 213 | B | 5.04 | 0.0919 | | 1 |
| 11031 | OCDD | 3268-87-9 | 2,180 | B | 10.1 | 0.0895 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.191 | JQ | 1.01 | 0.0378 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.495 | JB | 5.04 | 0.0253 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.450 | JB | 5.04 | 0.0247 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.856 | JB | 5.04 | 0.0527 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.830 | JB | 5.04 | 0.0475 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.355 | JB | 5.04 | 0.0668 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 1.20 | JB | 5.04 | 0.0490 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 23.0 | B | 5.04 | 0.0284 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 2.05 | JBQ | 5.04 | 0.0579 | | 1 |
| 11031 | OCDF | 39001-02-0 | 57.9 | B | 10.1 | 0.0678 | | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 5.87 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 76 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 81 | 28 - 130 |
| 13C12-1234678-HpCDD | 75 | 23 - 140 |
| 13C12-OCDD | 68 | 17 - 157 |
| 13C12-2378-TCDF | 71 | 24 - 169 |
| 13C12-12378-PeCDF | 80 | 24 - 185 |
| 13C12-23478-PeCDF | 75 | 21 - 178 |
| 13C12-123478-HxCDF | 79 | 26 - 152 |
| 13C12-123678-HxCDF | 87 | 26 - 123 |
| 13C12-234678-HxCDF | 79 | 28 - 136 |
| 13C12-123789-HxCDF | 62 | 29 - 147 |
| 13C12-1234678-HpCDF | 99 | 28 - 143 |
| 13C12-1234789-HpCDF | 58 | 26 - 138 |
| 13C12-OCDF | 47 | 17 - 157 |

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-560-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024686**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 10:20 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56000 SDG#: PH032-04

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

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-560-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024686**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 10:20 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56000 SDG#: PH032-04

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 14:37 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 05:36 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 08:35 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13107001 | 04/19/2013 02:10 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13107001 | 04/17/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:40 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:37 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:37 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:37 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:37 | David K Beck | 2 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-560-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024686**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 10:20 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56000 SDG#: PH032-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:40 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401B | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401B | 04/23/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-560-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024687**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 11:05 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56003 SDG#: PH032-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.37 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | U | 1.9 | 0.37 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.3 | J | 1.9 | 0.75 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.7 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.7 | | 1 |
| 12969 | Chrysene | 218-01-9 | 2.2 | | 1.9 | 0.37 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.7 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.7 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.7 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.7 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.9 | U | 1.9 | 0.75 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.2 | J | 1.9 | 0.75 | | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.2 | U | 1.2 | 0.2 | | 25.77 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 3.6 | | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.9 | | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.6 | U | 5.6 | 2.2 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.6 | U | 5.6 | 2.2 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-560-SA7-SB-3.0-4.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7024687**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 11:05 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56003 SDG#: PH032-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 10 | | 5.6 | 2.2 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 27 | | 11 | 4.5 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.6 | U | 5.6 | 2.2 | | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 30,600 | | 44.0 | 8.48 | | 1 |
| 06944 | Antimony | 7440-36-0 | 2.55 | J | 4.40 | 0.550 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.63 | | 4.40 | 0.363 | | 1 |
| 06946 | Barium | 7440-39-3 | 132 | | 1.10 | 0.0363 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.01 | J | 1.10 | 0.0737 | | 1 |
| 07914 | Boron | 7440-42-8 | 5.41 | J | 11.0 | 0.913 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.736 | J | 1.10 | 0.0363 | | 1 |
| 01650 | Calcium | 7440-70-2 | 12,600 | | 22.0 | 4.42 | | 1 |
| 06951 | Chromium | 7440-47-3 | 38.5 | | 3.30 | 0.0968 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 10.5 | | 1.10 | 0.0990 | | 1 |
| 06953 | Copper | 7440-50-8 | 17.0 | | 2.20 | 0.198 | | 1 |
| 01654 | Iron | 7439-89-6 | 30,900 | | 220 | 20.9 | | 5 |
| 06955 | Lead | 7439-92-1 | 12.1 | | 3.30 | 0.517 | | 1 |
| 01656 | Lithium | 7439-93-2 | 26.3 | | 4.4 | 0.61 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,330 | | 11.0 | 1.90 | | 1 |
| 06958 | Manganese | 7439-96-5 | 493 | | 1.10 | 0.0913 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.360 | J | 2.20 | 0.187 | | 1 |
| 06961 | Nickel | 7440-02-0 | 18.8 | | 2.20 | 0.121 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 386 | | 11.0 | 0.561 | | 1 |
| 01662 | Potassium | 7440-09-7 | 4,110 | | 110 | 14.9 | | 1 |
| 01667 | Sodium | 7440-23-5 | 113 | | 110 | 18.4 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.88 | J | 11.0 | 0.242 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,390 | | 1.10 | 0.187 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 69.0 | | 1.10 | 0.121 | | 1 |
| 06972 | Zinc | 7440-66-6 | 69.6 | | 4.40 | 0.220 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.08 | J | 5.50 | 0.913 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.161 | J | 0.440 | 0.110 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0406 | J | 0.220 | 0.0220 | | 2 |
| 06144 | Strontium | 7440-24-6 | 42.8 | | 0.440 | 0.0374 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.349 | | 0.220 | 0.0330 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0183 | J | 0.0214 | 0.0111 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.92 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 22.1 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 10.9 | | 0.10 | 0.10 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-560-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024687**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 11:05 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56003 SDG#: PH032-05

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-560-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024687**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 11:05 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56003 SDG#: PH032-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0801 | JQ | 1.12 | 0.0234 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.235 | JBQ | 5.58 | 0.0226 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0961 | JB | 5.58 | 0.0221 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.205 | JBQ | 5.58 | 0.0224 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.262 | JBQ | 5.58 | 0.0210 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.26 | JBQ | 5.58 | 0.0242 | | 1 |
| 11031 | OCDD | 3268-87-9 | 10.7 | JB | 11.2 | 0.0227 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0392 | JQ | 1.12 | 0.0182 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.309 | JB | 5.58 | 0.0124 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.179 | JBQ | 5.58 | 0.0131 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.157 | JB | 5.58 | 0.0194 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0911 | JB | 5.58 | 0.0163 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.439 | JBQ | 5.58 | 0.0226 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0801 | JB | 5.58 | 0.0183 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.129 | JB | 5.58 | 0.00828 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.125 | JB | 5.58 | 0.0169 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.373 | JBQ | 11.2 | 0.0339 | | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0574 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 92 | 32 - 141 |
| 13C12-123678-HxCDD | 92 | 28 - 130 |
| 13C12-123789-HxCDD | 91 | 28 - 130 |
| 13C12-1234678-HpCDD | 89 | 23 - 140 |
| 13C12-OCDD | 87 | 17 - 157 |
| 13C12-2378-TCDF | 74 | 24 - 169 |
| 13C12-12378-PeCDF | 91 | 24 - 185 |
| 13C12-23478-PeCDF | 82 | 21 - 178 |
| 13C12-123478-HxCDF | 87 | 26 - 152 |
| 13C12-123678-HxCDF | 100 | 26 - 123 |
| 13C12-234678-HxCDF | 89 | 28 - 136 |
| 13C12-123789-HxCDF | 82 | 29 - 147 |
| 13C12-1234678-HpCDF | 126 | 28 - 143 |
| 13C12-1234789-HpCDF | 70 | 26 - 138 |
| 13C12-OCDF | 62 | 17 - 157 |

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-560-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024687**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 11:05 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56003 SDG#: PH032-05

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

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-560-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024687**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 11:05 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56003 SDG#: PH032-05

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 15:06 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13108A16A | 04/19/2013 00:43 | Laura M Krieger | 25.77 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201310730788 | 04/17/2013 15:15 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 05:55 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 08:56 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13107001 | 04/19/2013 07:58 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13107001 | 04/17/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/22/2013 15:12 | Eric L Eby | 5 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:44 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:39 | David K Beck | 2 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-560-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024687**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 11:05 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56003 SDG#: PH032-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:39 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:39 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:39 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:42 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401B | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401B | 04/23/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-561-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7024688**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 13:30 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56100 SDG#: PH032-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 0.94 | J | 1.7 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 2.3 | | 1.7 | 0.35 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 3.4 | | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 2.2 | | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 6.7 | | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.6 | J | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.9 | | 1.7 | 0.69 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 33 | | 19 | 6.2 | | 1 |
| 12969 | Chrysene | 218-01-9 | 11 | | 1.7 | 0.35 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 8.8 | J | 19 | 6.2 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 42 | | 1.7 | 0.69 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.0 | J | 1.7 | 0.69 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.1 | J | 1.7 | 0.69 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.2 | J | 1.7 | 0.69 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | J | 1.7 | 0.69 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 3.3 | | 1.7 | 0.69 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 29 | | 1.7 | 0.69 | | 1 |
| 12969 | Pyrene | 129-00-0 | 38 | | 1.7 | 0.69 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | mg/kg | | mg/kg | mg/kg | mg/kg | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | | 5 |
| 12952 | EFH (C15-C20) | n.a. | 11 | J | 26 | 10 | | 5 |
| 12952 | EFH (C21-C30) | n.a. | 52 | | 26 | 10 | | 5 |
| 12952 | EFH (C30-C40) | n.a. | 230 | | 52 | 21 | | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 10 | | 5 |
| **Metals** | **SW-846 6010C** | | mg/kg | | mg/kg | mg/kg | mg/kg | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-561-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024688**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 13:30 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56100 SDG#: PH032-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,300 | | 40.4 | 7.79 | | 1 |
| 06944 | Antimony | 7440-36-0 | 1.73 | J | 4.04 | 0.505 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.59 | J | 4.04 | 0.333 | | 1 |
| 06946 | Barium | 7440-39-3 | 108 | | 1.01 | 0.0333 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.562 | J | 1.01 | 0.0677 | | 1 |
| 07914 | Boron | 7440-42-8 | 4.91 | J | 10.1 | 0.839 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.581 | J | 1.01 | 0.0333 | | 1 |
| 01650 | Calcium | 7440-70-2 | 4,290 | | 20.2 | 4.06 | | 1 |
| 06951 | Chromium | 7440-47-3 | 19.9 | | 3.03 | 0.0889 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.85 | | 1.01 | 0.0909 | | 1 |
| 06953 | Copper | 7440-50-8 | 9.12 | | 2.02 | 0.182 | | 1 |
| 01654 | Iron | 7439-89-6 | 21,400 | | 40.4 | 3.84 | | 1 |
| 06955 | Lead | 7439-92-1 | 26.0 | | 3.03 | 0.475 | | 1 |
| 01656 | Lithium | 7439-93-2 | 24.8 | | 4.0 | 0.56 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,750 | | 10.1 | 1.75 | | 1 |
| 06958 | Manganese | 7439-96-5 | 560 | | 1.01 | 0.0839 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.501 | J | 2.02 | 0.172 | | 1 |
| 06961 | Nickel | 7440-02-0 | 11.4 | | 2.02 | 0.111 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 601 | | 10.1 | 0.515 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,510 | | 101 | 13.6 | | 1 |
| 01667 | Sodium | 7440-23-5 | 93.3 | J | 101 | 16.9 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.88 | J | 10.1 | 0.222 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,150 | | 1.01 | 0.172 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.0 | | 1.01 | 0.111 | | 1 |
| 06972 | Zinc | 7440-66-6 | 96.8 | | 4.04 | 0.202 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.05 | U | 5.05 | 0.839 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.140 | J | 0.404 | 0.101 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0434 | J | 0.202 | 0.0202 | | 2 |
| 06144 | Strontium | 7440-24-6 | 35.0 | | 0.404 | 0.0343 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.240 | | 0.202 | 0.0303 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0299 | | 0.0204 | 0.0105 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.06 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 22.4 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.9 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-561-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7024688**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 13:30 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56100 SDG#: PH032-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0250 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.448 | JB | 5.20 | 0.0432 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.897 | JB | 5.20 | 0.0325 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 4.00 | JB | 5.20 | 0.0331 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.82 | JB | 5.20 | 0.0306 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 110 | B | 5.20 | 0.0630 | | 1 |
| 11031 | OCDD | 3268-87-9 | 1,140 | B | 10.4 | 0.0412 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.507 | J | 1.04 | 0.0553 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.860 | JB | 5.20 | 0.0225 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 1.08 | JB | 5.20 | 0.0235 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 1.83 | JB | 5.20 | 0.0308 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.49 | JB | 5.20 | 0.0267 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 1.07 | JB | 5.20 | 0.0330 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 1.59 | JB | 5.20 | 0.0277 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 16.3 | B | 5.20 | 0.0228 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 2.07 | JB | 5.20 | 0.0433 | | 1 |
| 11031 | OCDF | 39001-02-0 | 27.3 | B | 10.4 | 0.0295 | | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 3.75 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 79 | 25 - 164 |
| 13C12-12378-PeCDD | 80 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 88 | 28 - 130 |
| 13C12-123789-HxCDD | 88 | 28 - 130 |
| 13C12-1234678-HpCDD | 84 | 23 - 140 |
| 13C12-OCDD | 85 | 17 - 157 |
| 13C12-2378-TCDF | 75 | 24 - 169 |
| 13C12-12378-PeCDF | 87 | 24 - 185 |
| 13C12-23478-PeCDF | 78 | 21 - 178 |
| 13C12-123478-HxCDF | 84 | 26 - 152 |
| 13C12-123678-HxCDF | 93 | 26 - 123 |
| 13C12-234678-HxCDF | 84 | 28 - 136 |
| 13C12-123789-HxCDF | 78 | 29 - 147 |
| 13C12-1234678-HpCDF | 115 | 28 - 143 |
| 13C12-1234789-HpCDF | 68 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-561-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024688**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 13:30 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56100 SDG#: PH032-06

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

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-561-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024688**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 13:30 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56100 SDG#: PH032-06

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 15:36 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 06:13 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/24/2013 09:42 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13107001 | 04/19/2013 08:55 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13107001 | 04/17/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:47 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:41 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:41 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:41 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:41 | David K Beck | 2 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-561-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024688**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 13:30 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

56100 SDG#: PH032-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:44 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401B | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401B | 04/23/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: TB-041613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7024689**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 08:00

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

561TB SDG#: PH032-07TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13108B20A | 04/19/2013 13:54 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13108B20A | 04/19/2013 13:54 | Catherine J Schwarz | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-558-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7024690**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 14:35 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55800 SDG#: PH032-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Anthracene | 120-12-7 | 0.36 | J | 1.7 | 0.34 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.4 | J | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.1 | | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.2 | J | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.1 | J | 1.7 | 0.68 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 870 | | 180 | 61 | | 10 |
| 12969 | Chrysene | 218-01-9 | 3.2 | | 1.7 | 0.34 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 14 | J | 18 | 6.1 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.5 | | 1.7 | 0.68 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.90 | J | 1.7 | 0.68 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.2 | J | 1.7 | 0.68 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.6 | J | 1.7 | 0.68 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 3.3 | | 1.7 | 0.68 | | 1 |
| 12969 | Pyrene | 129-00-0 | 3.8 | | 1.7 | 0.68 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 28 | | 5.1 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 36 | | 10 | 4.1 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-558-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7024690**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 14:35 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55800 SDG#: PH032-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,610 | | 40.2 | 7.75 | | 1 |
| 06944 | Antimony | 7440-36-0 | 1.18 | J | 4.02 | 0.503 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 1.55 | J | 4.02 | 0.332 | | 1 |
| 06946 | Barium | 7440-39-3 | 55.4 | | 1.01 | 0.0332 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.378 | J | 1.01 | 0.0674 | | 1 |
| 07914 | Boron | 7440-42-8 | 3.37 | J | 10.1 | 0.835 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.651 | J | 1.01 | 0.0332 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,160 | | 20.1 | 4.04 | | 1 |
| 06951 | Chromium | 7440-47-3 | 14.3 | | 3.02 | 0.0885 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.82 | | 1.01 | 0.0905 | | 1 |
| 06953 | Copper | 7440-50-8 | 6.40 | | 2.01 | 0.181 | | 1 |
| 01654 | Iron | 7439-89-6 | 14,000 | | 40.2 | 3.82 | | 1 |
| 06955 | Lead | 7439-92-1 | 19.5 | | 3.02 | 0.473 | | 1 |
| 01656 | Lithium | 7439-93-2 | 12.0 | | 4.0 | 0.55 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 2,600 | | 10.1 | 1.74 | | 1 |
| 06958 | Manganese | 7439-96-5 | 198 | | 1.01 | 0.0835 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.229 | J | 2.01 | 0.171 | | 1 |
| 06961 | Nickel | 7440-02-0 | 7.15 | | 2.01 | 0.111 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 308 | | 10.1 | 0.513 | | 1 |
| 01662 | Potassium | 7440-09-7 | 2,190 | | 101 | 13.6 | | 1 |
| 01667 | Sodium | 7440-23-5 | 77.4 | J | 101 | 16.8 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.26 | J | 10.1 | 0.221 | | 1 |
| 06970 | Titanium | 7440-32-6 | 713 | | 1.01 | 0.171 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 22.7 | | 1.01 | 0.111 | | 1 |
| 06972 | Zinc | 7440-66-6 | 48.7 | | 4.02 | 0.201 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.32 | J | 5.03 | 0.835 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.402 | U | 0.402 | 0.101 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0267 | J | 0.201 | 0.0201 | | 2 |
| 06144 | Strontium | 7440-24-6 | 12.8 | | 0.402 | 0.0342 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.138 | J | 0.201 | 0.0302 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0181 | J | 0.0198 | 0.0102 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.39 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 22.2 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.5 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-558-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024690**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 14:35 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55800 SDG#: PH032-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.148 | J | 1.00 | 0.0509 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 1.96 | JB | 5.02 | 0.0885 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.16 | B | 5.02 | 0.0606 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 31.5 | B | 5.02 | 0.0598 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 13.7 | B | 5.02 | 0.0582 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 726 | B | 5.02 | 0.152 | | 1 |
| 11031 | OCDD | 3268-87-9 | 5,670 EB | | 10.0 | 0.103 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.138 | J | 1.00 | 0.0467 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.320 | JB | 5.02 | 0.0318 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.317 | JBQ | 5.02 | 0.0325 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 2.04 | JB | 5.02 | 0.0685 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.93 | JB | 5.02 | 0.0575 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.02 | U | 5.02 | 0.0751 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 3.03 | JB | 5.02 | 0.0623 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 59.2 | B | 5.02 | 0.0374 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 7.49 | B | 5.02 | 0.0792 | | 1 |
| 11031 | OCDF | 39001-02-0 | 145 | B | 10.0 | 0.0627 | | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 17.5 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 68 | 25 - 164 |
| 13C12-12378-PeCDD | 69 | 25 - 181 |
| 13C12-123478-HxCDD | 72 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 71 | 23 - 140 |
| 13C12-OCDD | 73 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 67 | 21 - 178 |
| 13C12-123478-HxCDF | 71 | 26 - 152 |
| 13C12-123678-HxCDF | 80 | 26 - 123 |
| 13C12-234678-HxCDF | 69 | 28 - 136 |
| 13C12-123789-HxCDF | 65 | 29 - 147 |
| 13C12-1234678-HpCDF | 99 | 28 - 143 |
| 13C12-1234789-HpCDF | 54 | 26 - 138 |
| 13C12-OCDF | 49 | 17 - 157 |

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-558-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024690**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 14:35 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55800 SDG#: PH032-08*

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

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

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-558-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024690**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 14:35 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55800 SDG#: PH032-08*

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/25/2013 16:05 | Mark A Clark | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLA026 | 04/27/2013 16:10 | Holly Berry | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLA026 | 04/21/2013 07:00 | Joseph S Feister | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 06:32 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 09:37 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13107001 | 04/19/2013 09:51 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13107001 | 04/17/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131070637001 | 04/21/2013 20:51 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131070637001B | 04/21/2013 02:44 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:44 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:44 | David K Beck | 2 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-558-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7024690**
**LLI Group # 1383412**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/16/2013 14:35 by SM

Submitted: 04/17/2013 09:30
Reported: 05/03/2013 10:18

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

55800 SDG#: PH032-08*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 131070637001A | 04/21/2013 02:44 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131070638001 | 04/18/2013 08:46 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131070637001 | 04/17/2013 23:35 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131070638001 | 04/18/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13107039401B | 04/17/2013 17:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401B | 04/23/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: E131111AA | Sample number(s): 7024683 | | | | | | | | | |
| 1,4-Dioxane | 2.0 | U | 2.0 | 0.5 | ug/l | 97 | 107 | 80-123 | 11 | 30 |
| Batch number: Y131141AA | Sample number(s): 7024683 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 83 | 79 | 35-181 | 5 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 73 | 78 | 46-146 | 8 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 99 | 94 | 61-130 | 5 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.8 | ug/l | 101 | 102 | 66-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 100 | 101 | 77-121 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 100 | 100 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 104 | 104 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 1 | ug/l | 100 | 99 | 73-120 | 1 | 30 |
| Bromoform | 5 | U | 5. | 1 | ug/l | 99 | 98 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 1 | ug/l | 79 | 78 | 51-120 | 2 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 97 | 94 | 57-141 | 3 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 10 | ug/l | 90 | 85 | 75-120 | 5 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 103 | 73-130 | 1 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 74-124 | 0 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 101 | 103 | 80-120 | 2 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 74 | 74 | 68-121 | 0 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 1 | ug/l | 100 | 100 | 65-137 | 0 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.8 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| Chloroethane | 5 | U | 5. | 1 | ug/l | 81 | 79 | 60-120 | 3 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 106 | 103 | 52-127 | 3 | 30 |
| Chloroform | 5 | U | 5. | 0.8 | ug/l | 102 | 103 | 77-122 | 1 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 100 | 100 | 70-130 | 1 | 30 |
| Chloromethane | 5 | U | 5. | 1 | ug/l | 82 | 81 | 54-123 | 2 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 102 | 80-120 | 2 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 60 | 58 | 47-120 | 3 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 96 | 94 | 56-120 | 2 | 30 |
| Dibromochloromethane | 5 | U | 5. | 1 | ug/l | 101 | 101 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 1 | ug/l | 104 | 105 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 1 | ug/l | 105 | 105 | 80-120 | 0 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 105 | 104 | 80-120 | 0 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 2 | ug/l | 82 | 83 | 35-122 | 1 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 1 | ug/l | 102 | 103 | 79-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 1 | ug/l | 106 | 106 | 64-130 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.8 | ug/l | 90 | 91 | 76-124 | 0 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.8 | ug/l | 103 | 104 | 80-120 | 0 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.8 | ug/l | 100 | 100 | 80-120 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 5 | U | 5. | 1 | ug/l | 106 | 106 | 80-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 1 | ug/l | 96 | 98 | 67-124 | 2 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 78-120 | 1 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/l | 87 | 88 | 66-124 | 1 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.8 | ug/l | 103 | 102 | 66-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.8 | ug/l | 102 | 103 | 79-120 | 1 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 90 | 89 | 69-128 | 1 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 96 | 96 | 64-120 | 1 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 95 | 100 | 58-120 | 5 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 93 | 92 | 59-125 | 1 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.8 | ug/l | 98 | 98 | 65-120 | 0 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 104 | 106 | 77-120 | 2 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 104 | 104 | 77-121 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 1 | ug/l | 86 | 86 | 71-122 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 102 | 101 | 68-121 | 2 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 97 | 97 | 65-122 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 97 | 96 | 84-118 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 103 | 77-130 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 104 | 105 | 77-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/l | 103 | 103 | 79-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/l | 99 | 99 | 70-129 | 0 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.8 | ug/l | 103 | 105 | 79-120 | 2 | 30 |
| Toluene | 5 | U | 5. | 0.7 | ug/l | 101 | 102 | 79-120 | 1 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 98 | 102 | 67-120 | 4 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 65-120 | 2 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.8 | ug/l | 96 | 98 | 66-126 | 2 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.8 | ug/l | 105 | 104 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/l | 88 | 87 | 65-130 | 1 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 99 | 98 | 76-120 | 1 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 103 | 69-122 | 1 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 103 | 68-124 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 87 | 94 | 57-147 | 8 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/l | 85 | 87 | 63-120 | 3 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.8 | ug/l | 104 | 105 | 77-120 | 1 | 30 |
| o-Xylene | 5 | U | 5. | 0.8 | ug/l | 103 | 104 | 77-120 | 1 | 30 |
| Batch number: 13107WAH026 | Sample number(s): 7024683 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 106 | 65-124 | 1 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 109 | 72-113 | 2 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 111 | 70-117 | 2 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 111 | 75-115 | 1 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 116 | 119 | 72-120 | 3 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 113 | 115 | 74-130 | 2 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 97 | 70-130 | 1 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 106 | 104 | 63-121 | 1 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 112 | 114 | 74-118 | 1 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 89 | 88 | 40-138 | 1 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 114 | 119 | 70-145 | 5 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 109 | 75-112 | 0 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 101 | 66-122 | 2 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 107 | 115 | 74-129 | 7 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 100 | 98 | 40-119 | 2 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.059 | J | 1.0 | 0.050 | ug/l | 107 | 84 | 70-143 | 24 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 113 | 73-116 | 3 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 106 | 74-115 | 1 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 101 | 66-122 | 1 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 113 | 114 | 71-120 | 1 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 112 | 114 | 74-119 | 2 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 106 | 109 | 67-118 | 2 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 86 | 89 | 36-120 | 3 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 53* | 56* | 57-145 | 6 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 105 | 107 | 72-109 | 2 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 111 | 110 | 71-116 | 1 | 30 |
| Batch number: 13107WAI026 | Sample number(s): 7024683 | | | | | | | | | |
| Acenaphthene | 0.5 | U | 0.5 | 0.1 | ug/l | 105 | 104 | 79-110 | 1 | 30 |
| Acenaphthylene | 0.5 | U | 0.5 | 0.1 | ug/l | 110 | 109 | 84-125 | 2 | 30 |
| Aniline | 1 | U | 1. | 0.5 | ug/l | 68 | 66 | 50-107 | 4 | 30 |
| Anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 107 | 108 | 82-116 | 1 | 30 |
| Benzidine | 60 | U | 60. | 20 | ug/l | 49 | 41 | 28-80 | 17 | 30 |
| Benzo(a)anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 115 | 114 | 79-119 | 1 | 30 |
| Benzo(a)pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 113 | 114 | 82-116 | 1 | 30 |
| Benzo(b)fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 109 | 109 | 78-119 | 0 | 30 |
| Benzo(g,h,i)perylene | 0.5 | U | 0.5 | 0.1 | ug/l | 114 | 114 | 81-121 | 0 | 30 |
| Benzo(k)fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 107 | 108 | 81-122 | 1 | 30 |
| Benzoic acid | 15 | U | 15. | 6 | ug/l | 15 | 22 | 10-69 | 37* | 30 |
| Benzyl alcohol | 15 | U | 15. | 5 | ug/l | 92 | 94 | 60-106 | 2 | 30 |
| 1,1'-Biphenyl | 1 | U | 1. | 0.5 | ug/l | 100 | 98 | 75-107 | 2 | 30 |
| 4-Bromophenyl-phenylether | 1 | U | 1. | 0.5 | ug/l | 104 | 103 | 75-115 | 1 | 30 |
| Butylbenzylphthalate | 5 | U | 5. | 2 | ug/l | 110 | 111 | 77-115 | 1 | 30 |
| Di-n-butylphthalate | 5 | U | 5. | 2 | ug/l | 104 | 106 | 80-115 | 2 | 30 |
| Carbazole | 1 | U | 1. | 0.5 | ug/l | 107 | 107 | 81-114 | 0 | 30 |
| 4-Chloro-3-methylphenol | 1 | U | 1. | 0.5 | ug/l | 102 | 102 | 77-119 | 0 | 30 |
| 4-Chloroaniline | 1 | U | 1. | 0.5 | ug/l | 76 | 75 | 43-110 | 2 | 30 |
| bis(2-Chloroethoxy)methane | 1 | U | 1. | 0.5 | ug/l | 99 | 98 | 76-112 | 0 | 30 |
| bis(2-Chloroethyl)ether | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 73-112 | 1 | 30 |
| bis(2-Chloroisopropyl)ether | 1 | U | 1. | 0.5 | ug/l | 99 | 98 | 60-115 | 1 | 30 |
| 2-Chloronaphthalene | 1 | U | 1. | 0.4 | ug/l | 104 | 103 | 56-135 | 1 | 30 |
| 2-Chlorophenol | 1 | U | 1. | 0.5 | ug/l | 101 | 102 | 76-111 | 1 | 30 |
| 4-Chlorophenyl-phenylether | 1 | U | 1. | 0.5 | ug/l | 101 | 99 | 77-114 | 2 | 30 |
| Chrysene | 0.5 | U | 0.5 | 0.1 | ug/l | 111 | 109 | 76-116 | 2 | 30 |
| Dibenz(a,h)anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 118 | 118 | 83-124 | 0 | 30 |
| Dibenzofuran | 1 | U | 1. | 0.5 | ug/l | 103 | 102 | 81-110 | 1 | 30 |
| 1,2-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 97 | 97 | 65-107 | 0 | 30 |
| 1,3-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 95 | 95 | 61-111 | 0 | 30 |
| 1,4-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 95 | 95 | 61-109 | 0 | 30 |
| 3,3'-Dichlorobenzidine | 5 | U | 5. | 2 | ug/l | 97 | 96 | 47-108 | 1 | 30 |
| 2,4-Dichlorophenol | 1 | U | 1. | 0.5 | ug/l | 101 | 102 | 84-114 | 1 | 30 |
| 2,6-Dichlorophenol | 1 | U | 1. | 0.5 | ug/l | 102 | 104 | 80-116 | 2 | 30 |
| Diethylphthalate | 5 | U | 5. | 2 | ug/l | 101 | 101 | 74-115 | 0 | 30 |
| 2,4-Dimethylphenol | 1 | U | 1. | 0.5 | ug/l | 100 | 101 | 78-117 | 1 | 30 |
| 3,5-Dimethylphenol | 10 | U | 10. | 3 | ug/l | | | | | |
| Dimethylphthalate | 5 | U | 5. | 2 | ug/l | 94 | 97 | 50-127 | 3 | 30 |
| 4,6-Dinitro-2-methylphenol | 15 | U | 15. | 5 | ug/l | 95 | 100 | 76-128 | 4 | 30 |
| 2,4-Dinitrophenol | 30 | U | 30. | 10 | ug/l | 84 | 90 | 45-146 | 7 | 30 |
| 1,2-Diphenylhydrazine | 1 | U | 1. | 0.5 | ug/l | 105 | 106 | 68-127 | 0 | 30 |
| bis(2-Ethylhexyl)phthalate | 5 | U | 5. | 2 | ug/l | 113 | 114 | 78-117 | 1 | 30 |
| Fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 108 | 109 | 81-121 | 1 | 30 |
| Fluorene | 0.5 | U | 0.5 | 0.1 | ug/l | 104 | 104 | 80-114 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobenzene | 0.5 | U | 0.5 | 0.1 | ug/l | 100 | 102 | 75-119 | 2 | 30 |
| Hexachlorobutadiene | 1 | U | 1. | 0.5 | ug/l | 95 | 93 | 61-115 | 2 | 30 |
| Hexachlorocyclopentadiene | 15 | U | 15. | 5 | ug/l | 83 | 87 | 30-124 | 4 | 30 |
| Hexachloroethane | 5 | U | 5. | 1 | ug/l | 90 | 90 | 55-109 | 0 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 116 | 116 | 83-121 | 0 | 30 |
| Isophorone | 1 | U | 1. | 0.5 | ug/l | 101 | 102 | 74-117 | 0 | 30 |
| 1-Methylnaphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 104 | 104 | 79-111 | 0 | 30 |
| 2-Methylnaphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 95 | 95 | 80-115 | 0 | 30 |
| 2-Methylphenol | 1 | U | 1. | 0.5 | ug/l | 95 | 97 | 65-115 | 2 | 30 |
| 4-Methylphenol | 1 | U | 1. | 0.5 | ug/l | 95 | 96 | 54-112 | 1 | 30 |
| Naphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 97 | 96 | 75-108 | 0 | 30 |
| NDPA as diphenylamine | 5 | U | 5. | 2 | ug/l | 104 | 104 | 70-130 | 1 | 30 |
| 2-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 112 | 114 | 84-122 | 2 | 30 |
| 3-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 88 | 88 | 80-120 | 1 | 30 |
| 4-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 90 | 88 | 61-110 | 3 | 30 |
| Nitrobenzene | 1 | U | 1. | 0.5 | ug/l | 101 | 102 | 72-116 | 0 | 30 |
| 2-Nitrophenol | 1 | U | 1. | 0.5 | ug/l | 105 | 111 | 84-118 | 5 | 30 |
| 4-Nitrophenol | 30 | U | 30. | 10 | ug/l | 78* | 82* | 13-71 | 5 | 30 |
| N-Nitroso-di-n-propylamine | 1 | U | 1. | 0.5 | ug/l | 101 | 100 | 69-110 | 0 | 30 |
| N-Nitrosodimethylamine | 5 | U | 5. | 2 | ug/l | 78 | 79 | 37-83 | 1 | 30 |
| N-Nitrosodiphenylamine | 1 | U | 1. | 0.5 | ug/l | 104 | 104 | 80-115 | 1 | 30 |
| Di-n-octylphthalate | 5 | U | 5. | 2 | ug/l | 110 | 112 | 72-129 | 2 | 30 |
| Pentachlorophenol | 5 | U | 5. | 1 | ug/l | 101 | 103 | 55-131 | 2 | 30 |
| Phenanthrene | 0.5 | U | 0.5 | 0.1 | ug/l | 96 | 96 | 76-113 | 0 | 30 |
| Phenol | 1 | U | 1. | 0.5 | ug/l | 64 | 64 | 26-68 | 0 | 30 |
| Pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 104 | 103 | 81-112 | 1 | 30 |
| Pyridine | 5 | U | 5. | 2 | ug/l | 79 | 68 | 13-97 | 14 | 30 |
| 1,2,4-Trichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 97 | 96 | 71-112 | 1 | 30 |
| 2,4,5-Trichlorophenol | 1 | U | 1. | 0.5 | ug/l | 106 | 107 | 80-114 | 0 | 30 |
| 2,4,6-Trichlorophenol | 1 | U | 1. | 0.5 | ug/l | 110 | 111 | 84-119 | 1 | 30 |

Batch number: 13110SLA026 Sample number(s): 7024684-7024688,7024690

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 90 | | 69-114 |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 71-113 |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 75-116 |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 76-115 |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 76-117 |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 77-129 |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 85 | | 70-130 |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 64-120 |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 71-120 |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 95 | | 65-131 |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 67-140 |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 78-111 |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 65-124 |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 68-125 |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 91 | | 70-130 |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 95 | | 67-143 |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 68-119 |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 116 | | 75-123 |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 66-122 |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 74-113 |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 78-121 |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 64-120 |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 121 | | 30-125 |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 88 | | 57-133 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 71-120 | | |
| Batch number: 13108A16A | Sample number(s): 7024685,7024687 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 89 | 82 | 67-119 | 8 | 30 |
| Batch number: 13108B20A | Sample number(s): 7024683,7024689 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 106 | 105 | 75-135 | 1 | 30 |
| Batch number: 131120017A | Sample number(s): 7024683 | | | | | | | | | |
| 4-Amino-2,6-Dinitrotoluene | 0.60 | U | 0.60 | 0.30 | ug/l | 128* | 128* | 80-120 | 0 | 30 |
| 2-Amino-4,6-Dinitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 92 | 92 | 74-104 | 0 | 30 |
| 2,6-Diamino-4-nitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 97 | 97 | 50-122 | 0 | 30 |
| 2,4-Diamino-6-nitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 97 | 97 | 50-122 | 0 | 30 |
| 1,3-Dinitrobenzene | 0.60 | U | 0.60 | 0.20 | ug/l | 103 | 104 | 76-116 | 1 | 30 |
| 2,4-Dinitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 95 | 96 | 76-104 | 1 | 30 |
| 2,6-Dinitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 119* | 119* | 79-114 | 0 | 30 |
| HMX | 2.0 | U | 2.0 | 0.65 | ug/l | 94 | 96 | 73-104 | 2 | 30 |
| Nitrobenzene | 0.60 | U | 0.60 | 0.20 | ug/l | 95 | 94 | 71-111 | 1 | 30 |
| Nitroglycerin | 15 | U | 15. | 5.2 | ug/l | 99 | 100 | 83-104 | 1 | 30 |
| 2-Nitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 97 | 99 | 78-102 | 2 | 30 |
| 3-Nitrotoluene | 1.2 | U | 1.2 | 0.40 | ug/l | 98 | 100 | 81-107 | 2 | 30 |
| 4-Nitrotoluene | 1.2 | U | 1.2 | 0.60 | ug/l | 103 | 103 | 76-105 | 1 | 30 |
| PETN | 18 | U | 18. | 6.0 | ug/l | 110 | 111 | 88-128 | 1 | 30 |
| RDX | 0.60 | U | 0.60 | 0.20 | ug/l | 98 | 101 | 74-107 | 2 | 30 |
| Tetryl | 0.60 | U | 0.60 | 0.40 | ug/l | 101 | 101 | 31-148 | 0 | 30 |
| 1,3,5-Trinitrobenzene | 0.60 | U | 0.60 | 0.20 | ug/l | 102 | 104 | 80-111 | 2 | 30 |
| 2,4,6-Trinitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 101 | 101 | 76-109 | 1 | 30 |
| Batch number: 131080014A | Sample number(s): 7024683 | | | | | | | | | |
| 19b Formaldehyde 8315A | 50 | U | 50. | 30 | ug/l | 97 | 97 | 60-140 | 0 | 20 |
| Batch number: 131120003A | Sample number(s): 7024683 | | | | | | | | | |
| 2,4-D | 0.50 | U | 0.50 | 0.16 | ug/l | 115 | 87 | 68-155 | 27 | 30 |
| Dalapon | 1.3 | U | 1.3 | 0.25 | ug/l | 89 | 59 | 39-115 | 40* | 30 |
| 2,4-DB | 1.0 | U | 1.0 | 0.30 | ug/l | 120 | 91 | 50-163 | 27 | 30 |
| Dicamba | 0.30 | U | 0.30 | 0.080 | ug/l | 97 | 71 | 55-163 | 31* | 30 |
| Dinoseb | 0.50 | U | 0.50 | 0.12 | ug/l | 119 | 85 | 16-163 | 34* | 30 |
| 2,4-DP (Dichlorprop) | 0.50 | U | 0.50 | 0.16 | ug/l | 102 | 77* | 89-162 | 28 | 30 |
| MCPA | 200 U | | 200. | 50 | ug/l | 100 | 74 | 68-154 | 30 | 30 |
| MCPP | 200 U | | 200. | 50 | ug/l | 109 | 76 | 46-173 | 36* | 30 |
| 2,4,5-T | 0.050 | U | 0.050 | 0.015 | ug/l | 123 | 90 | 55-169 | 31* | 30 |
| 2,4,5-TP | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 77 | 58-155 | 27 | 30 |
| Batch number: 131130024A | Sample number(s): 7024683 | | | | | | | | | |
| 6b Perchlorate (Method 6850) | 1.0 | U | 1.0 | 0.20 | ug/l | 101 | 103 | 85-115 | 2 | 20 |
| Batch number: 131100011A | Sample number(s): 7024684-7024688,7024690 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 75 | 75 | 36-106 | 0 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 103 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 115 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131120021A | Sample number(s): 7024683 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 72 | 64 | 35-84 | 11 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 102 | 105 | 69-120 | 2 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 108 | 111 | 69-128 | 3 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 131120022A | Sample number(s): 7024683 | | | | | | | | | |
| Aldrin | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 74 | 88 | 55-126 | 17 | 30 |
| Alpha BHC | 0.0080 | U | 0.0080 | 0.0024 | ug/l | 82 | 92 | 63-132 | 11 | 30 |
| Beta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 78 | 87 | 63-132 | 11 | 30 |
| Gamma BHC - Lindane | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 83 | 92 | 68-128 | 10 | 30 |
| Chlordane | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| p,p-DDD | 0.016 | U | 0.016 | 0.0040 | ug/l | 76 | 89 | 62-143 | 16 | 30 |
| p,p-DDE | 0.016 | U | 0.016 | 0.0040 | ug/l | 83 | 93 | 56-137 | 12 | 30 |
| p,p-DDT | 0.016 | U | 0.016 | 0.0042 | ug/l | 78 | 92 | 45-134 | 17 | 30 |
| Delta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 83 | 90 | 63-131 | 9 | 30 |
| Dieldrin | 0.016 | U | 0.016 | 0.0042 | ug/l | 83 | 92 | 65-135 | 11 | 30 |
| Endosulfan I | 0.0080 | U | 0.0080 | 0.0034 | ug/l | 81 | 91 | 48-124 | 11 | 30 |
| Endosulfan II | 0.016 | U | 0.016 | 0.012 | ug/l | 77 | 88 | 53-123 | 14 | 30 |
| Endosulfan Sulfate | 0.016 | U | 0.016 | 0.0046 | ug/l | 74 | 85 | 60-129 | 13 | 30 |
| Endrin | 0.016 | U | 0.016 | 0.0065 | ug/l | 81 | 90 | 43-139 | 11 | 30 |
| Endrin Aldehyde | 0.080 | U | 0.080 | 0.016 | ug/l | 69 | 78 | 55-123 | 12 | 20 |
| Endrin Ketone | 0.016 | U | 0.016 | 0.0040 | ug/l | 68 | 82 | 51-138 | 18 | 30 |
| Heptachlor | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 73 | 85 | 57-126 | 16 | 30 |
| Heptachlor Epoxide | 0.0080 | U | 0.0080 | 0.0018 | ug/l | 79 | 88 | 65-128 | 11 | 30 |
| Methoxychlor | 0.080 | U | 0.080 | 0.024 | ug/l | 80 | 91 | 46-134 | 14 | 30 |
| Mirex | 0.20 | U | 0.20 | 0.068 | ug/l | | | | | |
| Toxaphene | 2.4 | U | 2.4 | 0.80 | ug/l | | | | | |
| Batch number: 131130028A | Sample number(s): 7024683 | | | | | | | | | |
| Diethylene glycol | 10 | U | 10. | 8.0 | mg/l | 90 | | 61-123 | | |
| Ethylene glycol | 10 | U | 10. | 8.0 | mg/l | 97 | | 63-128 | | |
| Propylene glycol | 10 | U | 10. | 8.0 | mg/l | 94 | | 62-136 | | |
| Triethylene glycol | 10 | U | 10. | 8.0 | mg/l | 86 | | 66-129 | | |
| Batch number: 131140019A | Sample number(s): 7024683 | | | | | | | | | |
| Ethanol | 1,000 U | | 1,000. | 200 | ug/l | 94 | | 78-116 | | |
| Isopropanol | 1,000 U | | 1,000. | 200 | ug/l | 97 | | 67-120 | | |
| Methanol | 1,000 | | 1,000. | 200 | ug/l | 92 | | 79-120 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 131070015A | Sample number(s): 7024683 | | | | | | | | | |
| EFH (C12-C14) | 0.60 | U | 0.60 | 0.10 | mg/l | 97 | 95 | 70-130 | 3 | 30 |
| EFH (C15-C20) | 0.60 | U | 0.60 | 0.10 | mg/l | 109 | 107 | 70-130 | 2 | 30 |
| EFH (C21-C30) | 0.60 | U | 0.60 | 0.10 | mg/l | 102 | 99 | 70-130 | 2 | 30 |
| EFH (C30 - C40) | 0.60 | U | 0.60 | 0.10 | mg/l | 70 | 69* | 70-130 | 2 | 30 |
| EFH (C8-C11) | 0.60 | U | 0.60 | 0.10 | mg/l | 84 | 81 | 70-130 | 3 | 30 |
| Batch number: 131080007A | Sample number(s): 7024683 | | | | | | | | | |
| m-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 82 | 85 | 61-108 | 4 | 20 |
| o-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 83 | 87 | 75-125 | 4 | 20 |
| p-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 97 | 101 | 63-110 | 4 | 20 |
| Batch number: 131090007A | Sample number(s): 7024684-7024688,7024690 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 67 | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 76 | | 49-107 | | |
| Batch number: 131070637001 | Sample number(s): 7024684-7024688,7024690 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 99 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 101 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 109 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 96 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 106 | | 80-120 | | |
| Calcium | 20.0 | U | 20.0 | 4.02 | mg/kg | 101 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 100 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 106 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 103 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 103 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 1.82 | J | 10.0 | 1.73 | mg/kg | 99 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 100 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 10.9 | | 10.0 | 0.510 | mg/kg | 116 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 99 | | 80-120 | | |
| Tin | 1.40 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 98 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 108 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 101 | | 80-120 | | |
| Batch number: 131070637001A | Sample number(s): 7024684-7024688,7024690 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 110 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0340 | mg/kg | 111 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 97 | | 80-120 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 131070637001B | Sample number(s): 7024684-7024688,7024690 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 117 | | 80-120 | | |
| Batch number: 131070638001 | Sample number(s): 7024684-7024688,7024690 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0103 | mg/kg | 109 | | 85-120 | | |
| Batch number: 131080639002A | Sample number(s): 7024683 | | | | | | | | |
| Silver | 0.0010 U | 0.0010 | 0.00010 | mg/l | 103 | 107 | 90-115 | 3 | 20 |
| Strontium | 0.0020 U | 0.0020 | 0.00022 | mg/l | 100 | 102 | 80-120 | 2 | 20 |
| Thallium | 0.0010 U | 0.0010 | 0.00015 | mg/l | 101 | 103 | 80-120 | 2 | 20 |
| Batch number: 131080639002B | Sample number(s): 7024683 | | | | | | | | |
| Selenium | 0.0040 U | 0.0040 | 0.00050 | mg/l | 103 | 104 | 80-120 | 1 | 20 |
| Batch number: 131125713006 | Sample number(s): 7024683 | | | | | | | | |
| 3b Mercury 7470A | 0.00020 U | 0.00020 | 0.00007 0 | mg/l | 93 | 94 | 90-115 | 0 | 20 |
| Batch number: 131140635001 | Sample number(s): 7024683 | | | | | | | | |
| Aluminum | 0.400 U | 0.400 | 0.0743 | mg/l | 117* | 118* | 90-112 | 1 | 20 |
| Antimony | 0.0400 U | 0.0400 | 0.0035 | mg/l | 107 | 107 | 88-111 | 0 | 20 |
| Arsenic | 0.0400 U | 0.0400 | 0.0068 | mg/l | 107 | 108 | 90-113 | 1 | 20 |
| Barium | 0.0100 U | 0.0100 | 0.00033 | mg/l | 108 | 109 | 90-110 | 1 | 20 |
| Beryllium | 0.0100 U | 0.0100 | 0.00067 | mg/l | 105 | 107 | 88-110 | 2 | 20 |
| Boron | 0.100 U | 0.100 | 0.0083 | mg/l | 97 | 99 | 89-110 | 2 | 20 |
| Cadmium | 0.0100 U | 0.0100 | 0.00036 | mg/l | 109 | 110 | 90-112 | 2 | 20 |
| Calcium | 0.400 U | 0.400 | 0.0640 | mg/l | 116* | 117* | 90-110 | 1 | 20 |
| Chromium | 0.0300 U | 0.0300 | 0.0011 | mg/l | 102 | 103 | 90-110 | 2 | 20 |
| Cobalt | 0.0100 U | 0.0100 | 0.00066 | mg/l | 109 | 110 | 90-110 | 1 | 20 |
| Copper | 0.0024 J | 0.0200 | 0.0021 | mg/l | 107 | 109 | 90-112 | 2 | 20 |
| Iron | 0.400 U | 0.400 | 0.0333 | mg/l | 116* | 117* | 90-112 | 1 | 20 |
| Lead | 0.0300 U | 0.0300 | 0.0051 | mg/l | 107 | 110 | 88-110 | 3 | 20 |
| Lithium | 0.0400 U | 0.0400 | 0.0060 | mg/l | 107 | 108 | 90-110 | 1 | 20 |
| Magnesium | 0.200 U | 0.200 | 0.0606 | mg/l | 115* | 116* | 90-110 | 1 | 20 |
| Manganese | 0.0100 U | 0.0100 | 0.00083 | mg/l | 107 | 109 | 90-110 | 2 | 20 |
| Molybdenum | 0.0200 U | 0.0200 | 0.0029 | mg/l | 106 | 108 | 90-110 | 2 | 20 |
| Nickel | 0.0200 U | 0.0200 | 0.0011 | mg/l | 110 | 112* | 90-111 | 2 | 20 |
| Potassium | 1.00 U | 1.00 | 0.145 | mg/l | 113 | 114 | 85-115 | 1 | 20 |
| Sodium | 2.00 U | 2.00 | 0.167 | mg/l | 113 | 115* | 87-114 | 1 | 20 |
| Tin | 0.0400 U | 0.0400 | 0.0022 | mg/l | 102 | 103 | 90-110 | 1 | 20 |
| Titanium | 0.0200 U | 0.0200 | 0.0017 | mg/l | 104 | 106 | 90-113 | 2 | 20 |
| Vanadium | 0.0100 U | 0.0100 | 0.0013 | mg/l | 104 | 106 | 90-110 | 2 | 20 |
| Zinc | 0.0400 U | 0.0400 | 0.0020 | mg/l | 109 | 110 | 90-110 | 1 | 20 |
| Zirconium | 0.100 U | 0.100 | 0.0092 | mg/l | 105 | 107 | 90-110 | 2 | 20 |
| Batch number: 131180635001 | Sample number(s): 7024683 | | | | | | | | |
| Phosphorus | 0.200 U | 0.200 | 0.0052 | mg/l | 99 | 100 | 90-110 | 1 | 20 |
| Batch number: 13107495301B | Sample number(s): 7024683 | | | | | | | | |
| 2b Chromium VI by EPA 7199 | 10.0 U | 10.0 | 5.0 | ug/l | 94 | 98 | 90-110 | 4 | 20 |
| Batch number: 13107655902A | Sample number(s): 7024683 | | | | | | | | |
| 1b Anions by 300.0-Bromide | 0.50 U | 0.50 | 0.40 | mg/l | 101 | 102 | 90-110 | 1 | 20 |
| 1b Anions by 300.0-Chloride | 0.40 U | 0.40 | 0.20 | mg/l | 100 | 102 | 90-110 | 2 | 20 |
| 1b Anions by 300.0-Fluoride | 0.10 U | 0.10 | 0.080 | mg/l | 103 | 102 | 90-110 | 2 | 20 |
| 1b Anions by 300.0-Nitrate | 0.10 U | 0.10 | 0.050 | mg/l | 102 | 102 | 90-110 | 0 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1b Anions by 300.0-Nitrite | 0.10 | U | 0.10 | 0.080 | mg/l | 98 | 100 | 90-110 | 2 | 20 |
| 1b Anions by 300.0-Orthophosph | 0.50 | U | 0.50 | 0.20 | mg/l | 100 | 101 | 90-110 | 1 | 20 |
| 1b Anions by 300.0-Sulfate | 1.0 | U | 1.0 | 0.30 | mg/l | 100 | 102 | 90-110 | 2 | 20 |
| Batch number: 13113117101A | Sample number(s): 7024683 | | | | | | | | | |
| 16b Cyanide by EPA 9012B | 0.010 | U | 0.010 | 0.0050 | mg/l | 100 | 105 | 90-110 | 5 | 15 |
| Batch number: 13107002101A | Sample number(s): 7024683 | | | | | | | | | |
| 28b. pH (9040B and 9040C) | | | | | | 100 | | 99-103 | | |
| Batch number: 13107039401B | Sample number(s): 7024684-7024688,7024690 | | | | | | | | | |
| 15a pH by 9045C | | | | | | 100 | | 95-105 | | |
| Batch number: 13122003201A | Sample number(s): 7024683 | | | | | | | | | |
| 15b Ammonia by EPA 350.3 | 0.20 | U | 0.20 | 0.050 | mg/l | 98 | | 90-110 | | |
| Batch number: 13112162401B | Sample number(s): 7024684-7024688,7024690 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13107001 | Sample number(s): 7024684-7024688,7024690 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0192 | ng/kg | 90 | | 67-158 | | |
| 12378-PeCDD | 0.0350 | J | 5.00 | 0.0205 | ng/kg | 94 | | 70-142 | | |
| 123478-HxCDD | 0.0185 | J | 5.00 | 0.0151 | ng/kg | 99 | | 70-164 | | |
| 123678-HxCDD | 0.0275 | J | 5.00 | 0.0157 | ng/kg | 95 | | 76-134 | | |
| 123789-HxCDD | 0.0437 | J | 5.00 | 0.0155 | ng/kg | 98 | | 64-162 | | |
| 1234678-HpCDD | 0.0818 | J | 5.00 | 0.0175 | ng/kg | 95 | | 70-140 | | |
| OCDD | 0.151 | J | 10.0 | 0.0174 | ng/kg | 97 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0177 | ng/kg | 96 | | 75-158 | | |
| 12378-PeCDF | 0.0538 | J | 5.00 | 0.0111 | ng/kg | 96 | | 80-134 | | |
| 23478-PeCDF | 0.0482 | J | 5.00 | 0.0112 | ng/kg | 98 | | 68-160 | | |
| 123478-HxCDF | 0.0425 | J | 5.00 | 0.0107 | ng/kg | 100 | | 72-134 | | |
| 123678-HxCDF | 0.0316 | J | 5.00 | 0.00978 | ng/kg | 95 | | 84-130 | | |
| 123789-HxCDF | 0.0663 | J | 5.00 | 0.0122 | ng/kg | 98 | | 78-130 | | |
| 234678-HxCDF | 0.0359 | J | 5.00 | 0.0103 | ng/kg | 98 | | 70-156 | | |
| 1234678-HpCDF | 0.0623 | J | 5.00 | 0.00596 | ng/kg | 97 | | 82-122 | | |
| 1234789-HpCDF | 0.0596 | J | 5.00 | 0.0104 | ng/kg | 98 | | 78-138 | | |
| OCDF | 0.164 | J | 10.0 | 0.0311 | ng/kg | 98 | | 63-170 | | |
| Batch number: 13112001 | Sample number(s): 7024683 | | | | | | | | | |
| 2378-TCDD | 2.00 | U | 2.00 | 0.166 | pg/l | 89 | | 60-150 | | |
| 12378-PeCDD | 0.478 | J | 10.0 | 0.221 | pg/l | 93 | | 60-150 | | |
| 123478-HxCDD | 10.0 | U | 10.0 | 0.130 | pg/l | 88 | | 60-150 | | |
| 123678-HxCDD | 0.209 | J | 10.0 | 0.137 | pg/l | 90 | | 60-150 | | |
| 123789-HxCDD | 0.143 | J | 10.0 | 0.128 | pg/l | 91 | | 60-150 | | |
| 1234678-HpCDD | 0.304 | J | 10.0 | 0.152 | pg/l | 93 | | 60-150 | | |
| OCDD | 0.400 | J | 20.0 | 0.297 | pg/l | 91 | | 60-150 | | |
| 2378-TCDF | 2.00 | U | 2.00 | 0.162 | pg/l | 91 | | 60-150 | | |
| 12378-PeCDF | 0.459 | J | 10.0 | 0.131 | pg/l | 92 | | 60-150 | | |
| 23478-PeCDF | 0.221 | J | 10.0 | 0.127 | pg/l | 91 | | 60-150 | | |
| 123478-HxCDF | 10.0 | U | 10.0 | 0.0895 | pg/l | 93 | | 60-150 | | |
| 123678-HxCDF | 0.192 | J | 10.0 | 0.0871 | pg/l | 91 | | 60-150 | | |
| 123789-HxCDF | 0.213 | J | 10.0 | 0.0779 | pg/l | 92 | | 60-150 | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 234678-HxCDF | 0.148 | J | 10.0 | 0.0830 | pg/l | 90 | | 60-150 | | |
| 1234678-HpCDF | 0.268 | J | 10.0 | 0.0605 | pg/l | 91 | | 60-150 | | |
| 1234789-HpCDF | 0.249 | J | 10.0 | 0.0770 | pg/l | 91 | | 60-150 | | |
| OCDF | 0.832 | J | 20.0 | 0.210 | pg/l | 89 | | 60-150 | | |
| Batch number: 13107001 | Sample number(s): 7024684-7024688,7024690 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0205 | | | | ng/kg | | | | | |
| Batch number: 13112001 | Sample number(s): 7024683 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | U | | | | pg/l | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13110SLA026 | Sample number(s): 7024684-7024688,7024690 UNSPK: P022144 | | | | | | | | |
| Acenaphthene | 97 | 92 | 48-127 | 5 | 30 | | | | |
| Acenaphthylene | 104 | 96 | 49-121 | 7 | 30 | | | | |
| Anthracene | 102 | 97 | 52-126 | 5 | 30 | | | | |
| Benzo(a)anthracene | 108 | 93 | 32-135 | 15 | 30 | | | | |
| Benzo(a)pyrene | 100 | 86 | 36-138 | 15 | 30 | | | | |
| Benzo(b)fluoranthene | 109 | 88 | 26-142 | 20 | 30 | | | | |
| Benzo(e)pyrene | 91 | 77 | 70-130 | 17 | 30 | | | | |
| Benzo(g,h,i)perylene | 81 | 82 | 33-141 | 2 | 30 | | | | |
| Benzo(k)fluoranthene | 103 | 90 | 47-129 | 13 | 30 | | | | |
| Butylbenzylphthalate | 107 | 88 | 59-153 | 19 | 30 | | | | |
| Di-n-butylphthalate | 88 | 79 | 62-154 | 10 | 30 | | | | |
| Chrysene | 107 | 86 | 29-148 | 21 | 30 | | | | |
| Dibenz(a,h)anthracene | 86 | 89 | 34-125 | 4 | 30 | | | | |
| Diethylphthalate | 84 | 88 | 76-127 | 5 | 30 | | | | |
| Dimethylphthalate | 93 | 88 | 62-136 | 6 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 129 | 116 | 39-167 | 11 | 30 | | | | |
| Fluoranthene | 100 | 72 | 47-135 | 30 | 30 | | | | |
| Fluorene | 110 | 108 | 50-129 | 3 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 84 | 86 | 17-136 | 2 | 30 | | | | |
| 1-Methylnaphthalene | 102 | 98 | 50-131 | 4 | 30 | | | | |
| 2-Methylnaphthalene | 100 | 98 | 28-144 | 2 | 30 | | | | |
| Naphthalene | 95 | 91 | 31-148 | 4 | 30 | | | | |
| N-Nitrosodimethylamine | 85 | 108 | 48-113 | 23 | 30 | | | | |
| Di-n-octylphthalate | 85 | 72 | 52-162 | 16 | 30 | | | | |
| Phenanthrene | 115 | 99 | 29-142 | 15 | 30 | | | | |
| Pyrene | 110 | 64 | 26-143 | 49* | 30 | | | | |
| Batch number: 131100011A | Sample number(s): 7024684-7024688,7024690 UNSPK: P023137 | | | | | | | | |
| PCB-1016 | 94 | 93 | 16-146 | 1 | 50 | | | | |
| PCB-1260 | 99 | 99 | 40-134 | 1 | 50 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 131130028A | Sample number(s): 7024683 UNSPK: 7024683 | | | | | | | | |
| Diethylene glycol | 91 | 92 | 50-166 | 1 | 20 | | | | |
| Ethylene glycol | 97 | 98 | 50-155 | 2 | 20 | | | | |
| Propylene glycol | 96 | 96 | 54-145 | 0 | 20 | | | | |
| Triethylene glycol | 86 | 88 | 50-133 | 2 | 20 | | | | |
| Batch number: 131140019A | Sample number(s): 7024683 UNSPK: 7024683 | | | | | | | | |
| Ethanol | 99 | 97 | 62-145 | 3 | 20 | | | | |
| Isopropanol | 99 | 100 | 73-131 | 0 | 20 | | | | |
| Methanol | 98 | 96 | 52-159 | 2 | 20 | | | | |
| Batch number: 131090007A | Sample number(s): 7024684-7024688,7024690 UNSPK: P023136 | | | | | | | | |
| EFH (C12-C14) | 101 | 94 | 49-123 | 7 | 20 | | | | |
| EFH (C15-C20) | 81 | 58 | 49-123 | 13 | 20 | | | | |
| EFH (C21-C30) | 130* | 52 | 49-123 | 28* | 20 | | | | |
| EFH (C30-C40) | 163* | 98 | 49-123 | 19 | 20 | | | | |
| EFH (C8-C11) | 88 | 88 | 49-123 | 0 | 20 | | | | |
| Batch number: 131070637001 | Sample number(s): 7024684-7024688,7024690 UNSPK: P022144 BKG: P022144 | | | | | | | | |
| Aluminum | 1359 (2) | 1600 (2) | 75-125 | 3 | 20 | 10,500 | 10,800 | 2 | 20 |
| Antimony | 70* | 73* | 75-125 | 4 | 20 | 1.54 J | 1.48 J | 4 (1) | 20 |
| Arsenic | 111 | 108 | 75-125 | 2 | 20 | 2.01 J | 2.79 J | 32* (1) | 20 |
| Barium | 105 | 100 | 75-125 | 3 | 20 | 70.2 | 68.6 | 2 | 20 |
| Beryllium | 99 | 99 | 75-125 | 1 | 20 | 0.469 J | 0.472 J | 1 (1) | 20 |
| Boron | 94 | 95 | 75-125 | 0 | 20 | 3.12 J | 3.00 J | 4 (1) | 20 |
| Cadmium | 105 | 104 | 75-125 | 1 | 20 | 0.409 J | 0.437 J | 7 (1) | 20 |
| Calcium | 67 (2) | 102 (2) | 75-125 | 4 | 20 | 3,060 | 2,860 | 7 | 20 |
| Chromium | 103 | 118 | 75-125 | 8 | 20 | 18.0 | 17.9 | 1 | 20 |
| Cobalt | 101 | 100 | 75-125 | 1 | 20 | 4.98 | 4.86 | 3 | 20 |
| Copper | 101 | 101 | 75-125 | 0 | 20 | 5.00 | 5.12 | 2 (1) | 20 |
| Iron | 1525 (2) | 1576 (2) | 75-125 | 0 | 20 | 18,500 | 19,000 | 3 | 20 |
| Lead | 106 | 104 | 75-125 | 1 | 20 | 5.00 | 5.37 | 7 (1) | 20 |
| Lithium | 104 | 105 | 75-125 | 1 | 20 | 22.9 | 23.7 | 3 | 20 |
| Magnesium | 277 (2) | 267 (2) | 75-125 | 0 | 20 | 3,970 | 3,970 | 0 | 20 |
| Manganese | 107 (2) | 104 (2) | 75-125 | 0 | 20 | 275 | 269 | 2 | 20 |
| Molybdenum | 96 | 96 | 75-125 | 0 | 20 | 1.19 J | 0.434 J | 93* (1) | 20 |
| Nickel | 100 | 99 | 75-125 | 1 | 20 | 8.44 | 8.47 | 0 (1) | 20 |
| Phosphorus | 98 | 132* | 75-125 | 7 | 20 | 357 | 368 | 3 | 20 |
| Potassium | 129* | 124 | 75-125 | 1 | 20 | 2,680 | 2,750 | 2 | 20 |
| Sodium | 96 | 97 | 75-125 | 2 | 20 | 59.7 J | 60.9 J | 2 (1) | 20 |
| Tin | 92 | 91 | 75-125 | 0 | 20 | 2.85 J | 2.68 J | 6 (1) | 20 |
| Titanium | 243 (2) | 230 (2) | 75-125 | 1 | 20 | 1,030 | 1,050 | 2 | 20 |
| Vanadium | 100 | 99 | 75-125 | 1 | 20 | 28.1 | 28.2 | 0 | 20 |
| Zinc | 112 | 111 | 75-125 | 0 | 20 | 53.7 | 54.2 | 1 | 20 |
| Zirconium | 95 | 94 | 75-125 | 1 | 20 | 1.08 J | 1.96 J | 57* (1) | 20 |
| Batch number: 131070637001A | Sample number(s): 7024684-7024688,7024690 UNSPK: P022144 BKG: P022144 | | | | | | | | |
| Silver | 100 | 101 | 75-125 | 1 | 20 | 0.0299 J | 0.0323 J | 8 (1) | 20 |
| Strontium | 89 | 103 | 75-125 | 6 | 20 | 11.7 | 11.4 | 2 | 20 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Thallium | 105 | 98 | 75-125 | 5 | 20 | 0.226 | 0.220 | 3 (1) | 20 |
| Batch number: 131070637001B | Sample number(s): 7024684-7024688,7024690 UNSPK: P022144 BKG: P022144 | | | | | | | | |
| Selenium | 116 | 111 | 75-125 | 4 | 20 | 0.385 U | 0.385 U | 0 (1) | 20 |
| Batch number: 131070638001 | Sample number(s): 7024684-7024688,7024690 UNSPK: P022144 BKG: P022144 | | | | | | | | |
| 3a Mercury 7471A | 112 | 111 | 65-135 | 1 | 20 | 0.0197 U | 0.0198 U | 0 (1) | 20 |
| Batch number: 13107002101A | Sample number(s): 7024683 BKG: P024806 | | | | | | | | |
| 28b. pH (9040B and 9040C) | | | | | | 7.1 | 7.2 | 1 | 3 |
| Batch number: 13107039401B | Sample number(s): 7024684-7024688,7024690 BKG: P023140 | | | | | | | | |
| 15a pH by 9045C | | | | | | 6.85 | 6.87 | 0 | 3 |
| Batch number: 13122003201A | Sample number(s): 7024683 UNSPK: P032181 BKG: P032181 | | | | | | | | |
| 15b Ammonia by EPA 350.3 | 83 | 76 | 28-141 | 8 | 10 | 0.68 | 0.99 | 37* (1) | 20 |
| Batch number: 13112162401B | Sample number(s): 7024684-7024688,7024690 BKG: 7024684 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.2 | 3.4 | 7 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 13b 1,4-Dioxane by 8260B SIM
Batch number: E131111AA

| | Toluene-d8 |
|---|---|
| 7024683 | 88 |
| Blank | 88 |
| LCS | 88 |
| LCSD | 88 |
| Limits: | 80-120 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y131141AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7024683 | 101 | 101 | 97 | 95 |
| Blank | 101 | 100 | 97 | 95 |
| LCS | 100 | 103 | 99 | 100 |
| LCSD | 100 | 102 | 100 | 100 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 13107WAH026

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

## Surrogate Quality Control

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7024683 | 106 | 124 | 100 |
| Blank | 79 | 87 | 77 |
| LCS | 105 | 125 | 102 |
| LCSD | 107 | 125 | 102 |
| Limits: | 64-120 | 62-141 | 58-134 |

Analysis Name: 8b SVOCs by EPA 8270D
Batch number: 13107WAI026

| | Phenol-d6 | 2-Fluorophenol | 2,4,6-Tribromophenol | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---|---|---|---|---|---|---|
| 7024683 | 45 | 66 | 88 | 87 | 91 | 100 |
| Blank | 60 | 76 | 100 | 105 | 111 | 105 |
| LCS | 60 | 79 | 105 | 99 | 104 | 107 |
| LCSD | 60 | 78 | 103 | 99 | 103 | 106 |
| Limits: | 20-110 | 20-110 | 30-110 | 40-130 | 45-130 | 45-130 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13110SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7024684 | 64 | 99 | 96 |
| 7024685 | 75 | 62 | 94 |
| 7024686 | 69 | 99 | 94 |
| 7024687 | 71 | 91 | 94 |
| 7024688 | 56 | 68 | 77 |
| 7024690 | 70 | 89 | 97 |
| Blank | 83 | 91 | 96 |
| LCS | 82 | 91 | 101 |
| MS | 78 | 92 | 95 |
| MSD | 69 | 89 | 97 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13108A16A

| | Trifluorotoluene-F |
|---|---|
| 7024685 | 83 |
| 7024687 | 77 |
| Blank | 88 |
| LCS | 86 |
| LCSD | 80 |
| Limits: | 61-122 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13108B20A

| | Trifluorotoluene-F |
|---|---|

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

## Surrogate Quality Control

| | |
|---|---|
| 7024683 | 90 |
| 7024689 | 91 |
| Blank | 88 |
| LCS | 114 |
| LCSD | 117 |
| Limits: | 63-135 |

Analysis Name: 19b Formaldehyde 8315A
Batch number: 131080014A

| | Butyraldehyde |
|---|---|
| 7024683 | 113 |
| Blank | 87 |
| LCS | 108 |
| LCSD | 104 |
| Limits: | 45-145 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131100011A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7024684 | 115 | 86 |
| 7024685 | 84 | 88 |
| 7024686 | 112 | 87 |
| 7024687 | 124* | 102 |
| 7024688 | 104 | 85 |
| 7024690 | 118 | 96 |
| Blank | 129* | 111 |
| LCS | 130* | 120 |
| LCSD | 130* | 122* |
| MS | 122* | 107 |
| MSD | 125* | 108 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 24b Herbicides by EPA 8151A
Batch number: 131120003A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7024683 | 97 |
| Blank | 88 |
| LCS | 101 |
| LCSD | 78 |
| Limits: | 50-150 |

Analysis Name: 18b Energetics by 8330A
Batch number: 131120017A

| | 2-Nitro-m-xylene |
|---|---|
| 7024683 | 97 |
| Blank | 97 |
| LCS | 95 |

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(2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

### Surrogate Quality Control

LCSD 102

Limits: 80-146

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 131120021A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7024683 | 126* | 108 |
| Blank | 126* | 96 |
| LCS | 117 | 71 |
| LCSD | 118 | 101 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 131120022A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7024683 | 100 | 93 |
| Blank | 93 | 80 |
| LCS | 85 | 66 |
| LCSD | 94 | 84 |
| Limits: | 60-140 | 20-120 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 131070015A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7024683 | 87 | 85 |
| Blank | 96 | 88 |
| LCS | 101 | 80 |
| LCSD | 100 | 80 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 23b Terphenyls by 8015B
Batch number: 131080007A

| | n-Triacontane-d62 |
|---|---|
| 7024683 | 96 |
| Blank | 86 |
| LCS | 86 |
| LCSD | 86 |
| Limits: | 36-160 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131090007A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7024684 | 89 | 87 |
| 7024685 | 88 | 87 |
| 7024686 | 89 | 88 |
| 7024687 | 91 | 89 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7024688 | 86 | 80 |
| 7024690 | 96 | 89 |
| Blank | 90 | 90 |
| LCS | 87 | 87 |
| MS | 88 | 86 |
| MSD | 83 | 82 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 20b Glycols by EPA 8015C
Batch number: 131130028A

| | Tetramethylene glycol |
|---|---|
| 7024683 | 87 |
| Blank | 96 |
| LCS | 90 |
| MS | 89 |
| MSD | 91 |
| Limits: | 58-141 |

Analysis Name: 14b Alcohols by EPA 8015C
Batch number: 131140019A

| | Acetone |
|---|---|
| 7024683 | 96 |
| Blank | 94 |
| LCS | 92 |
| MS | 92 |
| MSD | 94 |
| Limits: | 71-127 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13107001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7024684 | 78 | 77 | 81 | 81 | 81 | 80 |
| 7024685 | 81 | 77 | 83 | 84 | 82 | 77 |
| 7024686 | 76 | 75 | 79 | 87 | 79 | 62 |
| 7024687 | 80 | 82 | 87 | 100 | 89 | 82 |
| 7024688 | 79 | 78 | 84 | 93 | 84 | 78 |
| 7024690 | 68 | 67 | 71 | 80 | 69 | 65 |
| Blank | 71 | 69 | 75 | 81 | 75 | 71 |
| OPR | 65 | 66 | 72 | 80 | 73 | 72 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7024684 | 80 | 68 | 61 | 77 | 77 | 81 |
| 7024685 | 86 | 77 | 73 | 77 | 78 | 81 |
| 7024686 | 99 | 58 | 47 | 76 | 78 | 80 |
| 7024687 | 126 | 70 | 62 | 85 | 92 | 92 |
| 7024688 | 115 | 68 | 61 | 80 | 84 | 88 |
| 7024690 | 99 | 54 | 49 | 69 | 72 | 77 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383412
Reported: 05/03/13 at 10:18 AM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| Blank | 94 | 62 | 57 | 74 | 79 | 77 |
| OPR | 100 | 62 | 58 | 72 | 77 | 78 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7024684 | 82 | 74 | 68 | 76 | 77 |
| 7024685 | 80 | 76 | 72 | 76 | 79 |
| 7024686 | 81 | 75 | 68 | 71 | 80 |
| 7024687 | 91 | 89 | 87 | 74 | 91 |
| 7024688 | 88 | 84 | 85 | 75 | 87 |
| 7024690 | 77 | 71 | 73 | 64 | 75 |
| Blank | 77 | 75 | 72 | 63 | 73 |
| OPR | 77 | 79 | 79 | 59 | 73 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 13112001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7024683 | 67 | 72 | 71 | 69 | 71 | 70 |
| Blank | 75 | 74 | 74 | 72 | 72 | 87 |
| OPR | 65 | 70 | 69 | 69 | 69 | 76 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7024683 | 69 | 71 | 72 | 76 | 76 | 77 |
| Blank | 74 | 71 | 71 | 81 | 78 | 77 |
| OPR | 69 | 67 | 66 | 73 | 75 | 73 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7024683 | 76 | 77 | 80 | 65 | 71 |
| Blank | 78 | 77 | 78 | 66 | 76 |
| OPR | 73 | 71 | 74 | 63 | 71 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Cap# 1383412 sample# 7024683-90

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/16/2013
CarrierName: FedEx
AirbillNo: 7995 4183 7052

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130416-01
Cooler #: 2, 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FB-041613 | 4/16/13 15:15 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 1 - 250 mL Poly | 10 day | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 1 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 1 - 40 mL Vial | 10 day | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 1 - 1 L Amber | 10 day | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 2 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | HCl | 2 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | HCl | 1 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 6 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | Analyze for Nitrite, Bromide, Chloride, Phosphate, Sulfate |
| FB-041613 | 4/16/13 15:15 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | NaOH | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | |
| FB-041613 | 4/16/13 15:15 | WQ | H2SO4 pH<2 | 1 - 8 oz glass | 10 day | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Analyze for Ammonia by EPA 350.3 \| |

acct#13013 Cap#1383412 Sample#7024683-90

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/16/2013
CarrierName: FedEx
AirbillNo: 7995 4183 7052

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130416-01
Cooler #: 2, 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate Confirm 6850/6860 | Perchlorate 314.0/331 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

Special Instructions:

Sampler: Steven Mercer

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Gh | 4/16/13 | | | | | | | | | | |
| | | | | | | | | | Pat Gh | 4/17/13 | 0930 |

acct# 13013 Gp# 1383412 Sample # 7024683-90

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/16/2013
CarrierName: FedEx
AirbillNo: 7995 4183 7052

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130416-02
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-559-SA7-SB-0.0-0.5 | 4/16/13 08:45 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-559-SA7-SB-0.0-0.5 | 4/16/13 08:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-559-SA7-SB-2.0-3.0 | 4/16/13 09:25 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-559-SA7-SB-2.0-3.0 | 4/16/13 09:25 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-559-SA7-SB-2.0-3.0 | 4/16/13 09:25 | SO | None | 1 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-560-SA7-SB-0.0-0.5 | 4/16/13 10:20 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-560-SA7-SB-0.0-0.5 | 4/16/13 10:20 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-560-SA7-SB-3.0-4.0 | 4/16/13 11:05 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-560-SA7-SB-3.0-4.0 | 4/16/13 11:05 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-560-SA7-SB-3.0-4.0 | 4/16/13 11:05 | SO | None | 1 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-561-SA7-SB-0.0-0.5 | 4/16/13 13:30 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-561-SA7-SB-0.0-0.5 | 4/16/13 13:30 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| TB-041613 | 4/16/13 08:00 | WQ | None | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-558-SA7-SB-0.0-0.5 | 4/16/13 14:35 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-558-SA7-SB-0.0-0.5 | 4/16/13 14:35 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

Special Instructions:

Sampler: Steven Marcus

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Gtz | 4/16/13 | | | | | | | | Patgu | 4/17/13 | 0930 |

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C# 1383412

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** CDM Smith

**Date of Receipt:** 4/17/13

**Time of Receipt:** 0930

**Source Code:** 50

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present *:** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | 2737 | 2.6 | TB | WI | y | B | |
| 2 | ↓ | 2.5 | ↓ | ↓ | ↓ | ↓ | |
| 3 | ↓ | 2.4 | ↓ | ↓ | ↓ | ↓ | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** Ø

**Paperwork Discrepancy/Unpacking Problems:**

~~Rec'd 1 500 mL Sulfuric preserved glass container for ammonia analysis not listed on chain.~~ ① PE 4/17/13

**Unpacker Signature/Emp#:** Pat Gh 3472 **Date/Time:** 4/17/13 1200

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

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

April 30, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/18/2013
Group Number: 1383780
SDG: PH033
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| TB-041713 Water | 7026475 |
| SL-558-SA7-SB-3.0-4.0 Soil | 7026476 |
| SL-557-SA7-SB-0.0-0.5 Soil | 7026477 |
| SL-505-SA7-SB-0.0-0.5 Soil | 7026478 |
| SL-502-SA7-SB-0.0-0.5 Soil | 7026479 |
| SL-501-SA7-SB-0.0-0.5 Soil | 7026480 |
| SL-500-SA7-SB-0.0-0.5 Soil | 7026481 |

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

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

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eurofins | Lancaster Laboratories

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

# Analysis Report

**Sample Description: TB-041713 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7026475**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 08:00

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

TB417 SDG#: PH033-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13108B20A | 04/19/2013 14:15 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13108B20A | 04/19/2013 14:15 | Catherine J Schwarz | 1 |

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

**Sample Description:** SL-558-SA7-SB-3.0-4.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026476**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-558 SDG#: PH033-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 4.4 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 24 | | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.47 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 26.15 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

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

**Sample Description:** SL-558-SA7-SB-3.0-4.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026476**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-558 SDG#: PH033-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,800 | | 41.5 | 7.99 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.15 | U | 4.15 | 0.518 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.67 | | 4.15 | 0.342 | 1 |
| 06946 | Barium | 7440-39-3 | 78.9 | | 1.04 | 0.0342 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.573 | J | 1.04 | 0.0694 | 1 |
| 07914 | Boron | 7440-42-8 | 5.62 | J | 10.4 | 0.860 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.102 | J | 1.04 | 0.0342 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,570 | | 20.7 | 4.17 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.5 | | 3.11 | 0.0912 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.21 | | 1.04 | 0.0933 | 1 |
| 06953 | Copper | 7440-50-8 | 12.4 | | 2.07 | 0.187 | 1 |
| 01654 | Iron | 7439-89-6 | 22,700 | | 41.5 | 3.94 | 1 |
| 06955 | Lead | 7439-92-1 | 5.53 | | 3.11 | 0.487 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.0 | | 4.1 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,890 | | 10.4 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 320 | | 1.04 | 0.0860 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.377 | J | 2.07 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.7 | | 2.07 | 0.114 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 384 | | 10.4 | 0.528 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,090 | | 104 | 14.0 | 1 |
| 01667 | Sodium | 7440-23-5 | 111 | | 104 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 3.17 | J | 10.4 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,230 | | 1.04 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 39.0 | | 1.04 | 0.114 | 1 |
| 06972 | Zinc | 7440-66-6 | 53.1 | | 4.15 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.38 | J | 5.18 | 0.860 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.152 | J | 0.415 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0854 | J | 0.207 | 0.0207 | 2 |
| 06144 | Strontium | 7440-24-6 | 14.7 | | 0.415 | 0.0352 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.235 | | 0.207 | 0.0311 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0203 | U | 0.0203 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C<br>The pH was measured in water at 22 C. | n.a. | 7.43 | | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.5 | | 0.10 | 0.10 | 1 |

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

**Sample Description: SL-558-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026476**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-558 SDG#: PH033-02

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

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

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

**Sample Description:** SL-558-SA7-SB-3.0-4.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026476**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-558 SDG#: PH033-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0253 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.174 | JB | 5.14 | 0.0306 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.400 | JB | 5.14 | 0.0350 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 2.48 | JB | 5.14 | 0.0358 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.15 | JB | 5.14 | 0.0342 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 64.4 | B | 5.14 | 0.0484 | 1 |
| 11031 | OCDD | 3268-87-9 | 505 | B | 10.3 | 0.0388 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.03 | U | 1.03 | 0.0200 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0704 | JBQ | 5.14 | 0.0131 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0479 | JBQ | 5.14 | 0.0122 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.162 | JBQ | 5.14 | 0.0275 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.115 | JB | 5.14 | 0.0259 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.103 | JB | 5.14 | 0.0263 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.168 | JB | 5.14 | 0.0255 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 3.96 | JB | 5.14 | 0.0138 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.438 | JB | 5.14 | 0.0197 | 1 |
| 11031 | OCDF | 39001-02-0 | 10.8 | B | 10.3 | 0.0255 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.46 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 75 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 75 | 17 - 157 |
| 13C12-2378-TCDF | 70 | 24 - 169 |
| 13C12-12378-PeCDF | 76 | 24 - 185 |
| 13C12-23478-PeCDF | 76 | 21 - 178 |
| 13C12-123478-HxCDF | 86 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 83 | 28 - 136 |
| 13C12-123789-HxCDF | 88 | 29 - 147 |
| 13C12-1234678-HpCDF | 91 | 28 - 143 |
| 13C12-1234789-HpCDF | 74 | 26 - 138 |
| 13C12-OCDF | 68 | 17 - 157 |

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

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

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

**Sample Description: SL-558-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026476**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-558 SDG#: PH033-02

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-558-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026476**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-558 SDG#: PH033-02

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLE026 | 04/28/2013 22:43 | Holly Berry | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLE026 | 04/22/2013 02:00 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13108A16B | 04/19/2013 21:00 | Laura M Krieger | 26.15 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201310830810 | 04/18/2013 15:21 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 06:50 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 04:06 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13109001 | 04/22/2013 17:39 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13109001 | 04/19/2013 11:45 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:50 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 08:40 | Choon Y Tian | 2 |

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

**Sample Description: SL-558-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026476**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-558 SDG#: PH033-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:40 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:40 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:40 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131090638001 | 04/23/2013 07:05 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131090638001 | 04/23/2013 01:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13108039401A | 04/18/2013 20:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401A | 04/25/2013 19:23 | Scott W Freisher | 1 |

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

**Sample Description:** SL-557-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026477**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:40 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-557 SDG#: PH033-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.2 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 3.8 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | J | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.97 | J | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 7.3 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.3 | J | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.70 | J | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.80 | J | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.0 | J | 1.7 | 0.70 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 17 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 28 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description:** SL-557-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026477**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:40 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-557 SDG#: PH033-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,200 | | 41.8 | 8.06 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.592 | J | 4.18 | 0.523 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.65 | | 4.18 | 0.345 | 1 |
| 06946 | Barium | 7440-39-3 | 88.2 | | 1.05 | 0.0345 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.740 | J | 1.05 | 0.0701 | 1 |
| 07914 | Boron | 7440-42-8 | 3.19 | J | 10.5 | 0.868 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.0858 | J | 1.05 | 0.0345 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,820 | | 20.9 | 4.21 | 1 |
| 06951 | Chromium | 7440-47-3 | 24.7 | | 3.14 | 0.0921 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.86 | | 1.05 | 0.0941 | 1 |
| 06953 | Copper | 7440-50-8 | 14.9 | | 2.09 | 0.188 | 1 |
| 01654 | Iron | 7439-89-6 | 26,000 | | 41.8 | 3.97 | 1 |
| 06955 | Lead | 7439-92-1 | 7.50 | | 3.14 | 0.492 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.7 | | 4.2 | 0.58 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,280 | | 10.5 | 1.81 | 1 |
| 06958 | Manganese | 7439-96-5 | 365 | | 1.05 | 0.0868 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.240 | J | 2.09 | 0.178 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.7 | | 2.09 | 0.115 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 267 | | 10.5 | 0.533 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,300 | | 105 | 14.1 | 1 |
| 01667 | Sodium | 7440-23-5 | 80.6 | J | 105 | 17.5 | 1 |
| 06969 | Tin | 7440-31-5 | 3.34 | J | 10.5 | 0.230 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,290 | | 1.05 | 0.178 | 1 |
| 06971 | Vanadium | 7440-62-2 | 47.9 | | 1.05 | 0.115 | 1 |
| 06972 | Zinc | 7440-66-6 | 56.1 | | 4.18 | 0.209 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.47 | J | 5.23 | 0.868 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.202 | J | 0.418 | 0.105 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0582 | J | 0.209 | 0.0209 | 2 |
| 06144 | Strontium | 7440-24-6 | 12.1 | | 0.418 | 0.0356 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.255 | | 0.209 | 0.0314 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0252 | | 0.0205 | 0.0106 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.76 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.9 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

**Sample Description:** SL-557-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026477**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:40 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-557 SDG#: PH033-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0218 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0514 | JB | 5.18 | 0.0229 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.18 | U | 5.18 | 0.0268 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.167 | JB | 5.18 | 0.0263 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.142 | JB | 5.18 | 0.0244 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 3.42 | JB | 5.18 | 0.0293 | 1 |
| 11031 | OCDD | 3268-87-9 | 25.0 | B | 10.4 | 0.0264 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0749 | J | 1.04 | 0.0267 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.133 | JB | 5.18 | 0.0160 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.113 | JB | 5.18 | 0.0155 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0896 | JB | 5.18 | 0.0199 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0717 | JB | 5.18 | 0.0196 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0468 | JB | 5.18 | 0.0201 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0959 | JBQ | 5.18 | 0.0189 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.576 | JB | 5.18 | 0.0126 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0644 | JB | 5.18 | 0.0169 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.34 | JB | 10.4 | 0.0324 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.197 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 75 | 25 - 164 |
| 13C12-12378-PeCDD | 73 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 73 | 17 - 157 |
| 13C12-2378-TCDF | 72 | 24 - 169 |
| 13C12-12378-PeCDF | 76 | 24 - 185 |
| 13C12-23478-PeCDF | 74 | 21 - 178 |
| 13C12-123478-HxCDF | 83 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 85 | 29 - 147 |
| 13C12-1234678-HpCDF | 87 | 28 - 143 |
| 13C12-1234789-HpCDF | 73 | 26 - 138 |
| 13C12-OCDF | 66 | 17 - 157 |

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

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

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

**Sample Description: SL-557-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026477**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:40 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-557 SDG#: PH033-03

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-557-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026477**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:40 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-557 SDG#: PH033-03

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLE026 | 04/29/2013 00:15 | Holly Berry | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLE026 | 04/22/2013 02:00 | Sherry L Morrow | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 07:09 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 06:52 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13109001 | 04/22/2013 18:35 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13109001 | 04/19/2013 11:45 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:54 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 08:50 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:50 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:50 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:50 | Choon Y Tian | 2 |

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

**Sample Description: SL-557-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026477**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 09:40 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-557 SDG#: PH033-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131090638001 | 04/23/2013 07:17 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131090638001 | 04/23/2013 01:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13108039401A | 04/18/2013 20:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401A | 04/25/2013 19:23 | Scott W Freisher | 1 |

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

**Sample Description:** SL-505-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026478**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 11:10 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-505 SDG#: PH033-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.71 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 4.8 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 5.8 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 17 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 5.4 | J | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 3.1 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 11 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 8.4 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.3 | J | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 13 | J | 18 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 11 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.4 | J | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.7 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.98 | J | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.6 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.3 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 3.9 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 9.8 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 44 | | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.3 | J | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 19 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 98 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description:** SL-505-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026478**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 11:10 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-505 SDG#: PH033-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,700 | | 41.2 | 7.94 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.12 | U | 4.12 | 0.515 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.79 | | 4.12 | 0.340 | 1 |
| 06946 | Barium | 7440-39-3 | 74.6 | | 1.03 | 0.0340 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.514 | J | 1.03 | 0.0690 | 1 |
| 07914 | Boron | 7440-42-8 | 4.25 | J | 10.3 | 0.855 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.174 | J | 1.03 | 0.0340 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,380 | | 20.6 | 4.14 | 1 |
| 06951 | Chromium | 7440-47-3 | 22.5 | | 3.09 | 0.0906 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.70 | | 1.03 | 0.0927 | 1 |
| 06953 | Copper | 7440-50-8 | 17.9 | | 2.06 | 0.185 | 1 |
| 01654 | Iron | 7439-89-6 | 24,200 | | 41.2 | 3.91 | 1 |
| 06955 | Lead | 7439-92-1 | 11.3 | | 3.09 | 0.484 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.1 | | 4.1 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,400 | | 10.3 | 1.78 | 1 |
| 06958 | Manganese | 7439-96-5 | 301 | | 1.03 | 0.0855 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.309 | J | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.7 | | 2.06 | 0.113 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 532 | | 10.3 | 0.525 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,990 | | 103 | 13.9 | 1 |
| 01667 | Sodium | 7440-23-5 | 79.4 | J | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 3.15 | J | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,180 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.9 | | 1.03 | 0.113 | 1 |
| 06972 | Zinc | 7440-66-6 | 111 | | 4.12 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.44 | J | 5.15 | 0.855 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.138 | J | 0.412 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0450 | J | 0.206 | 0.0206 | 2 |
| 06144 | Strontium | 7440-24-6 | 14.0 | | 0.412 | 0.0350 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.214 | | 0.206 | 0.0309 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0226 | | 0.0198 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.20 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.9 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

**Sample Description: SL-505-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026478**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 11:10 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-505 SDG#: PH033-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 4.35 | 0.986 | 0.0672 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 15.9 B | 4.93 | 0.102 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 3,660 EB | 4.93 | 0.114 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 54.8 B | 4.93 | 0.128 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 18.1 B | 4.93 | 0.118 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2,000 EB | 4.93 | 0.223 | 1 |
| 11031 | OCDD | 3268-87-9 | 23,100 EB | 9.86 | 0.104 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.33 C | 0.986 | 0.112 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 6.58 B | 4.93 | 0.0468 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 2.54 JB | 4.93 | 0.0458 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 6.59 B | 4.93 | 0.0632 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 7.55 B | 4.93 | 0.0620 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 4.93 U | 4.93 | 0.0716 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 9.07 B | 4.93 | 0.0646 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 101 B | 4.93 | 0.0442 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 12.2 B | 4.93 | 0.0544 | 1 |
| 11031 | OCDF | 39001-02-0 | 177 B | 9.86 | 0.0422 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 425 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 69 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 79 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 80 | 17 - 157 |
| 13C12-2378-TCDF | 68 | 24 - 169 |
| 13C12-12378-PeCDF | 70 | 24 - 185 |
| 13C12-23478-PeCDF | 68 | 21 - 178 |
| 13C12-123478-HxCDF | 78 | 26 - 152 |
| 13C12-123678-HxCDF | 79 | 26 - 123 |

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

**Sample Description: SL-505-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026478**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 11:10 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-505 SDG#: PH033-04

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

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 82 | 28 - 143 |
| 13C12-1234789-HpCDF | 73 | 26 - 138 |
| 13C12-OCDF | 72 | 17 - 157 |

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

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

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

**Sample Description: SL-505-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026478**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 11:10 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-505 SDG#: PH033-04

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLE026 | 04/29/2013 00:46 | Holly Berry | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLE026 | 04/22/2013 02:00 | Sherry L Morrow | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 07:27 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 09:58 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13109001 | 04/22/2013 19:32 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13109001 | 04/19/2013 11:45 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:06 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 08:52 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:52 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:52 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:52 | Choon Y Tian | 2 |

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

**Sample Description: SL-505-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026478**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 11:10 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-505 SDG#: PH033-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131090638001 | 04/23/2013 07:20 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131090638001 | 04/23/2013 01:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13108039401A | 04/18/2013 20:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401A | 04/25/2013 19:23 | Scott W Freisher | 1 |

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

**Sample Description:** SL-502-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7026479
**LLI Group #** 1383780
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 04/17/2013 13:25 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-502 SDG#: PH033-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.92 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 35 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 29 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 58 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 20 | | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 8.3 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 23 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 32 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 2.8 | | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 12 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 46 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 8.7 | | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.75 | J | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.2 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 5.2 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 46 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 24 | J | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.1 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 11 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 27 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

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

**Sample Description:** SL-502-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7026479
**LLI Group #** 1383780
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 04/17/2013 13:25 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-502 SDG#: PH033-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 18,900 | | 41.0 | 7.89 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.580 | J | 4.10 | 0.512 | 1 |
| 06935 | Arsenic | 7440-38-2 | 7.04 | | 4.10 | 0.338 | 1 |
| 06946 | Barium | 7440-39-3 | 114 | | 1.02 | 0.0338 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.695 | J | 1.02 | 0.0686 | 1 |
| 07914 | Boron | 7440-42-8 | 3.38 | J | 10.2 | 0.850 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.204 | J | 1.02 | 0.0338 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,700 | | 20.5 | 4.12 | 1 |
| 06951 | Chromium | 7440-47-3 | 24.7 | | 3.07 | 0.0901 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.47 | | 1.02 | 0.0921 | 1 |
| 06953 | Copper | 7440-50-8 | 17.3 | | 2.05 | 0.184 | 1 |
| 01654 | Iron | 7439-89-6 | 26,900 | | 81.9 | 7.78 | 2 |
| 06955 | Lead | 7439-92-1 | 21.7 | | 3.07 | 0.481 | 1 |
| 01656 | Lithium | 7439-93-2 | 32.7 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,200 | | 10.2 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 368 | | 1.02 | 0.0850 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.404 | J | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 15.4 | | 2.05 | 0.113 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 447 | | 10.2 | 0.522 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,190 | | 102 | 13.8 | 1 |
| 01667 | Sodium | 7440-23-5 | 87.1 | J | 102 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 3.62 | J | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,470 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 49.8 | | 1.02 | 0.113 | 1 |
| 06972 | Zinc | 7440-66-6 | 89.4 | | 4.10 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.53 | J | 5.12 | 0.850 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.162 | J | 0.410 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0651 | J | 0.205 | 0.0205 | 2 |
| 06144 | Strontium | 7440-24-6 | 22.3 | | 0.410 | 0.0348 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.338 | | 0.205 | 0.0307 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0196 | J | 0.0201 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.02 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

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

**Sample Description:** SL-502-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026479**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 13:25 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-502 SDG#: PH033-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0442 | JQ | 1.02 | 0.0245 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.277 | JB | 5.08 | 0.0414 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.926 | JB | 5.08 | 0.0424 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.00 | JB | 5.08 | 0.0419 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.746 | JB | 5.08 | 0.0404 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 25.7 | B | 5.08 | 0.0636 | 1 |
| 11031 | OCDD | 3268-87-9 | 248 | B | 10.2 | 0.0397 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.653 | J | 1.02 | 0.0638 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 2.25 | JB | 5.08 | 0.0362 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.984 | JB | 5.08 | 0.0341 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.788 | JBQ | 5.08 | 0.0336 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.525 | JB | 5.08 | 0.0313 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.232 | JB | 5.08 | 0.0359 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.497 | JB | 5.08 | 0.0326 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 3.89 | JB | 5.08 | 0.0238 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.448 | JB | 5.08 | 0.0304 | 1 |
| 11031 | OCDF | 39001-02-0 | 7.16 | JB | 10.2 | 0.0274 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.47 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 71 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 81 | 17 - 157 |
| 13C12-2378-TCDF | 70 | 24 - 169 |
| 13C12-12378-PeCDF | 70 | 24 - 185 |
| 13C12-23478-PeCDF | 71 | 21 - 178 |
| 13C12-123478-HxCDF | 83 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 83 | 28 - 136 |
| 13C12-123789-HxCDF | 85 | 29 - 147 |
| 13C12-1234678-HpCDF | 90 | 28 - 143 |
| 13C12-1234789-HpCDF | 80 | 26 - 138 |
| 13C12-OCDF | 79 | 17 - 157 |

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

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

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

**Sample Description: SL-502-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026479**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 13:25 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

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

7-502 SDG#: PH033-05

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

*F* *Interference is present*
*S* *Saturation of detection signal*

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

**Sample Description: SL-502-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026479**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 13:25 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-502 SDG#: PH033-05

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLE026 | 04/29/2013 01:17 | Holly Berry | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLE026 | 04/22/2013 02:00 | Sherry L Morrow | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 08:59 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 07:12 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13109001 | 04/22/2013 20:28 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13109001 | 04/19/2013 11:45 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/29/2013 21:32 | Katlin N Cataldi | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:10 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 08:54 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:54 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:54 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:54 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-502-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026479**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 13:25 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-502 SDG#: PH033-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131090638001 | 04/23/2013 07:22 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131090638001 | 04/23/2013 01:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13108039401A | 04/18/2013 20:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401A | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-501-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026480**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 14:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-501 SDG#: PH033-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.83 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 6.3 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 7.5 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 12 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 4.8 | J | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.7 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 8.3 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 8.5 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 0.99 | J | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 11 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.7 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 4.2 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 12 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 7.5 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 27 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-501-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026480**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 14:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-501 SDG#: PH033-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,900 | | 39.9 | 7.68 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.99 | U | 3.99 | 0.498 | 1 |
| 06935 | Arsenic | 7440-38-2 | 8.43 | | 3.99 | 0.329 | 1 |
| 06946 | Barium | 7440-39-3 | 100 | | 0.996 | 0.0329 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.551 | J | 0.996 | 0.0668 | 1 |
| 07914 | Boron | 7440-42-8 | 4.03 | J | 9.96 | 0.827 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.239 | J | 0.996 | 0.0329 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,700 | | 19.9 | 4.01 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.2 | | 2.99 | 0.0877 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.47 | | 0.996 | 0.0897 | 1 |
| 06953 | Copper | 7440-50-8 | 12.7 | | 1.99 | 0.179 | 1 |
| 01654 | Iron | 7439-89-6 | 19,800 | | 39.9 | 3.79 | 1 |
| 06955 | Lead | 7439-92-1 | 10.1 | | 2.99 | 0.468 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.6 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,810 | | 9.96 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 313 | | 0.996 | 0.0827 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.336 | J | 1.99 | 0.169 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.3 | | 1.99 | 0.110 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 390 | | 9.96 | 0.508 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,490 | | 99.6 | 13.5 | 1 |
| 01667 | Sodium | 7440-23-5 | 84.1 | J | 99.6 | 16.6 | 1 |
| 06969 | Tin | 7440-31-5 | 2.94 | J | 9.96 | 0.219 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,080 | | 0.996 | 0.169 | 1 |
| 06971 | Vanadium | 7440-62-2 | 30.9 | | 0.996 | 0.110 | 1 |
| 06972 | Zinc | 7440-66-6 | 88.1 | | 3.99 | 0.199 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.15 | J | 4.98 | 0.827 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.399 | U | 0.399 | 0.0996 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0465 | J | 0.199 | 0.0199 | 2 |
| 06144 | Strontium | 7440-24-6 | 20.7 | | 0.399 | 0.0339 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.237 | | 0.199 | 0.0299 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0226 | | 0.0194 | 0.0100 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.95 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.8 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-501-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026480**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 14:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-501 SDG#: PH033-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.981 | U | 0.981 | 0.0300 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0848 | JBQ | 4.90 | 0.0364 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.241 | JBQ | 4.90 | 0.0434 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.324 | JB | 4.90 | 0.0421 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.420 | JB | 4.90 | 0.0401 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 4.02 | JB | 4.90 | 0.0365 | 1 |
| 11031 | OCDD | 3268-87-9 | 38.6 | B | 9.81 | 0.0346 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0772 | JQ | 0.981 | 0.0481 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.360 | JB | 4.90 | 0.0265 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.373 | JBQ | 4.90 | 0.0257 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.234 | JBQ | 4.90 | 0.0397 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.195 | JB | 4.90 | 0.0376 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.277 | JB | 4.90 | 0.0379 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.242 | JB | 4.90 | 0.0361 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.929 | JB | 4.90 | 0.0279 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.161 | JB | 4.90 | 0.0377 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.49 | JB | 9.81 | 0.0317 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.220 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 64 | 25 - 164 |
| 13C12-12378-PeCDD | 71 | 25 - 181 |
| 13C12-123478-HxCDD | 74 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 79 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 73 | 17 - 157 |
| 13C12-2378-TCDF | 63 | 24 - 169 |
| 13C12-12378-PeCDF | 70 | 24 - 185 |
| 13C12-23478-PeCDF | 70 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 78 | 26 - 123 |
| 13C12-234678-HxCDF | 75 | 28 - 136 |
| 13C12-123789-HxCDF | 79 | 29 - 147 |
| 13C12-1234678-HpCDF | 84 | 28 - 143 |
| 13C12-1234789-HpCDF | 70 | 26 - 138 |
| 13C12-OCDF | 67 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-501-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026480**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 14:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-501 SDG#: PH033-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-501-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026480**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 14:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-501 SDG#: PH033-06

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLE026 | 04/29/2013 01:49 | Holly Berry | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLE026 | 04/22/2013 02:00 | Sherry L Morrow | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 09:18 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 07:33 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13109001 | 04/22/2013 21:25 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13109001 | 04/19/2013 11:45 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:14 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 08:57 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:57 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:57 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:57 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-501-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026480**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 14:00 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-501 SDG#: PH033-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131090638001 | 04/23/2013 07:28 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131090638001 | 04/23/2013 01:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13108039401A | 04/18/2013 20:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401A | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-500-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026481**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 14:45 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-500 SDG#: PH033-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.90 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.8 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.86 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 4.0 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.1 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 7.2 | J | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.4 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.84 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.2 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 16 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 39 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-500-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7026481**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 14:45 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-500 SDG#: PH033-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,000 | | 39.7 | 7.65 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.97 | U | 3.97 | 0.496 | 1 |
| 06935 | Arsenic | 7440-38-2 | 9.73 | | 3.97 | 0.328 | 1 |
| 06946 | Barium | 7440-39-3 | 74.2 | | 0.993 | 0.0328 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.466 | J | 0.993 | 0.0665 | 1 |
| 07914 | Boron | 7440-42-8 | 4.56 | J | 9.93 | 0.824 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.165 | J | 0.993 | 0.0328 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,430 | | 19.9 | 3.99 | 1 |
| 06951 | Chromium | 7440-47-3 | 13.5 | | 2.98 | 0.0874 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.87 | | 0.993 | 0.0893 | 1 |
| 06953 | Copper | 7440-50-8 | 9.56 | | 1.99 | 0.179 | 1 |
| 01654 | Iron | 7439-89-6 | 17,000 | | 39.7 | 3.77 | 1 |
| 06955 | Lead | 7439-92-1 | 11.0 | | 2.98 | 0.467 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.9 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,440 | | 9.93 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 260 | | 0.993 | 0.0824 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.257 | J | 1.99 | 0.169 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.27 | | 1.99 | 0.109 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 298 | | 9.93 | 0.506 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,330 | | 99.3 | 13.4 | 1 |
| 01667 | Sodium | 7440-23-5 | 118 | | 99.3 | 16.6 | 1 |
| 06969 | Tin | 7440-31-5 | 3.07 | J | 9.93 | 0.218 | 1 |
| 06970 | Titanium | 7440-32-6 | 876 | | 0.993 | 0.169 | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.3 | | 0.993 | 0.109 | 1 |
| 06972 | Zinc | 7440-66-6 | 87.9 | | 3.97 | 0.199 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.35 | J | 4.96 | 0.824 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.397 | U | 0.397 | 0.0993 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0356 | J | 0.199 | 0.0199 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.2 | | 0.397 | 0.0338 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.189 | J | 0.199 | 0.0298 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0178 | J | 0.0192 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.28 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-500-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026481**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 14:45 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-500 SDG#: PH033-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0274 | JQ | 1.00 | 0.0246 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.184 | JBQ | 5.00 | 0.0323 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.421 | JB | 5.00 | 0.0471 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.688 | JB | 5.00 | 0.0450 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.437 | JB | 5.00 | 0.0432 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 14.8 | B | 5.00 | 0.0428 | 1 |
| 11031 | OCDD | 3268-87-9 | 154 | B | 10.0 | 0.0349 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.271 | J | 1.00 | 0.0404 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.520 | JB | 5.00 | 0.0260 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.472 | JBQ | 5.00 | 0.0241 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.949 | JB | 5.00 | 0.0352 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.307 | JB | 5.00 | 0.0337 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.00 | U | 5.00 | 0.0339 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.392 | JBQ | 5.00 | 0.0315 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.82 | JB | 5.00 | 0.0246 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.343 | JB | 5.00 | 0.0324 | 1 |
| 11031 | OCDF | 39001-02-0 | 4.86 | JB | 10.0 | 0.0282 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.551 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 76 | 25 - 164 |
| 13C12-12378-PeCDD | 78 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 89 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 82 | 23 - 140 |
| 13C12-OCDD | 79 | 17 - 157 |
| 13C12-2378-TCDF | 75 | 24 - 169 |
| 13C12-12378-PeCDF | 78 | 24 - 185 |
| 13C12-23478-PeCDF | 79 | 21 - 178 |
| 13C12-123478-HxCDF | 85 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 85 | 28 - 136 |
| 13C12-123789-HxCDF | 89 | 29 - 147 |
| 13C12-1234678-HpCDF | 96 | 28 - 143 |
| 13C12-1234789-HpCDF | 81 | 26 - 138 |
| 13C12-OCDF | 78 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-500-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026481**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 14:45 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-500 SDG#: PH033-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-500-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026481**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 14:45 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-500 SDG#: PH033-07*

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLE026 | 04/29/2013 02:20 | Holly Berry | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLE026 | 04/22/2013 02:00 | Sherry L Morrow | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131100011A | 04/23/2013 09:36 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131100011A | 04/22/2013 08:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131090007A | 04/23/2013 10:19 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131090007A | 04/19/2013 16:25 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13109001 | 04/22/2013 22:21 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13109001 | 04/19/2013 11:45 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:18 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 08:59 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:59 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:59 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:59 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-500-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7026481**
**LLI Group # 1383780**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/17/2013 14:45 by SM

Submitted: 04/18/2013 09:15
Reported: 04/30/2013 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

7-500 SDG#: PH033-07*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131090638001 | 04/23/2013 07:30 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131090638001 | 04/23/2013 01:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13108039401A | 04/18/2013 20:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401A | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383780
Reported: 04/30/13 at 02:14 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13110SLE026 | Sample number(s): 7026476-7026481 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 105 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 114 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 117 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 99 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 120 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 102 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 91 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 105 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 71-120 | | |
| Batch number: 13108A16B | Sample number(s): 7026476 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 89 | 82 | 67-119 | 8 | 30 |
| Batch number: 13108B20A | Sample number(s): 7026475 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 106 | 105 | 75-135 | 1 | 30 |
| Batch number: 131100011A | Sample number(s): 7026476-7026481 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 75 | 75 | 36-106 | 0 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 103 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383780
Reported: 04/30/13 at 02:14 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 115 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131090007A | Sample number(s): 7026476-7026481 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 67 | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 76 | | 49-107 | | |
| Batch number: 131090638001 | Sample number(s): 7026476-7026481 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0103 | mg/kg | 113 | | 85-120 | | |
| Batch number: 131150637001 | Sample number(s): 7026476-7026481 | | | | | | | | | |
| Aluminum | 10.3 | J | 40.0 | 7.71 | mg/kg | 105 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 105 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 104 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 1.62 | J | 10.0 | 0.830 | mg/kg | 100 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |
| Calcium | 25.6 | | 20.0 | 4.02 | mg/kg | 107 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 103 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 101 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 104 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 101 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 106 | | 80-120 | | |
| Phosphorus | 1.45 | J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.45 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 102 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 102 | | 80-120 | | |
| Batch number: 131150637001A | Sample number(s): 7026476-7026481 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 100 | | 80-120 | | |
| Strontium | 0.179 | J | 0.400 | 0.0340 | mg/kg | 98 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 111 | | 80-120 | | |
| Batch number: 131150637001B | Sample number(s): 7026476-7026481 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 98 | | 80-120 | | |
| Batch number: 13108039401A | Sample number(s): 7026476-7026481 | | | | | | | | | |
| 15a pH by 9045C | | | | | | 100 | | 99-101 | | |
| Batch number: 13115162401A | Sample number(s): 7026476-7026481 | | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383780
Reported: 04/30/13 at 02:14 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13109001 | Sample number(s): 7026476-7026481 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0214 | ng/kg | 93 | | 67-158 | | |
| 12378-PeCDD | 0.0517 J | 5.00 | 0.0176 | ng/kg | 98 | | 70-142 | | |
| 123478-HxCDD | 0.0268 J | 5.00 | 0.0152 | ng/kg | 102 | | 70-164 | | |
| 123678-HxCDD | 0.0283 J | 5.00 | 0.0162 | ng/kg | 100 | | 76-134 | | |
| 123789-HxCDD | 0.0385 J | 5.00 | 0.0144 | ng/kg | 100 | | 64-162 | | |
| 1234678-HpCDD | 0.0607 J | 5.00 | 0.0171 | ng/kg | 98 | | 70-140 | | |
| OCDD | 0.147 J | 10.0 | 0.0176 | ng/kg | 98 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0169 | ng/kg | 96 | | 75-158 | | |
| 12378-PeCDF | 0.0627 J | 5.00 | 0.0112 | ng/kg | 100 | | 80-134 | | |
| 23478-PeCDF | 0.0283 J | 5.00 | 0.0102 | ng/kg | 100 | | 68-160 | | |
| 123478-HxCDF | 0.0414 J | 5.00 | 0.0106 | ng/kg | 102 | | 72-134 | | |
| 123678-HxCDF | 0.0288 J | 5.00 | 0.0103 | ng/kg | 98 | | 84-130 | | |
| 123789-HxCDF | 0.0430 J | 5.00 | 0.0114 | ng/kg | 101 | | 78-130 | | |
| 234678-HxCDF | 0.0179 J | 5.00 | 0.0103 | ng/kg | 99 | | 70-156 | | |
| 1234678-HpCDF | 0.0593 J | 5.00 | 0.00778 | ng/kg | 100 | | 82-122 | | |
| 1234789-HpCDF | 0.0303 J | 5.00 | 0.00902 | ng/kg | 100 | | 78-138 | | |
| OCDF | 0.0804 J | 10.0 | 0.0234 | ng/kg | 99 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0585 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13110SLE026 | Sample number(s): 7026476-7026481 UNSPK: 7026476 | | | | | | | | |
| Acenaphthene | 103 | 103 | 48-127 | 0 | 30 | | | | |
| Acenaphthylene | 102 | 104 | 49-121 | 2 | 30 | | | | |
| Anthracene | 99 | 100 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 108 | 104 | 32-135 | 4 | 30 | | | | |
| Benzo(a)pyrene | 113 | 110 | 36-138 | 3 | 30 | | | | |
| Benzo(b)fluoranthene | 134 | 129 | 26-142 | 4 | 30 | | | | |
| Benzo(e)pyrene | 103 | 99 | 70-130 | 3 | 30 | | | | |
| Benzo(g,h,i)perylene | 63 | 60 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 122 | 115 | 47-129 | 5 | 30 | | | | |
| Butylbenzylphthalate | 114 | 112 | 59-153 | 1 | 30 | | | | |
| Di-n-butylphthalate | 93 | 159* | 62-154 | 34* | 30 | | | | |
| Chrysene | 104 | 99 | 29-148 | 5 | 30 | | | | |
| Dibenz(a,h)anthracene | 78 | 76 | 34-125 | 3 | 30 | | | | |
| Diethylphthalate | 102 | 103 | 76-127 | 1 | 30 | | | | |
| Dimethylphthalate | 101 | 102 | 62-136 | 1 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383780
Reported: 04/30/13 at 02:14 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 113 | 111 | 39-167 | 2 | 30 | | | | |
| Fluoranthene | 104 | 101 | 47-135 | 3 | 30 | | | | |
| Fluorene | 105 | 105 | 50-129 | 0 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 75 | 71 | 17-136 | 4 | 30 | | | | |
| 1-Methylnaphthalene | 109 | 108 | 50-131 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 110 | 109 | 28-144 | 1 | 30 | | | | |
| Naphthalene | 102 | 104 | 31-148 | 2 | 30 | | | | |
| N-Nitrosodimethylamine | 90 | 93 | 48-113 | 3 | 30 | | | | |
| Di-n-octylphthalate | 154 | 147 | 52-162 | 5 | 30 | | | | |
| Phenanthrene | 105 | 104 | 29-142 | 1 | 30 | | | | |
| Pyrene | 103 | 97 | 26-143 | 7 | 30 | | | | |
| Batch number: 131100011A | Sample number(s): 7026476-7026481 UNSPK: P023137 | | | | | | | | |
| PCB-1016 | 94 | 93 | 16-146 | 1 | 50 | | | | |
| PCB-1260 | 99 | 99 | 40-134 | 1 | 50 | | | | |
| Batch number: 131090007A | Sample number(s): 7026476-7026481 UNSPK: P023136 | | | | | | | | |
| EFH (C12-C14) | 101 | 94 | 49-123 | 7 | 20 | | | | |
| EFH (C15-C20) | 81 | 58 | 49-123 | 13 | 20 | | | | |
| EFH (C21-C30) | 130* | 52 | 49-123 | 28* | 20 | | | | |
| EFH (C30-C40) | 163* | 98 | 49-123 | 19 | 20 | | | | |
| EFH (C8-C11) | 88 | 88 | 49-123 | 0 | 20 | | | | |
| Batch number: 131090638001 | Sample number(s): 7026476-7026481 UNSPK: 7026476 BKG: 7026476 | | | | | | | | |
| 3a Mercury 7471A | 110 | 108 | 65-135 | 2 | 20 | 0.0195 U | 0.0114 J | 200* (1) | 20 |
| Batch number: 131150637001 | Sample number(s): 7026476-7026481 UNSPK: P031213 BKG: P031213 | | | | | | | | |
| Aluminum | 2585 (2) | 2282 (2) | 75-125 | 3 | 20 | 13,100 | 14,600 | 11 | 20 |
| Antimony | 67* | 64* | 75-125 | 4 | 20 | 3.96 U | 0.540 J | 200* (1) | 20 |
| Arsenic | 95 | 105 | 75-125 | 7 | 20 | 4.95 | 5.12 | 3 (1) | 20 |
| Barium | 104 | 106 | 75-125 | 1 | 20 | 70.7 | 77.9 | 10 | 20 |
| Beryllium | 106 | 104 | 75-125 | 1 | 20 | 0.522 J | 0.579 J | 10 (1) | 20 |
| Boron | 101 | 100 | 75-125 | 1 | 20 | 5.72 J | 7.99 J | 33* (1) | 20 |
| Cadmium | 97 | 98 | 75-125 | 1 | 20 | 0.116 J | 0.138 J | 17 (1) | 20 |
| Calcium | 140 (2) | 198 (2) | 75-125 | 7 | 20 | 2,840 | 3,060 | 8 | 20 |
| Chromium | 107 | 104 | 75-125 | 2 | 20 | 19.7 | 20.4 | 3 | 20 |
| Cobalt | 100 | 100 | 75-125 | 0 | 20 | 4.62 | 5.28 | 13 (1) | 20 |
| Copper | 111 | 110 | 75-125 | 0 | 20 | 12.4 | 13.2 | 7 | 20 |
| Iron | 3126 (2) | 2463 (2) | 75-125 | 3 | 20 | 21,800 | 23,500 | 7 | 20 |
| Lead | 104 | 185* | 75-125 | 24* | 20 | 28.1 | 43.6 | 43* | 20 |
| Lithium | 103 | 101 | 75-125 | 1 | 20 | 25.6 | 25.7 | 0 | 20 |
| Magnesium | 249 (2) | 221 (2) | 75-125 | 1 | 20 | 5,100 | 5,180 | 2 | 20 |
| Manganese | 145 (2) | 132 (2) | 75-125 | 2 | 20 | 266 | 298 | 11 | 20 |
| Molybdenum | 99 | 99 | 75-125 | 0 | 20 | 0.291 J | 0.314 J | 8 (1) | 20 |
| Nickel | 103 | 101 | 75-125 | 1 | 20 | 10.5 | 11.2 | 6 | 20 |
| Phosphorus | 78 (2) | 113 (2) | 75-125 | 7 | 20 | 420 | 439 | 4 | 20 |
| Potassium | 140* | 137* | 75-125 | 1 | 20 | 3,350 | 3,630 | 8 | 20 |
| Sodium | 99 | 98 | 75-125 | 1 | 20 | 73.1 J | 77.5 J | 6 (1) | 20 |
| Tin | 94 | 95 | 75-125 | 1 | 20 | 3.02 J | 3.24 J | 7 (1) | 20 |
| Titanium | 359 (2) | 334 (2) | 75-125 | 2 | 20 | 1,120 | 1,230 | 9 | 20 |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383780
Reported: 04/30/13 at 02:14 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Vanadium | 114 | 112 | 75-125 | 1 | 20 | 35.4 | 39.1 | 10 | 20 |
| Zinc | 106 | 106 | 75-125 | 0 | 20 | 60.1 | 62.1 | 3 | 20 |
| Zirconium | 99 | 98 | 75-125 | 1 | 20 | 2.43 J | 2.76 J | 13 (1) | 20 |
| Batch number: 131150637001A | Sample number(s): 7026476-7026481 UNSPK: P031213 BKG: P031213 | | | | | | | | |
| Silver | 96 | 98 | 75-125 | 2 | 20 | 0.0269 J | 0.0419 J | 44* (1) | 20 |
| Strontium | 69* | 75 | 75-125 | 3 | 20 | 12.7 | 13.0 | 2 | 20 |
| Thallium | 87 | 90 | 75-125 | 2 | 20 | 0.272 | 0.264 | 3 (1) | 20 |
| Batch number: 131150637001B | Sample number(s): 7026476-7026481 UNSPK: P031213 BKG: P031213 | | | | | | | | |
| Selenium | 95 | 90 | 75-125 | 5 | 20 | 0.396 U | 0.396 U | 0 (1) | 20 |
| Batch number: 13108039401A | Sample number(s): 7026476-7026481 BKG: 7026477 | | | | | | | | |
| 15a pH by 9045C | | | | | | 6.76 | 6.74 | 0 | 3 |
| Batch number: 13115162401A | Sample number(s): 7026476-7026481 BKG: 7026477 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.4 | 4.4 | 0 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13110SLE026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7026476 | 91 | 108 | 98 |
| 7026477 | 99 | 116 | 107 |
| 7026478 | 96 | 107 | 105 |
| 7026479 | 99 | 111 | 106 |
| 7026480 | 92 | 110 | 103 |
| 7026481 | 97 | 111 | 102 |
| Blank | 91 | 108 | 101 |
| LCS | 96 | 115 | 106 |
| MS | 97 | 117 | 108 |
| MSD | 96 | 115 | 106 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13108A16B

| | Trifluorotoluene-F |
|---|---|
| 7026476 | 87 |
| Blank | 87 |
| LCS | 86 |
| LCSD | 80 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383780
Reported: 04/30/13 at 02:14 PM

## Surrogate Quality Control

Limits: 61-122

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13108B20A

| | Trifluorotoluene-F |
|---|---|
| 7026475 | 88 |
| Blank | 88 |
| LCS | 114 |
| LCSD | 117 |

Limits: 63-135

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131100011A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7026476 | 129* | 115 |
| 7026477 | 133* | 108 |
| 7026478 | 116 | 101 |
| 7026479 | 113 | 108 |
| 7026480 | 111 | 110 |
| 7026481 | 113 | 109 |
| Blank | 129* | 111 |
| LCS | 130* | 120 |
| LCSD | 130* | 122* |
| MS | 122* | 107 |
| MSD | 125* | 108 |

Limits: 45-120 45-120

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131090007A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7026476 | 89 | 90 |
| 7026477 | 86 | 86 |
| 7026478 | 97 | 94 |
| 7026479 | 83 | 82 |
| 7026480 | 91 | 91 |
| 7026481 | 95 | 95 |
| Blank | 90 | 90 |
| LCS | 87 | 87 |
| MS | 88 | 86 |
| MSD | 83 | 82 |

Limits: 37-125 66-123

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13109001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7026476 | 72 | 76 | 86 | 86 | 83 | 88 |
| 7026477 | 75 | 74 | 83 | 84 | 81 | 85 |
| 7026478 | 70 | 68 | 78 | 79 | 77 | 77 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1383780
Reported: 04/30/13 at 02:14 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7026479 | 73 | 71 | 83 | 85 | 83 | 85 |
| 7026480 | 64 | 70 | 75 | 78 | 75 | 79 |
| 7026481 | 76 | 79 | 85 | 86 | 85 | 89 |
| Blank | 74 | 79 | 94 | 95 | 94 | 94 |
| OPR | 67 | 74 | 83 | 86 | 83 | 89 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |
| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
| 7026476 | 91 | 74 | 68 | 75 | 81 | 83 |
| 7026477 | 87 | 73 | 66 | 73 | 78 | 81 |
| 7026478 | 82 | 73 | 72 | 69 | 79 | 80 |
| 7026479 | 90 | 80 | 79 | 71 | 83 | 87 |
| 7026480 | 84 | 70 | 67 | 71 | 74 | 81 |
| 7026481 | 96 | 81 | 78 | 78 | 82 | 89 |
| Blank | 97 | 92 | 90 | 80 | 93 | 91 |
| OPR | 96 | 78 | 74 | 74 | 81 | 80 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |
| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
| 7026476 | 80 | 77 | 75 | 70 | 76 | |
| 7026477 | 82 | 76 | 73 | 72 | 76 | |
| 7026478 | 79 | 76 | 80 | 68 | 70 | |
| 7026479 | 87 | 81 | 81 | 70 | 70 | |
| 7026480 | 79 | 74 | 73 | 63 | 70 | |
| 7026481 | 86 | 82 | 79 | 75 | 78 | |
| Blank | 91 | 90 | 88 | 69 | 77 | |
| OPR | 81 | 81 | 80 | 63 | 73 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct # 13013 Cp # 1383780 Sample # 7026475-81

# SSFL Phase 3 Chain of Custody

**CDM Smith**

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 4/17/2013 | Contact Name: | Pam Hartman | COC No: | 20130417-01 |
| CarrierName: | FedEx | Contact Phone: | (818)466-8007 | Cooler #: | 1 |
| AirbillNo: | 7995 5263 5625 | | | Lab: | Lancaster |
| | | | | Lab Phone: | 717-556-7259 |
| | | | | Lab Address | 2425 New Holland Pike<br>Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-041713 | 4/17/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-558-SA7-SB-3.0-4.0 | 4/17/13 09:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-558-SA7-SB-3.0-4.0 | 4/17/13 09:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-558-SA7-SB-3.0-4.0 | 4/17/13 09:00 | SO | None | 1 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-557-SA7-SB-0.0-0.5 | 4/17/13 09:40 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-557-SA7-SB-0.0-0.5 | 4/17/13 09:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-505-SA7-SB-0.0-0.5 | 4/17/13 11:10 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-505-SA7-SB-0.0-0.5 | 4/17/13 11:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-502-SA7-SB-0.0-0.5 | 4/17/13 13:25 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-502-SA7-SB-0.0-0.5 | 4/17/13 13:25 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-501-SA7-SB-0.0-0.5 | 4/17/13 14:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-501-SA7-SB-0.0-0.5 | 4/17/13 14:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-500-SA7-SB-0.0-0.5 | 4/17/13 14:45 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-500-SA7-SB-0.0-0.5 | 4/17/13 14:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |

Special Instructions:

Sampler: Steven Mercer

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V.G[illegible] | 4/17/13 | | | | | | | | | | |

CE[illegible] LI 4/18/13 0915

eurofins | Lancaster Laboratories

C# 13383780

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** CDM Smith

**Date of Receipt:** 4/18/13

**Time of Receipt:** 0915

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** YES (NO)

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT121 | 1.7 | TB | WI | Y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** Ø

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** [signature] 3647 **Date/Time:** 4/18/13 1050

Issued by Dept. 6042 Management

2174.06

eurofins | Lancaster Laboratories

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 01, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/19/2013
Group Number: 1384244
SDG: PH034
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| SL-531-SA7-SB-0.0-0.5 Soil | 7028427 |
| SL-532-SA7-SB-0.0-0.5 Soil | 7028428 |
| SL-533-SA7-SB-0.0-0.5 Soil | 7028429 |
| SL-530-SA7-SB-0.0-0.5 Soil | 7028430 |
| EB-041813 Water | 7028431 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-531-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7028427**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 08:55 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL531 SDG#: PH034-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.4 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.86 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 4.4 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.4 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.86 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.90 | J | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.87 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.3 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.4 | J | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 4.9 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 25 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 84 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-531-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028427**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 08:55 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL531 SDG#: PH034-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,600 | | 39.7 | 7.65 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.97 | U | 3.97 | 0.496 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.82 | J | 3.97 | 0.328 | 1 |
| 06946 | Barium | 7440-39-3 | 77.7 | | 0.993 | 0.0328 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.463 | J | 0.993 | 0.0665 | 1 |
| 07914 | Boron | 7440-42-8 | 2.91 | J | 9.93 | 0.824 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.139 | J | 0.993 | 0.0328 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,780 | | 19.9 | 3.99 | 1 |
| 06951 | Chromium | 7440-47-3 | 15.8 | | 2.98 | 0.0874 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.57 | | 0.993 | 0.0893 | 1 |
| 06953 | Copper | 7440-50-8 | 10.7 | | 1.99 | 0.179 | 1 |
| 01654 | Iron | 7439-89-6 | 18,900 | | 39.7 | 3.77 | 1 |
| 06955 | Lead | 7439-92-1 | 7.89 | | 2.98 | 0.467 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.1 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,700 | | 9.93 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 285 | | 0.993 | 0.0824 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 1.99 | U | 1.99 | 0.169 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.18 | | 1.99 | 0.109 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 445 | | 9.93 | 0.506 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,180 | | 99.3 | 13.4 | 1 |
| 01667 | Sodium | 7440-23-5 | 56.5 | J | 99.3 | 16.6 | 1 |
| 06969 | Tin | 7440-31-5 | 2.97 | J | 9.93 | 0.218 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,070 | | 0.993 | 0.169 | 1 |
| 06971 | Vanadium | 7440-62-2 | 30.9 | | 0.993 | 0.109 | 1 |
| 06972 | Zinc | 7440-66-6 | 57.9 | | 3.97 | 0.199 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.97 | J | 4.96 | 0.824 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.397 | U | 0.397 | 0.0993 | 2 |
| 06142 | Silver | 7440-22-4 | 0.199 | U | 0.199 | 0.0199 | 2 |
| 06144 | Strontium | 7440-24-6 | 9.97 | | 0.397 | 0.0338 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.198 | J | 0.199 | 0.0298 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0171 | J | 0.0204 | 0.0106 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.85 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-531-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7028427**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 08:55 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL531 SDG#: PH034-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.00 | U | 1.00 | 0.0217 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.173 | JB | 5.01 | 0.0225 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.183 | JB | 5.01 | 0.0309 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.391 | J | 5.01 | 0.0307 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.482 | JBQ | 5.01 | 0.0284 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 7.64 | B | 5.01 | 0.0237 | 1 |
| 11031 | OCDD | 3268-87-9 | 78.8 | B | 10.0 | 0.0198 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.136 | J | 1.00 | 0.0330 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.175 | JB | 5.01 | 0.0173 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.272 | JB | 5.01 | 0.0162 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.151 | JBQ | 5.01 | 0.0193 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.117 | JBQ | 5.01 | 0.0183 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0578 | JBQ | 5.01 | 0.0208 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.124 | JB | 5.01 | 0.0183 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.909 | JB | 5.01 | 0.0129 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0981 | JBQ | 5.01 | 0.0165 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.92 | JB | 10.0 | 0.0201 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.453 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 79 | 17 - 157 |
| 13C12-2378-TCDF | 67 | 24 - 169 |
| 13C12-12378-PeCDF | 70 | 24 - 185 |
| 13C12-23478-PeCDF | 71 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 83 | 26 - 123 |
| 13C12-234678-HxCDF | 80 | 28 - 136 |
| 13C12-123789-HxCDF | 78 | 29 - 147 |
| 13C12-1234678-HpCDF | 86 | 28 - 143 |
| 13C12-1234789-HpCDF | 74 | 26 - 138 |
| 13C12-OCDF | 72 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-531-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028427**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 08:55 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL531 SDG#: PH034-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-531-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028427**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 08:55 by SM

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL531 SDG#: PH034-01

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLE026 | 04/30/2013 07:13 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLE026 | 04/22/2013 02:00 | Sherry L Morrow | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131130012A | 04/27/2013 00:34 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131130012A | 04/23/2013 18:00 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 11:34 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13114001 | 04/25/2013 20:57 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13114001 | 04/24/2013 13:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:22 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 09:01 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:01 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:01 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:01 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-531-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028427**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 08:55 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL531 SDG#: PH034-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131090638001 | 04/23/2013 07:32 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131090638001 | 04/23/2013 01:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13109039403A | 04/19/2013 20:30 | Michelle L Lalli | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401A | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-532-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7028428**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 09:45 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL532 SDG#: PH034-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.40 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.61 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.96 | J | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.92 | J | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.80 | J | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 14 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 40 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-532-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028428**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 09:45 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL532 SDG#: PH034-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,440 | | 39.9 | 7.70 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.99 | U | 3.99 | 0.499 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.93 | J | 3.99 | 0.329 | 1 |
| 06946 | Barium | 7440-39-3 | 69.2 | | 0.998 | 0.0329 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.382 | J | 0.998 | 0.0669 | 1 |
| 07914 | Boron | 7440-42-8 | 1.98 | J | 9.98 | 0.829 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.106 | J | 0.998 | 0.0329 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,900 | | 20.0 | 4.01 | 1 |
| 06951 | Chromium | 7440-47-3 | 13.1 | | 3.00 | 0.0879 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.67 | | 0.998 | 0.0899 | 1 |
| 06953 | Copper | 7440-50-8 | 8.85 | | 2.00 | 0.180 | 1 |
| 01654 | Iron | 7439-89-6 | 19,000 | | 39.9 | 3.79 | 1 |
| 06955 | Lead | 7439-92-1 | 5.40 | | 3.00 | 0.469 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.7 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,230 | | 9.98 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 269 | | 0.998 | 0.0829 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.00 | U | 2.00 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 6.94 | | 2.00 | 0.110 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 370 | | 9.98 | 0.509 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,290 | | 99.8 | 13.5 | 1 |
| 01667 | Sodium | 7440-23-5 | 53.0 | J | 99.8 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 3.04 | J | 9.98 | 0.220 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,030 | | 0.998 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 26.8 | | 0.998 | 0.110 | 1 |
| 06972 | Zinc | 7440-66-6 | 57.0 | | 3.99 | 0.200 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.58 | J | 4.99 | 0.829 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.399 | U | 0.399 | 0.0998 | 2 |
| 06142 | Silver | 7440-22-4 | 0.200 | U | 0.200 | 0.0200 | 2 |
| 06144 | Strontium | 7440-24-6 | 9.47 | | 0.399 | 0.0339 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.206 | | 0.200 | 0.0300 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0144 | J | 0.0193 | 0.010 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.11 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.8 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-532-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028428**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 09:45 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL532 SDG#: PH034-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.991 | U | 0.991 | 0.0196 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0570 | JBQ | 4.95 | 0.0176 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0857 | JBQ | 4.95 | 0.0230 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.134 | J | 4.95 | 0.0224 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.123 | JB | 4.95 | 0.0208 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.58 | JB | 4.95 | 0.0188 | 1 |
| 11031 | OCDD | 3268-87-9 | 21.3 | B | 9.91 | 0.0167 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0663 | JQ | 0.991 | 0.0278 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.159 | JB | 4.95 | 0.0157 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.172 | JB | 4.95 | 0.0154 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0810 | JBQ | 4.95 | 0.0194 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0933 | JBQ | 4.95 | 0.0177 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0403 | JBQ | 4.95 | 0.0189 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0854 | JBQ | 4.95 | 0.0173 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.513 | JB | 4.95 | 0.0104 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0834 | JB | 4.95 | 0.0148 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.858 | JB | 9.91 | 0.0216 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.121 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 75 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 68 | 24 - 169 |
| 13C12-12378-PeCDF | 73 | 24 - 185 |
| 13C12-23478-PeCDF | 71 | 21 - 178 |
| 13C12-123478-HxCDF | 76 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 78 | 29 - 147 |
| 13C12-1234678-HpCDF | 94 | 28 - 143 |
| 13C12-1234789-HpCDF | 71 | 26 - 138 |
| 13C12-OCDF | 68 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-532-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028428**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 09:45 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL532 SDG#: PH034-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-532-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028428**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 09:45 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL532 SDG#: PH034-02

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLE026 | 04/30/2013 07:44 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLE026 | 04/22/2013 02:00 | Sherry L Morrow | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131130012A | 04/27/2013 00:52 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131130012A | 04/23/2013 18:00 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 05:21 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13114001 | 04/25/2013 21:54 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13114001 | 04/24/2013 13:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:26 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 09:04 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:04 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:04 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:04 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-532-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028428**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 09:45 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL532 SDG#: PH034-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131090638001 | 04/23/2013 07:34 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131090638001 | 04/23/2013 01:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13109039403A | 04/19/2013 20:30 | Michelle L Lalli | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401A | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-533-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7028429**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 11:25 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL533 SDG#: PH034-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.0 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.82 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 8.7 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 12 | J | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.6 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 6.5 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 0.86 | J | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.77 | J | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.86 | J | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.1 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.95 | J | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.5 | J | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 9.7 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 26 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-533-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7028429**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 11:25 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL533 SDG#: PH034-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,200 | | 39.9 | 7.69 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.770 | J | 3.99 | 0.499 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.95 | | 3.99 | 0.329 | 1 |
| 06946 | Barium | 7440-39-3 | 95.3 | | 0.997 | 0.0329 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.669 | J | 0.997 | 0.0668 | 1 |
| 07914 | Boron | 7440-42-8 | 2.64 | J | 9.97 | 0.828 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.0439 | J | 0.997 | 0.0329 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,660 | | 19.9 | 4.01 | 1 |
| 06951 | Chromium | 7440-47-3 | 25.7 | | 2.99 | 0.0878 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.38 | | 0.997 | 0.0898 | 1 |
| 06953 | Copper | 7440-50-8 | 16.4 | | 1.99 | 0.180 | 1 |
| 01654 | Iron | 7439-89-6 | 23,100 | | 79.8 | 7.58 | 2 |
| 06955 | Lead | 7439-92-1 | 10.2 | | 2.99 | 0.469 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.5 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,680 | | 9.97 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 382 | | 0.997 | 0.0828 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.423 | J | 1.99 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.8 | | 1.99 | 0.110 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 375 | | 9.97 | 0.509 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,860 | | 99.7 | 13.5 | 1 |
| 01667 | Sodium | 7440-23-5 | 63.6 | J | 99.7 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 3.36 | J | 9.97 | 0.219 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,340 | | 0.997 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 49.1 | | 0.997 | 0.110 | 1 |
| 06972 | Zinc | 7440-66-6 | 60.9 | | 3.99 | 0.199 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.18 | J | 4.99 | 0.828 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.231 | J | 0.399 | 0.0997 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0368 | J | 0.199 | 0.0199 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.7 | | 0.399 | 0.0339 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.271 | | 0.199 | 0.0299 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0282 | | 0.0199 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.99 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-533-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028429**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 11:25 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL533 SDG#: PH034-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0326 | JQ | 1.04 | 0.0236 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.107 | JB | 5.19 | 0.0221 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.128 | JB | 5.19 | 0.0289 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.344 | J | 5.19 | 0.0290 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.298 | JB | 5.19 | 0.0276 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 5.92 | B | 5.19 | 0.0250 | 1 |
| 11031 | OCDD | 3268-87-9 | 66.2 | B | 10.4 | 0.0214 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0789 | JQ | 1.04 | 0.0351 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.158 | JBQ | 5.19 | 0.0188 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.224 | JB | 5.19 | 0.0182 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.130 | JB | 5.19 | 0.0207 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0771 | JBQ | 5.19 | 0.0193 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0392 | JBQ | 5.19 | 0.0233 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.128 | JB | 5.19 | 0.0203 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.909 | JB | 5.19 | 0.0167 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.122 | JBQ | 5.19 | 0.0224 | 1 |
| 11031 | OCDF | 39001-02-0 | 2.02 | JB | 10.4 | 0.0237 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.366 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 69 | 25 - 164 |
| 13C12-12378-PeCDD | 72 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 74 | 17 - 157 |
| 13C12-2378-TCDF | 62 | 24 - 169 |
| 13C12-12378-PeCDF | 69 | 24 - 185 |
| 13C12-23478-PeCDF | 68 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 79 | 26 - 123 |
| 13C12-234678-HxCDF | 75 | 28 - 136 |
| 13C12-123789-HxCDF | 75 | 29 - 147 |
| 13C12-1234678-HpCDF | 84 | 28 - 143 |
| 13C12-1234789-HpCDF | 69 | 26 - 138 |
| 13C12-OCDF | 68 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-533-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028429**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 11:25 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL533 SDG#: PH034-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-533-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028429**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 11:25 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL533 SDG#: PH034-03

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLE026 | 04/30/2013 08:14 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLE026 | 04/22/2013 02:00 | Sherry L Morrow | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131130012A | 04/27/2013 01:11 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131130012A | 04/23/2013 18:00 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 05:42 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13114001 | 04/25/2013 22:51 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13114001 | 04/24/2013 13:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/29/2013 21:36 | Katlin N Cataldi | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:30 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 09:06 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:06 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:06 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:06 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-533-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028429**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 11:25 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL533 SDG#: PH034-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131090638001 | 04/23/2013 07:36 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131090638001 | 04/23/2013 01:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13109039403A | 04/19/2013 20:30 | Michelle L Lalli | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401A | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-530-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7028430**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 14:10 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL530 SDG#: PH034-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.4 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.9 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 4.5 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 6.8 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.9 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 48 | | 18 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.4 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.3 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 15 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 44 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-530-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7028430**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 14:10 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL530 SDG#: PH034-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 8,670 | | 40.4 | 7.78 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.04 | U | 4.04 | 0.505 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.53 | | 4.04 | 0.333 | 1 |
| 06946 | Barium | 7440-39-3 | 68.0 | | 1.01 | 0.0333 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.395 | J | 1.01 | 0.0676 | 1 |
| 07914 | Boron | 7440-42-8 | 3.08 | J | 10.1 | 0.838 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.194 | J | 1.01 | 0.0333 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,410 | | 20.2 | 4.06 | 1 |
| 06951 | Chromium | 7440-47-3 | 9.62 | | 3.03 | 0.0889 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.26 | | 1.01 | 0.0909 | 1 |
| 06953 | Copper | 7440-50-8 | 8.23 | | 2.02 | 0.182 | 1 |
| 01654 | Iron | 7439-89-6 | 15,400 | | 40.4 | 3.84 | 1 |
| 06955 | Lead | 7439-92-1 | 25.2 | | 3.03 | 0.475 | 1 |
| 01656 | Lithium | 7439-93-2 | 18.7 | | 4.0 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 2,760 | | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 250 | | 1.01 | 0.0838 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.02 | U | 2.02 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 5.31 | | 2.02 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 399 | | 10.1 | 0.515 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,640 | | 101 | 13.6 | 1 |
| 01667 | Sodium | 7440-23-5 | 57.4 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.98 | J | 10.1 | 0.222 | 1 |
| 06970 | Titanium | 7440-32-6 | 891 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 19.0 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 61.0 | | 4.04 | 0.202 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.59 | J | 5.05 | 0.838 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.404 | U | 0.404 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0245 | J | 0.202 | 0.0202 | 2 |
| 06144 | Strontium | 7440-24-6 | 10.8 | | 0.404 | 0.0343 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.226 | | 0.202 | 0.0303 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0151 | J | 0.0202 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.38 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.9 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-530-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7028430**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 14:10 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL530 SDG#: PH034-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.0266 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.208 | JB | 5.09 | 0.0299 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.266 | JB | 5.09 | 0.0310 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.462 | J | 5.09 | 0.0315 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.364 | JB | 5.09 | 0.0291 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 8.58 | B | 5.09 | 0.0343 | 1 |
| 11031 | OCDD | 3268-87-9 | 91.8 | B | 10.2 | 0.0241 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.131 | JQ | 1.02 | 0.0512 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.327 | JBQ | 5.09 | 0.0260 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.432 | JB | 5.09 | 0.0248 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.220 | JB | 5.09 | 0.0281 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.167 | JBQ | 5.09 | 0.0256 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0457 | JB | 5.09 | 0.0280 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.167 | JBQ | 5.09 | 0.0255 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.37 | JB | 5.09 | 0.0168 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.132 | JB | 5.09 | 0.0234 | 1 |
| 11031 | OCDF | 39001-02-0 | 2.99 | JB | 10.2 | 0.0281 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.602 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 68 | 25 - 164 |
| 13C12-12378-PeCDD | 68 | 25 - 181 |
| 13C12-123478-HxCDD | 73 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 71 | 23 - 140 |
| 13C12-OCDD | 68 | 17 - 157 |
| 13C12-2378-TCDF | 61 | 24 - 169 |
| 13C12-12378-PeCDF | 64 | 24 - 185 |
| 13C12-23478-PeCDF | 64 | 21 - 178 |
| 13C12-123478-HxCDF | 71 | 26 - 152 |
| 13C12-123678-HxCDF | 74 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 79 | 28 - 143 |
| 13C12-1234789-HpCDF | 65 | 26 - 138 |
| 13C12-OCDF | 62 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-530-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028430**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 14:10 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL530 SDG#: PH034-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-530-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028430**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 14:10 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL530 SDG#: PH034-04

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13110SLE026 | 04/30/2013 08:46 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13110SLE026 | 04/22/2013 02:00 | Sherry L Morrow | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131130012A | 04/27/2013 01:29 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131130012A | 04/23/2013 18:00 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 08:27 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13114001 | 04/25/2013 23:47 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13114001 | 04/24/2013 13:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:34 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 09:09 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:09 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:09 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:09 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-530-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7028430**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 14:10 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL530 SDG#: PH034-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131090638001 | 04/23/2013 07:38 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131090638001 | 04/23/2013 01:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13109039403A | 04/19/2013 20:30 | Michelle L Lalli | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401A | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-041813 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7028431**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 15:00 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE18 SDG#: PH034-05EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | |
| 12971 | Acenaphthene | 83-32-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.11 | J | 1.0 | 0.051 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.071 | J | 1.0 | 0.051 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.11 | J | 1.0 | 0.051 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.014 | J | 0.051 | 0.010 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.018 | J | 0.051 | 0.010 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.086 | | 0.051 | 0.030 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.051 | U | 0.051 | 0.030 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.051 | U | 0.051 | 0.010 | 1 |

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10589 | Aldrin | 309-00-2 | 0.0085 | U | 0.0085 | 0.0017 | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0085 | U | 0.0085 | 0.0025 | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0085 | U | 0.0085 | 0.0029 | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0085 | U | 0.0085 | 0.0017 | 1 |
| 10589 | Chlordane | 57-74-9 | 0.42 | U | 0.42 | 0.14 | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.017 | U | 0.017 | 0.0042 | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.017 | U | 0.017 | 0.0042 | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.017 | U | 0.017 | 0.0044 | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0085 | U | 0.0085 | 0.0029 | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.017 | U | 0.017 | 0.0045 | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0085 | U | 0.0085 | 0.0036 | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.017 | U | 0.017 | 0.013 | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.017 | U | 0.017 | 0.0049 | 1 |
| 10589 | Endrin | 72-20-8 | 0.017 | U | 0.017 | 0.0069 | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.085 | U | 0.085 | 0.017 | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.017 | U | 0.017 | 0.0042 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-041813 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7028431**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 15:00 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE18 SDG#: PH034-05EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10589 | Heptachlor | 76-44-8 | 0.0085 | U | 0.0085 | 0.0017 | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0085 | U | 0.0085 | 0.0019 | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.085 | U | 0.085 | 0.025 | 1 |
| 10589 | Mirex | 2385-85-5 | 0.21 | U | 0.21 | 0.072 | 1 |
| 10589 | Toxaphene | 8001-35-2 | 2.5 | U | 2.5 | 0.85 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10591 | Aroclor 5432 | 63496-31-1 | 0.42 | U | 0.42 | 0.085 | 1 |
| 10591 | Aroclor 5442 | 12642-23-8 | 0.42 | U | 0.42 | 0.085 | 1 |
| 10591 | Aroclor 5460 | 11126-42-4 | 0.42 | U | 0.42 | 0.085 | 1 |
| 10591 | PCB-1016 | 12674-11-2 | 0.42 | U | 0.42 | 0.085 | 1 |
| 10591 | PCB-1221 | 11104-28-2 | 0.42 | U | 0.42 | 0.085 | 1 |
| 10591 | PCB-1232 | 11141-16-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 10591 | PCB-1242 | 53469-21-9 | 0.42 | U | 0.42 | 0.085 | 1 |
| 10591 | PCB-1248 | 12672-29-6 | 0.42 | U | 0.42 | 0.085 | 1 |
| 10591 | PCB-1254 | 11097-69-1 | 0.42 | U | 0.42 | 0.085 | 1 |
| 10591 | PCB-1260 | 11096-82-5 | 0.42 | U | 0.42 | 0.13 | 1 |
| 10591 | PCB-1262 | 37324-23-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 10591 | PCB-1268 | 11100-14-4 | 0.42 | U | 0.42 | 0.14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.62 | U | 0.62 | 0.10 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.62 | U | 0.62 | 0.10 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.62 | U | 0.62 | 0.10 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.62 | U | 0.62 | 0.10 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.62 | U | 0.62 | 0.10 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0743 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0035 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 | U | 0.100 | 0.0083 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00036 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 | U | 0.400 | 0.0640 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0011 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 | U | 0.0100 | 0.00066 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 | U | 0.0200 | 0.0021 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 | U | 0.400 | 0.0333 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 | U | 0.0300 | 0.0051 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 | U | 0.0400 | 0.0060 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 | U | 0.200 | 0.0606 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 | U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0036 | J | 0.0200 | 0.0029 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 | U | 0.0200 | 0.0011 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 | U | 0.200 | 0.0052 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-041813 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7028431**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 15:00 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE18 SDG#: PH034-05EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.145 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0022 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0092 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00010 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.00028 J | 0.0020 | 0.00022 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000070 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b. pH (9040B and 9040C) | n.a. | 6.5 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-041813 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7028431**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 15:00 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE18 SDG#: PH034-05EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.94 | U | 1.94 | 0.165 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 0.420 | JBQ | 9.71 | 0.232 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 9.71 | U | 9.71 | 0.159 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 0.206 | JBQ | 9.71 | 0.175 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.71 | U | 9.71 | 0.167 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.576 | JBQ | 9.71 | 0.189 | 1 |
| 10915 | OCDD | 3268-87-9 | 1.20 | JB | 19.4 | 0.416 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.94 | U | 1.94 | 0.145 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.761 | JBQ | 9.71 | 0.144 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.194 | JBQ | 9.71 | 0.134 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.235 | JQ | 9.71 | 0.103 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.191 | JBQ | 9.71 | 0.102 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.137 | JBQ | 9.71 | 0.0883 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.201 | JBQ | 9.71 | 0.0943 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.466 | JB | 9.71 | 0.103 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.358 | JBQ | 9.71 | 0.122 | 1 |
| 10915 | OCDF | 39001-02-0 | 1.24 | JBQ | 19.4 | 0.323 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00502 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 81 | 25 - 164 |
| 13C12-12378-PeCDD | 77 | 25 - 181 |
| 13C12-123478-HxCDD | 72 | 32 - 141 |
| 13C12-123678-HxCDD | 70 | 28 - 130 |
| 13C12-123789-HxCDD | 70 | 28 - 130 |
| 13C12-1234678-HpCDD | 63 | 23 - 140 |
| 13C12-OCDD | 56 | 17 - 157 |
| 13C12-2378-TCDF | 72 | 24 - 169 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 75 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 66 | 26 - 123 |
| 13C12-234678-HxCDF | 67 | 28 - 136 |
| 13C12-123789-HxCDF | 82 | 29 - 147 |
| 13C12-1234678-HpCDF | 59 | 28 - 143 |
| 13C12-1234789-HpCDF | 59 | 26 - 138 |
| 13C12-OCDF | 51 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: EB-041813 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7028431**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 15:00 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE18 SDG#: PH034-05EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB-041813 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7028431**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 15:00 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE18 SDG#: PH034-05EB*

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13113WAC026 | 04/29/2013 00:15 | Holly Berry | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13113WAC026 | 04/24/2013 02:30 | Sherry L Morrow | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13112A20A | 04/22/2013 13:56 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13112A20A | 04/22/2013 13:56 | Catherine J Schwarz | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 131120022A | 04/24/2013 12:03 | Jamie L Brillhart | 1 |
| 10591 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 131120021A | 04/24/2013 02:38 | Monica M Souders | 1 |
| 11121 | PCB Waters Update IV Ext | SW-846 3510C | 1 | 131120021A | 04/23/2013 10:00 | William H Saadeh | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 131120022A | 04/23/2013 10:00 | William H Saadeh | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131130023A | 04/25/2013 13:49 | Heather E Williams | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 131130023A | 04/24/2013 06:00 | Catherine R Wiker | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13112001 | 04/24/2013 04:27 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13112001 | 04/22/2013 10:15 | Ginelle L McQuaid | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:34 | Katlin N Cataldi | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-041813 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7028431**
**LLI Group # 1384244**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/18/2013 15:00 by SM

Submitted: 04/19/2013 09:35
Reported: 05/01/2013 09:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE18 SDG#: PH034-05EB*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07070 | Titanium | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 131140635001 | 04/26/2013 18:54 | Katlin N Cataldi | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 131180639001B | 04/30/2013 14:02 | David K Beck | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 131180639001A | 04/30/2013 14:02 | David K Beck | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 131180639001A | 04/30/2013 14:02 | David K Beck | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 131180639001A | 04/30/2013 14:02 | David K Beck | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 131125713006 | 04/24/2013 08:08 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 131140635001 | 04/24/2013 23:30 | Annamaria Stipkovits | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 2 | 131180635001 | 04/29/2013 09:52 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 131180639001 | 04/29/2013 10:00 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131125713006 | 04/23/2013 15:20 | Nelli S Markaryan | 1 |
| 12152 | 28b. pH (9040B and 9040C) | SW-846 9040C | 1 | 13109002101A | 04/19/2013 21:12 | Clayton C Litchmore | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384244
Reported: 05/01/13 at 09:02 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13110SLE026 | Sample number(s): 7028427-7028430 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 105 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 114 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 117 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 99 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 120 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 102 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 91 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 105 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 71-120 | | |
| Batch number: 13113WAC026 | Sample number(s): 7028431 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 106 | 107 | 65-124 | 1 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 109 | 72-113 | 1 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 112 | 110 | 70-117 | 2 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 114 | 115 | 75-115 | 1 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 177* | 177* | 72-120 | 0 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 120 | 121 | 74-130 | 1 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 98 | 70-130 | 1 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 111 | 114 | 63-121 | 3 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 117 | 116 | 74-118 | 0 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 89 | 94 | 40-138 | 5 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 115 | 117 | 70-145 | 1 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 111 | 75-112 | 1 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 109 | 112 | 66-122 | 3 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 109 | 111 | 74-129 | 2 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 102 | 106 | 40-119 | 3 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384244
Reported: 05/01/13 at 09:02 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 0.054 | J | 1.0 | 0.050 | ug/l | 97 | 106 | 70-143 | 8 | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 114 | 113 | 73-116 | 1 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 106 | 107 | 74-115 | 0 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 106 | 109 | 66-122 | 3 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 115 | 115 | 71-120 | 0 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 113 | 113 | 74-119 | 0 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 109 | 108 | 67-118 | 0 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 101 | 36-120 | 3 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 74 | 77 | 57-145 | 4 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 108 | 107 | 72-109 | 1 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 112 | 71-116 | 2 | 30 |
| Batch number: 13112A20A | Sample number(s): 7028431 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 97 | 98 | 75-135 | 1 | 30 |
| Batch number: 131120021A | Sample number(s): 7028431 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 72 | 64 | 35-84 | 11 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 102 | 105 | 69-120 | 2 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 108 | 111 | 69-128 | 3 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 131120022A | Sample number(s): 7028431 | | | | | | | | | |
| Aldrin | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 74 | 88 | 55-126 | 17 | 30 |
| Alpha BHC | 0.0080 | U | 0.0080 | 0.0024 | ug/l | 82 | 92 | 63-132 | 11 | 30 |
| Beta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 78 | 87 | 63-132 | 11 | 30 |
| Gamma BHC - Lindane | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 83 | 92 | 68-128 | 10 | 30 |
| Chlordane | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| p,p-DDD | 0.016 | U | 0.016 | 0.0040 | ug/l | 76 | 89 | 62-143 | 16 | 30 |
| p,p-DDE | 0.016 | U | 0.016 | 0.0040 | ug/l | 83 | 93 | 56-137 | 12 | 30 |
| p,p-DDT | 0.016 | U | 0.016 | 0.0042 | ug/l | 78 | 92 | 45-134 | 17 | 30 |
| Delta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 83 | 90 | 63-131 | 9 | 30 |
| Dieldrin | 0.016 | U | 0.016 | 0.0042 | ug/l | 83 | 92 | 65-135 | 11 | 30 |
| Endosulfan I | 0.0080 | U | 0.0080 | 0.0034 | ug/l | 81 | 91 | 48-124 | 11 | 30 |
| Endosulfan II | 0.016 | U | 0.016 | 0.012 | ug/l | 77 | 88 | 53-123 | 14 | 30 |
| Endosulfan Sulfate | 0.016 | U | 0.016 | 0.0046 | ug/l | 74 | 85 | 60-129 | 13 | 30 |
| Endrin | 0.016 | U | 0.016 | 0.0065 | ug/l | 81 | 90 | 43-139 | 11 | 30 |
| Endrin Aldehyde | 0.080 | U | 0.080 | 0.016 | ug/l | 69 | 78 | 55-123 | 12 | 20 |
| Endrin Ketone | 0.016 | U | 0.016 | 0.0040 | ug/l | 68 | 82 | 51-138 | 18 | 30 |
| Heptachlor | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 73 | 85 | 57-126 | 16 | 30 |
| Heptachlor Epoxide | 0.0080 | U | 0.0080 | 0.0018 | ug/l | 79 | 88 | 65-128 | 11 | 30 |
| Methoxychlor | 0.080 | U | 0.080 | 0.024 | ug/l | 80 | 91 | 46-134 | 14 | 30 |
| Mirex | 0.20 | U | 0.20 | 0.068 | ug/l | | | | | |
| Toxaphene | 2.4 | U | 2.4 | 0.80 | ug/l | | | | | |
| Batch number: 131130012A | Sample number(s): 7028427-7028430 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 70 | 70 | 36-106 | 0 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384244
Reported: 05/01/13 at 09:02 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 102 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 106 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131130023A | Sample number(s): 7028431 | | | | | | | | | |
| EFH (C12-C14) | 0.60 | U | 0.60 | 0.10 | mg/l | 79 | 76 | 70-130 | 4 | 30 |
| EFH (C15-C20) | 0.60 | U | 0.60 | 0.10 | mg/l | 85 | 80 | 70-130 | 5 | 30 |
| EFH (C21-C30) | 0.60 | U | 0.60 | 0.10 | mg/l | 87 | 82 | 70-130 | 6 | 30 |
| EFH (C30 - C40) | 0.60 | U | 0.60 | 0.10 | mg/l | 70 | 67* | 70-130 | 5 | 30 |
| EFH (C8-C11) | 0.60 | U | 0.60 | 0.10 | mg/l | 63* | 62* | 70-130 | 2 | 30 |
| Batch number: 131140009A | Sample number(s): 7028427-7028430 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 94 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 55* | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 74 | | 49-107 | | |
| Batch number: 131090638001 | Sample number(s): 7028427-7028430 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0103 | mg/kg | 113 | | 85-120 | | |
| Batch number: 131125713006 | Sample number(s): 7028431 | | | | | | | | | |
| 3b Mercury 7470A | 0.00020 | U | 0.00020 | 0.00007 0 | mg/l | 93 | 94 | 90-115 | 0 | 20 |
| Batch number: 131140635001 | Sample number(s): 7028431 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0743 | mg/l | 117* | 118* | 90-112 | 1 | 20 |
| Antimony | 0.0400 | U | 0.0400 | 0.0035 | mg/l | 107 | 107 | 88-111 | 0 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 107 | 108 | 90-113 | 1 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 108 | 109 | 90-110 | 1 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 105 | 107 | 88-110 | 2 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0083 | mg/l | 97 | 99 | 89-110 | 2 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00036 | mg/l | 109 | 110 | 90-112 | 2 | 20 |
| Calcium | 0.400 | U | 0.400 | 0.0640 | mg/l | 116* | 117* | 90-110 | 1 | 20 |
| Chromium | 0.0300 | U | 0.0300 | 0.0011 | mg/l | 102 | 103 | 90-110 | 2 | 20 |
| Cobalt | 0.0100 | U | 0.0100 | 0.00066 | mg/l | 109 | 110 | 90-110 | 1 | 20 |
| Copper | 0.0024 | J | 0.0200 | 0.0021 | mg/l | 107 | 109 | 90-112 | 2 | 20 |
| Iron | 0.400 | U | 0.400 | 0.0333 | mg/l | 116* | 117* | 90-112 | 1 | 20 |
| Lead | 0.0300 | U | 0.0300 | 0.0051 | mg/l | 107 | 110 | 88-110 | 3 | 20 |
| Lithium | 0.0400 | U | 0.0400 | 0.0060 | mg/l | 107 | 108 | 90-110 | 1 | 20 |
| Magnesium | 0.200 | U | 0.200 | 0.0606 | mg/l | 115* | 116* | 90-110 | 1 | 20 |
| Manganese | 0.0100 | U | 0.0100 | 0.00083 | mg/l | 107 | 109 | 90-110 | 2 | 20 |
| Molybdenum | 0.0200 | U | 0.0200 | 0.0029 | mg/l | 106 | 108 | 90-110 | 2 | 20 |
| Nickel | 0.0200 | U | 0.0200 | 0.0011 | mg/l | 110 | 112* | 90-111 | 2 | 20 |
| Potassium | 1.00 | U | 1.00 | 0.145 | mg/l | 113 | 114 | 85-115 | 1 | 20 |
| Sodium | 2.00 | U | 2.00 | 0.167 | mg/l | 113 | 115* | 87-114 | 1 | 20 |
| Tin | 0.0400 | U | 0.0400 | 0.0022 | mg/l | 102 | 103 | 90-110 | 1 | 20 |
| Titanium | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 104 | 106 | 90-113 | 2 | 20 |
| Vanadium | 0.0100 | U | 0.0100 | 0.0013 | mg/l | 104 | 106 | 90-110 | 2 | 20 |
| Zinc | 0.0400 | U | 0.0400 | 0.0020 | mg/l | 109 | 110 | 90-110 | 1 | 20 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384244
Reported: 05/01/13 at 09:02 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Zirconium | 0.100 | U | 0.100 | 0.0092 | mg/l | 105 | 107 | 90-110 | 2 | 20 |
| Batch number: 131150637001 | Sample number(s): 7028427-7028430 | | | | | | | | | |
| Aluminum | 10.3 | J | 40.0 | 7.71 | mg/kg | 105 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 105 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 104 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 1.62 | J | 10.0 | 0.830 | mg/kg | 100 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |
| Calcium | 25.6 | | 20.0 | 4.02 | mg/kg | 107 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 103 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 101 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 104 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 101 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 106 | | 80-120 | | |
| Phosphorus | 1.45 | J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.45 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 102 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 102 | | 80-120 | | |
| Batch number: 131150637001A | Sample number(s): 7028427-7028430 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 100 | | 80-120 | | |
| Strontium | 0.179 | J | 0.400 | 0.0340 | mg/kg | 98 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 111 | | 80-120 | | |
| Batch number: 131150637001B | Sample number(s): 7028427-7028430 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 98 | | 80-120 | | |
| Batch number: 131180635001 | Sample number(s): 7028431 | | | | | | | | | |
| Phosphorus | 0.200 | U | 0.200 | 0.0052 | mg/l | 99 | 100 | 90-110 | 1 | 20 |
| Batch number: 131180639001A | Sample number(s): 7028431 | | | | | | | | | |
| Silver | 0.0010 | U | 0.0010 | 0.00010 | mg/l | 99 | 100 | 90-115 | 1 | 20 |
| Strontium | 0.0020 | U | 0.0020 | 0.00022 | mg/l | 96 | 100 | 80-120 | 4 | 20 |
| Thallium | 0.0010 | U | 0.0010 | 0.00015 | mg/l | 98 | 100 | 80-120 | 2 | 20 |
| Batch number: 131180639001B | Sample number(s): 7028431 | | | | | | | | | |
| Selenium | 0.0040 | U | 0.0040 | 0.00050 | mg/l | 98 | 106 | 80-120 | 8 | 20 |
| Batch number: 13109002101A | Sample number(s): 7028431 | | | | | | | | | |
| 28b. pH (9040B and 9040C) | | | | | | 100 | | 99-103 | | |
| Batch number: 13109039403A | Sample number(s): 7028427-7028430 | | | | | | | | | |
| 15a pH by 9045C | | | | | | 100 | | 95-105 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384244
Reported: 05/01/13 at 09:02 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13115162401A | Sample number(s): 7028427-7028430 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13112001 | Sample number(s): 7028431 | | | | | | | | |
| 2378-TCDD | 2.00 U | 2.00 | 0.166 | pg/l | 89 | | 60-150 | | |
| 12378-PeCDD | 0.478 J | 10.0 | 0.221 | pg/l | 93 | | 60-150 | | |
| 123478-HxCDD | 10.0 U | 10.0 | 0.130 | pg/l | 88 | | 60-150 | | |
| 123678-HxCDD | 0.209 J | 10.0 | 0.137 | pg/l | 90 | | 60-150 | | |
| 123789-HxCDD | 0.143 J | 10.0 | 0.128 | pg/l | 91 | | 60-150 | | |
| 1234678-HpCDD | 0.304 J | 10.0 | 0.152 | pg/l | 93 | | 60-150 | | |
| OCDD | 0.400 J | 20.0 | 0.297 | pg/l | 91 | | 60-150 | | |
| 2378-TCDF | 2.00 U | 2.00 | 0.162 | pg/l | 91 | | 60-150 | | |
| 12378-PeCDF | 0.459 J | 10.0 | 0.131 | pg/l | 92 | | 60-150 | | |
| 23478-PeCDF | 0.221 J | 10.0 | 0.127 | pg/l | 91 | | 60-150 | | |
| 123478-HxCDF | 10.0 U | 10.0 | 0.0895 | pg/l | 93 | | 60-150 | | |
| 123678-HxCDF | 0.192 J | 10.0 | 0.0871 | pg/l | 91 | | 60-150 | | |
| 123789-HxCDF | 0.213 J | 10.0 | 0.0779 | pg/l | 92 | | 60-150 | | |
| 234678-HxCDF | 0.148 J | 10.0 | 0.0830 | pg/l | 90 | | 60-150 | | |
| 1234678-HpCDF | 0.268 J | 10.0 | 0.0605 | pg/l | 91 | | 60-150 | | |
| 1234789-HpCDF | 0.249 J | 10.0 | 0.0770 | pg/l | 91 | | 60-150 | | |
| OCDF | 0.832 J | 20.0 | 0.210 | pg/l | 89 | | 60-150 | | |
| Batch number: 13114001 | Sample number(s): 7028427-7028430 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0193 | ng/kg | 90 | | 67-158 | | |
| 12378-PeCDD | 0.0221 J | 5.00 | 0.0168 | ng/kg | 92 | | 70-142 | | |
| 123478-HxCDD | 0.0132 J | 5.00 | 0.0107 | ng/kg | 99 | | 70-164 | | |
| 123678-HxCDD | 5.00 U | 5.00 | 0.0113 | ng/kg | 96 | | 76-134 | | |
| 123789-HxCDD | 0.0184 J | 5.00 | 0.0111 | ng/kg | 98 | | 64-162 | | |
| 1234678-HpCDD | 0.0680 J | 5.00 | 0.0123 | ng/kg | 95 | | 70-140 | | |
| OCDD | 0.148 J | 10.0 | 0.0153 | ng/kg | 96 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0176 | ng/kg | 94 | | 75-158 | | |
| 12378-PeCDF | 0.0555 J | 5.00 | 0.00908 | ng/kg | 96 | | 80-134 | | |
| 23478-PeCDF | 0.0295 J | 5.00 | 0.00879 | ng/kg | 96 | | 68-160 | | |
| 123478-HxCDF | 0.0510 J | 5.00 | 0.0109 | ng/kg | 99 | | 72-134 | | |
| 123678-HxCDF | 0.0214 J | 5.00 | 0.0102 | ng/kg | 97 | | 84-130 | | |
| 123789-HxCDF | 0.0300 J | 5.00 | 0.0125 | ng/kg | 99 | | 78-130 | | |
| 234678-HxCDF | 0.0286 J | 5.00 | 0.0105 | ng/kg | 98 | | 70-156 | | |
| 1234678-HpCDF | 0.0378 J | 5.00 | 0.00650 | ng/kg | 97 | | 82-122 | | |
| 1234789-HpCDF | 0.0182 J | 5.00 | 0.00892 | ng/kg | 98 | | 78-138 | | |
| OCDF | 0.0895 J | 10.0 | 0.0198 | ng/kg | 96 | | 63-170 | | |
| Batch number: 13112001 | Sample number(s): 7028431 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | U | | | pg/l | | | | | |
| Batch number: 13114001 | Sample number(s): 7028427-7028430 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00357 | | | ng/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384244
Reported: 05/01/13 at 09:02 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13110SLE026 | Sample number(s): 7028427-7028430 UNSPK: P026476 | | | | | | | | |
| Acenaphthene | 103 | 103 | 48-127 | 0 | 30 | | | | |
| Acenaphthylene | 102 | 104 | 49-121 | 2 | 30 | | | | |
| Anthracene | 99 | 100 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 108 | 104 | 32-135 | 4 | 30 | | | | |
| Benzo(a)pyrene | 113 | 110 | 36-138 | 3 | 30 | | | | |
| Benzo(b)fluoranthene | 134 | 129 | 26-142 | 4 | 30 | | | | |
| Benzo(e)pyrene | 103 | 99 | 70-130 | 3 | 30 | | | | |
| Benzo(g,h,i)perylene | 63 | 60 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 122 | 115 | 47-129 | 5 | 30 | | | | |
| Butylbenzylphthalate | 114 | 112 | 59-153 | 1 | 30 | | | | |
| Di-n-butylphthalate | 93 | 159* | 62-154 | 34* | 30 | | | | |
| Chrysene | 104 | 99 | 29-148 | 5 | 30 | | | | |
| Dibenz(a,h)anthracene | 78 | 76 | 34-125 | 3 | 30 | | | | |
| Diethylphthalate | 102 | 103 | 76-127 | 1 | 30 | | | | |
| Dimethylphthalate | 101 | 102 | 62-136 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 113 | 111 | 39-167 | 2 | 30 | | | | |
| Fluoranthene | 104 | 101 | 47-135 | 3 | 30 | | | | |
| Fluorene | 105 | 105 | 50-129 | 0 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 75 | 71 | 17-136 | 4 | 30 | | | | |
| 1-Methylnaphthalene | 109 | 108 | 50-131 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 110 | 109 | 28-144 | 1 | 30 | | | | |
| Naphthalene | 102 | 104 | 31-148 | 2 | 30 | | | | |
| N-Nitrosodimethylamine | 90 | 93 | 48-113 | 3 | 30 | | | | |
| Di-n-octylphthalate | 154 | 147 | 52-162 | 5 | 30 | | | | |
| Phenanthrene | 105 | 104 | 29-142 | 1 | 30 | | | | |
| Pyrene | 103 | 97 | 26-143 | 7 | 30 | | | | |
| Batch number: 131130012A | Sample number(s): 7028427-7028430 UNSPK: P031213 | | | | | | | | |
| PCB-1016 | 100 | 95 | 16-146 | 4 | 50 | | | | |
| PCB-1260 | 95 | 99 | 40-134 | 4 | 50 | | | | |
| Batch number: 131140009A | Sample number(s): 7028427-7028430 UNSPK: P031213 | | | | | | | | |
| EFH (C12-C14) | 99 | 91 | 49-123 | 8 | 20 | | | | |
| EFH (C15-C20) | 124* | 137* | 49-123 | 10 | 20 | | | | |
| EFH (C21-C30) | 127* | 182* | 49-123 | 18 | 20 | | | | |
| EFH (C30-C40) | 203 (2) | 296 (2) | 49-123 | 14 | 20 | | | | |
| EFH (C8-C11) | 106 | 95 | 49-123 | 11 | 20 | | | | |
| Batch number: 131090638001 | Sample number(s): 7028427-7028430 UNSPK: P026476 BKG: P026476 | | | | | | | | |
| 3a Mercury 7471A | 110 | 108 | 65-135 | 2 | 20 | 0.0195 U | 0.0114 J | 200* (1) | 20 |
| Batch number: 131150637001 | Sample number(s): 7028427-7028430 UNSPK: P031213 BKG: P031213 | | | | | | | | |
| Aluminum | 2585 (2) | 2282 (2) | 75-125 | 3 | 20 | 13,100 | 14,600 | 11 | 20 |
| Antimony | 67* | 64* | 75-125 | 4 | 20 | 3.96 U | 0.540 J | 200* (1) | 20 |
| Arsenic | 95 | 105 | 75-125 | 7 | 20 | 4.95 | 5.12 | 3 (1) | 20 |
| Barium | 104 | 106 | 75-125 | 1 | 20 | 70.7 | 77.9 | 10 | 20 |

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**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384244
Reported: 05/01/13 at 09:02 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 106 | 104 | 75-125 | 1 | 20 | 0.522 J | 0.579 J | 10 (1) | 20 |
| Boron | 101 | 100 | 75-125 | 1 | 20 | 5.72 J | 7.99 J | 33* (1) | 20 |
| Cadmium | 97 | 98 | 75-125 | 1 | 20 | 0.116 J | 0.138 J | 17 (1) | 20 |
| Calcium | 140 (2) | 198 (2) | 75-125 | 7 | 20 | 2,840 | 3,060 | 8 | 20 |
| Chromium | 107 | 104 | 75-125 | 2 | 20 | 19.7 | 20.4 | 3 | 20 |
| Cobalt | 100 | 100 | 75-125 | 0 | 20 | 4.62 | 5.28 | 13 (1) | 20 |
| Copper | 111 | 110 | 75-125 | 0 | 20 | 12.4 | 13.2 | 7 | 20 |
| Iron | 3126 (2) | 2463 (2) | 75-125 | 3 | 20 | 21,800 | 23,500 | 7 | 20 |
| Lead | 104 | 185* | 75-125 | 24* | 20 | 28.1 | 43.6 | 43* | 20 |
| Lithium | 103 | 101 | 75-125 | 1 | 20 | 25.6 | 25.7 | 0 | 20 |
| Magnesium | 249 (2) | 221 (2) | 75-125 | 1 | 20 | 5,100 | 5,180 | 2 | 20 |
| Manganese | 145 (2) | 132 (2) | 75-125 | 2 | 20 | 266 | 298 | 11 | 20 |
| Molybdenum | 99 | 99 | 75-125 | 0 | 20 | 0.291 J | 0.314 J | 8 (1) | 20 |
| Nickel | 103 | 101 | 75-125 | 1 | 20 | 10.5 | 11.2 | 6 | 20 |
| Phosphorus | 78 (2) | 113 (2) | 75-125 | 7 | 20 | 420 | 439 | 4 | 20 |
| Potassium | 140* | 137* | 75-125 | 1 | 20 | 3,350 | 3,630 | 8 | 20 |
| Sodium | 99 | 98 | 75-125 | 1 | 20 | 73.1 J | 77.5 J | 6 (1) | 20 |
| Tin | 94 | 95 | 75-125 | 1 | 20 | 3.02 J | 3.24 J | 7 (1) | 20 |
| Titanium | 359 (2) | 334 (2) | 75-125 | 2 | 20 | 1,120 | 1,230 | 9 | 20 |
| Vanadium | 114 | 112 | 75-125 | 1 | 20 | 35.4 | 39.1 | 10 | 20 |
| Zinc | 106 | 106 | 75-125 | 0 | 20 | 60.1 | 62.1 | 3 | 20 |
| Zirconium | 99 | 98 | 75-125 | 1 | 20 | 2.43 J | 2.76 J | 13 (1) | 20 |
| Batch number: 131150637001A | Sample number(s): 7028427-7028430 UNSPK: P031213 BKG: P031213 | | | | | | | | |
| Silver | 96 | 98 | 75-125 | 2 | 20 | 0.0269 J | 0.0419 J | 44* (1) | 20 |
| Strontium | 69* | 75 | 75-125 | 3 | 20 | 12.7 | 13.0 | 2 | 20 |
| Thallium | 87 | 90 | 75-125 | 2 | 20 | 0.272 | 0.264 | 3 (1) | 20 |
| Batch number: 131150637001B | Sample number(s): 7028427-7028430 UNSPK: P031213 BKG: P031213 | | | | | | | | |
| Selenium | 95 | 90 | 75-125 | 5 | 20 | 0.396 U | 0.396 U | 0 (1) | 20 |
| Batch number: 13109002101A | Sample number(s): 7028431 BKG: P027154 | | | | | | | | |
| 28b. pH (9040B and 9040C) | | | | | | 6.1 | 6.2 | 1 | 3 |
| Batch number: 13109039403A | Sample number(s): 7028427-7028430 BKG: 7028427 | | | | | | | | |
| 15a pH by 9045C | | | | | | 6.85 | 6.81 | 1 | 3 |
| Batch number: 13115162401A | Sample number(s): 7028427-7028430 BKG: P026477 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.4 | 4.4 | 0 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13110SLE026

| Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene- |
|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384244
Reported: 05/01/13 at 09:02 AM

## Surrogate Quality Control

| | | | d10 |
|---|---|---|---|
| 7028427 | 95 | 115 | 105 |
| 7028428 | 95 | 116 | 80 |
| 7028429 | 94 | 121 | 103 |
| 7028430 | 90 | 110 | 95 |
| Blank | 91 | 108 | 101 |
| LCS | 96 | 115 | 106 |
| MS | 97 | 117 | 108 |
| MSD | 96 | 115 | 106 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 13113WAC026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7028431 | 104 | 102 | 99 |
| Blank | 103 | 114 | 100 |
| LCS | 107 | 130 | 104 |
| LCSD | 105 | 130 | 103 |
| Limits: | 64-120 | 62-141 | 58-134 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13112A20A

| | Trifluorotoluene-F |
|---|---|
| 7028431 | 87 |
| Blank | 87 |
| LCS | 110 |
| LCSD | 111 |
| Limits: | 63-135 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 131120021A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7028431 | 123* | 95 |
| Blank | 126* | 96 |
| LCS | 117 | 71 |
| LCSD | 118 | 101 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 131120022A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7028431 | 96 | 87 |
| Blank | 93 | 80 |
| LCS | 85 | 66 |
| LCSD | 94 | 84 |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384244
Reported: 05/01/13 at 09:02 AM

## Surrogate Quality Control

Limits: 60-140 20-120

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131130012A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7028427 | 118 | 101 |
| 7028428 | 119 | 97 |
| 7028429 | 125* | 102 |
| 7028430 | 106 | 91 |
| Blank | 122* | 97 |
| LCS | 118 | 102 |
| LCSD | 122* | 106 |
| MS | 120 | 103 |
| MSD | 118 | 104 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 131130023A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7028431 | 80 | 82 |
| Blank | 76 | 78 |
| LCS | 74 | 82 |
| LCSD | 73 | 78 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131140009A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7028427 | 100 | 100 |
| 7028428 | 92 | 94 |
| 7028429 | 97 | 97 |
| 7028430 | 95 | 98 |
| Blank | 87 | 77 |
| LCS | 91 | 91 |
| MS | 95 | 96 |
| MSD | 88 | 89 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 13112001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7028431 | 81 | 75 | 67 | 66 | 67 | 82 |
| Blank | 75 | 74 | 74 | 72 | 72 | 87 |
| OPR | 65 | 70 | 69 | 69 | 69 | 76 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384244
Reported: 05/01/13 at 09:02 AM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7028431 | 59 | 59 | 51 | 77 | 72 | 70 |
| Blank | 74 | 71 | 71 | 81 | 78 | 77 |
| OPR | 69 | 67 | 66 | 73 | 75 | 73 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |
| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
| 7028431 | 70 | 63 | 56 | 72 | 75 | |
| Blank | 78 | 77 | 78 | 66 | 76 | |
| OPR | 73 | 71 | 74 | 63 | 71 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13114001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7028427 | 73 | 71 | 81 | 83 | 80 | 78 |
| 7028428 | 75 | 71 | 76 | 81 | 78 | 78 |
| 7028429 | 69 | 68 | 75 | 79 | 75 | 75 |
| 7028430 | 68 | 64 | 71 | 74 | 71 | 72 |
| Blank | 74 | 74 | 82 | 86 | 83 | 80 |
| OPR | 68 | 69 | 77 | 81 | 78 | 77 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |
| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
| 7028427 | 86 | 74 | 72 | 76 | 81 | 84 |
| 7028428 | 94 | 71 | 68 | 76 | 82 | 85 |
| 7028429 | 84 | 69 | 68 | 72 | 77 | 80 |
| 7028430 | 79 | 65 | 62 | 68 | 73 | 77 |
| Blank | 96 | 78 | 76 | 79 | 88 | 86 |
| OPR | 89 | 70 | 68 | 75 | 79 | 81 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |
| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
| 7028427 | 84 | 81 | 79 | 67 | 70 | |
| 7028428 | 87 | 81 | 77 | 68 | 73 | |
| 7028429 | 80 | 76 | 74 | 62 | 69 | |
| 7028430 | 78 | 71 | 68 | 61 | 64 | |
| Blank | 86 | 87 | 84 | 65 | 74 | |
| OPR | 79 | 78 | 75 | 61 | 70 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Gp# 1384244 sample# 7028427-31

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/18/2013
CarrierName: FedEx
AirbillNo: 7995 6315 9383

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130418-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-531-SA7-SB-0.0-0.5 | 4/18/13 08:55 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-531-SA7-SB-0.0-0.5 | 4/18/13 08:55 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-532-SA7-SB-0.0-0.5 | 4/18/13 09:45 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-532-SA7-SB-0.0-0.5 | 4/18/13 09:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-533-SA7-SB-0.0-0.5 | 4/18/13 11:25 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-533-SA7-SB-0.0-0.5 | 4/18/13 11:25 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-530-SA7-SB-0.0-0.5 | 4/18/13 14:10 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-530-SA7-SB-0.0-0.5 | 4/18/13 14:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

Special Instructions:

Sampler: Steven Mason

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Gh | 4/18/13 | | | | | | | | | | |
| | | | | | | | | | CCisler | 4/19/13 | 0935 |

acct#13013 Cp#1384244 Sample#7028427-31

# SSFL Phase 3 Chain of Custody

**CDM Smith**

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 4/18/2013 | Contact Name: | Pam Hartman | COC No: | 20130418-02 |
| CarrierName: | FedEx | Contact Phone: | (818)466-8007 | Cooler #: | 2 |
| AirbillNo: | 7995 6315 9383 | | | Lab: | Lancaster |
| | | | | Lab Phone: | 717-556-7259 |
| | | | | Lab Address | 2425 New Holland Pike<br>Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB-041813 | 4/18/13 15:00 | WQ | HNO3 pH<2 | 1 - 250 mL Amber | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-041813 | 4/18/13 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-041813 | 4/18/13 15:00 | WQ | None | 1 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| EB-041813 | 4/18/13 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| EB-041813 | 4/18/13 15:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB-041813 | 4/18/13 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| EB-041813 | 4/18/13 15:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| EB-041813 | 4/18/13 15:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |

Special Instructions:

Sampler: Steven Mercer

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. G[illegible] | 4/18/13 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

C E Shler 4/19/13 0935

eurofins | Lancaster Laboratories

C# 1384244

# Environmental Sample Administration
# Receipt Documentation Log

**Client/Project:** CDM Smith

**Date of Receipt:** 4/19/13

**Time of Receipt:** 0935

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** YES (NO)

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | 2783 | 2.6 | TB | WI | Y | B | |
| 2 | ↓ | 2.7 | ↓ | ↓ | ↓ | ↓ | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** Ø

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** C Eshler 3647 **Date/Time:** 4/19/13 1120

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 02, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/20/2013
Group Number: 1384434
SDG: PH035
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| SL-518-SA7-SB-0.0-0.5 Soil | 7029644 |
| SL-520-SA7-SB-0.0-0.5 Soil | 7029645 |
| SL-511-SA7-SB-0.0-0.5 Soil | 7029646 |
| EB-041913 Water | 7029647 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: SL-518-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029644**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 08:50 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL518 SDG#: PH035-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 13 | J | 17 | 6.8 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 170 | U | 170 | 34 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 14 | J | 17 | 6.8 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Chrysene | 218-01-9 | 7.5 | J | 17 | 3.4 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 180 | U | 180 | 61 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 7.7 | J | 17 | 6.8 | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | U | 17 | 6.8 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.8 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Naphthalene | 91-20-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 180 | U | 180 | 61 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Pyrene | 129-00-0 | 7.7 | J | 17 | 6.8 | 10 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 170 | U | 170 | 51 | 5 |
| 10592 | Aroclor 5442 | 12642-23-8 | 170 | U | 170 | 51 | 5 |
| 10592 | Aroclor 5460 | 11126-42-4 | 110 | J | 170 | 51 | 5 |
| 10592 | PCB-1016 | 12674-11-2 | 87 | U | 87 | 17 | 5 |
| 10592 | PCB-1221 | 11104-28-2 | 87 | U | 87 | 26 | 5 |
| 10592 | PCB-1232 | 11141-16-5 | 87 | U | 87 | 21 | 5 |
| 10592 | PCB-1242 | 53469-21-9 | 87 | U | 87 | 17 | 5 |
| 10592 | PCB-1248 | 12672-29-6 | 87 | U | 87 | 17 | 5 |
| 10592 | PCB-1254 | 11097-69-1 | 430 | | 87 | 22 | 5 |
| 10592 | PCB-1260 | 11096-82-5 | 87 | U | 87 | 20 | 5 |
| 10592 | PCB-1262 | 37324-23-5 | 87 | U | 87 | 17 | 5 |
| 10592 | PCB-1268 | 11100-14-4 | 87 | U | 87 | 17 | 5 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 6.2 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 35 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-518-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029644**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 08:50 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL518 SDG#: PH035-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,900 | | 39.8 | 7.67 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.777 | J | 3.98 | 0.497 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.28 | | 3.98 | 0.328 | 1 |
| 06946 | Barium | 7440-39-3 | 84.9 | | 0.995 | 0.0328 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.544 | J | 0.995 | 0.0666 | 1 |
| 07914 | Boron | 7440-42-8 | 3.73 | J | 9.95 | 0.826 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.606 | J | 0.995 | 0.0328 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,620 | | 19.9 | 4.00 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.8 | | 2.98 | 0.0875 | 1 |
| 06952 | Cobalt | 7440-48-4 | 10.8 | | 0.995 | 0.0895 | 1 |
| 06953 | Copper | 7440-50-8 | 20.2 | | 1.99 | 0.179 | 1 |
| 01654 | Iron | 7439-89-6 | 21,900 | | 79.6 | 7.56 | 2 |
| 06955 | Lead | 7439-92-1 | 24.1 | | 2.98 | 0.468 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.7 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,270 | | 9.95 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 330 | | 0.995 | 0.0826 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.359 | J | 1.99 | 0.169 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.4 | | 1.99 | 0.109 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 548 | | 9.95 | 0.507 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,520 | | 99.5 | 13.4 | 1 |
| 01667 | Sodium | 7440-23-5 | 77.0 | J | 99.5 | 16.6 | 1 |
| 06969 | Tin | 7440-31-5 | 3.33 | J | 9.95 | 0.219 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,190 | | 0.995 | 0.169 | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.1 | | 0.995 | 0.109 | 1 |
| 06972 | Zinc | 7440-66-6 | 109 | | 3.98 | 0.199 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.82 | J | 4.97 | 0.826 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.398 | U | 0.398 | 0.0995 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0918 | J | 0.199 | 0.0199 | 2 |
| 06144 | Strontium | 7440-24-6 | 12.9 | | 0.398 | 0.0338 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.240 | | 0.199 | 0.0298 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.198 | | 0.0168 | 0.0104 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.78 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.2 C. The holding time was not met. | | | | | | |
| **Wet Chemistry** | | **EPA 160.3 modified** | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-518-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029644**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 08:50 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL518 SDG#: PH035-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.139 | J | 1.02 | 0.0266 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.600 | JBQ | 5.10 | 0.0460 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.39 | JB | 5.10 | 0.0356 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 4.08 | J | 5.10 | 0.0360 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 2.53 | JB | 5.10 | 0.0332 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 128 | B | 5.10 | 0.0557 | 1 |
| 11031 | OCDD | 3268-87-9 | 948 | B | 10.2 | 0.0367 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.91 | C | 1.02 | 0.0849 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 5.05 | JB | 5.10 | 0.0448 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 1.73 | JB | 5.10 | 0.0419 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 2.24 | JB | 5.10 | 0.0369 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.23 | JB | 5.10 | 0.0352 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.10 | U | 5.10 | 0.0372 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 1.12 | JB | 5.10 | 0.0361 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 21.1 | B | 5.10 | 0.0295 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 1.36 | JB | 5.10 | 0.0354 | 1 |
| 11031 | OCDF | 39001-02-0 | 70.0 | B | 10.2 | 0.0239 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 4.07 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 82 | 25 - 164 |
| 13C12-12378-PeCDD | 81 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 89 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 80 | 17 - 157 |
| 13C12-2378-TCDF | 74 | 24 - 169 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 76 | 21 - 178 |
| 13C12-123478-HxCDF | 83 | 26 - 152 |
| 13C12-123678-HxCDF | 83 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 88 | 29 - 147 |
| 13C12-1234678-HpCDF | 85 | 28 - 143 |
| 13C12-1234789-HpCDF | 80 | 26 - 138 |
| 13C12-OCDF | 79 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-518-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029644**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 08:50 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL518 SDG#: PH035-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-518-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029644**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 08:50 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL518 SDG#: PH035-01

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 04/30/2013 10:51 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/29/2013 19:35 | Monica M Souders | 5 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 2 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 09:09 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13114001 | 04/26/2013 00:44 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13114001 | 04/24/2013 13:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/29/2013 21:41 | Katlin N Cataldi | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:38 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 09:18 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:18 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:18 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-518-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029644**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 08:50 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL518 SDG#: PH035-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:18 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 08:48 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13112039401A | 04/22/2013 21:40 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401B | 04/23/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-520-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7029645**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 09:50 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL520 SDG#: PH035-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.4 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 7.6 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 14 | J | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.9 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 10 | J | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.6 | J | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.86 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.69 | J | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.91 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.6 | J | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 24 | J | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 5.0 | J | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 10 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 21 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-520-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7029645**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 09:50 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL520 SDG#: PH035-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,700 | | 40.0 | 7.71 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.00 | U | 4.00 | 0.500 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.78 | | 4.00 | 0.330 | 1 |
| 06946 | Barium | 7440-39-3 | 80.7 | | 1.00 | 0.0330 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.522 | J | 1.00 | 0.0670 | 1 |
| 07914 | Boron | 7440-42-8 | 4.32 | J | 10.0 | 0.830 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.128 | J | 1.00 | 0.0330 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,860 | | 20.0 | 4.02 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.9 | | 3.00 | 0.0880 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.01 | | 1.00 | 0.0900 | 1 |
| 06953 | Copper | 7440-50-8 | 14.0 | | 2.00 | 0.180 | 1 |
| 01654 | Iron | 7439-89-6 | 22,500 | | 40.0 | 3.80 | 1 |
| 06955 | Lead | 7439-92-1 | 13.5 | | 3.00 | 0.470 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.9 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,270 | | 10.0 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 290 | | 1.00 | 0.0830 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.297 | J | 2.00 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.1 | | 2.00 | 0.110 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 426 | | 10.0 | 0.510 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,220 | | 100 | 13.5 | 1 |
| 01667 | Sodium | 7440-23-5 | 63.2 | J | 100 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 3.13 | J | 10.0 | 0.220 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,150 | | 1.00 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 38.3 | | 1.00 | 0.110 | 1 |
| 06972 | Zinc | 7440-66-6 | 60.6 | | 4.00 | 0.200 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.43 | J | 5.00 | 0.830 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.400 | U | 0.400 | 0.100 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0306 | J | 0.200 | 0.0200 | 2 |
| 06144 | Strontium | 7440-24-6 | 14.3 | | 0.400 | 0.0340 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.205 | | 0.200 | 0.0300 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0237 | | 0.0162 | 0.0101 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.81 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.8 C. The holding time was not met. | | | | | | |
| **Wet Chemistry** | | **EPA 160.3 modified** | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.0 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-520-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029645**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 09:50 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL520 SDG#: PH035-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0444 | JQ | 1.01 | 0.0266 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.174 | JBQ | 5.04 | 0.0272 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.209 | JB | 5.04 | 0.0295 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.770 | J | 5.04 | 0.0292 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.479 | JB | 5.04 | 0.0261 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 18.9 | B | 5.04 | 0.0335 | 1 |
| 11031 | OCDD | 3268-87-9 | 150 | B | 10.1 | 0.0264 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.244 | JQ | 1.01 | 0.0435 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.693 | JB | 5.04 | 0.0229 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.497 | JB | 5.04 | 0.0226 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.327 | JB | 5.04 | 0.0268 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.270 | JB | 5.04 | 0.0242 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.04 | U | 5.04 | 0.0262 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.234 | JB | 5.04 | 0.0237 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.42 | JB | 5.04 | 0.0219 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.219 | JB | 5.04 | 0.0319 | 1 |
| 11031 | OCDF | 39001-02-0 | 5.85 | JB | 10.1 | 0.0236 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.661 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 74 | 25 - 164 |
| 13C12-12378-PeCDD | 78 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 88 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 78 | 17 - 157 |
| 13C12-2378-TCDF | 66 | 24 - 169 |
| 13C12-12378-PeCDF | 74 | 24 - 185 |
| 13C12-23478-PeCDF | 71 | 21 - 178 |
| 13C12-123478-HxCDF | 78 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 78 | 29 - 147 |
| 13C12-1234678-HpCDF | 93 | 28 - 143 |
| 13C12-1234789-HpCDF | 72 | 26 - 138 |
| 13C12-OCDF | 69 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-520-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029645**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 09:50 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL520 SDG#: PH035-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-520-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029645**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 09:50 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL520 SDG#: PH035-02

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 04/30/2013 11:22 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 04:34 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 2 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 07:04 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13114001 | 04/26/2013 01:40 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13114001 | 04/24/2013 13:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:42 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 09:20 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:20 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:20 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-520-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029645**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 09:50 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL520 SDG#: PH035-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:20 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 08:51 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13112039401A | 04/22/2013 21:40 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401B | 04/23/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-511-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7029646**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 11:05 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL511 SDG#: PH035-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.73 | J | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 3.3 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 3.5 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 9.3 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 4.2 | J | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 3.0 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 19 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 6.7 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.2 | J | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 31 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 7.6 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 0.98 | J | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.6 | J | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 2.2 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 3.9 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 5.4 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 7.3 | | 1.7 | 0.70 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 8.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 2.7 | | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 6.5 | | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.87 | U | 0.87 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.60 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.87 | U | 0.87 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.18 | J | 0.87 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.87 | U | 0.87 | 0.54 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029646**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 11:05 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL511 SDG#: PH035-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | limits. The following corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported. Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | J | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 13 | J | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 7.8 | J | 18 | 4.1 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.5 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 28 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 66 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,000 | | 40.6 | 7.83 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.585 | J | 4.06 | 0.508 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.74 | | 4.06 | 0.335 | 1 |
| 06946 | Barium | 7440-39-3 | 72.3 | | 1.02 | 0.0335 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.487 | J | 1.02 | 0.0680 | 1 |
| 07914 | Boron | 7440-42-8 | 4.33 | J | 10.2 | 0.843 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.336 | J | 1.02 | 0.0335 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,940 | | 20.3 | 4.08 | 1 |
| 06951 | Chromium | 7440-47-3 | 20.4 | | 3.05 | 0.0894 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.18 | | 1.02 | 0.0914 | 1 |
| 06953 | Copper | 7440-50-8 | 16.9 | | 2.03 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 21,300 | | 40.6 | 3.86 | 1 |
| 06955 | Lead | 7439-92-1 | 15.0 | | 3.05 | 0.477 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.5 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,700 | | 10.2 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 290 | | 1.02 | 0.0843 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.429 | J | 2.03 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.3 | | 2.03 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 577 | | 10.2 | 0.518 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029646**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 11:05 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL511 SDG#: PH035-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01662 | Potassium | 7440-09-7 | 4,240 | | 102 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 67.7 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 3.20 | J | 10.2 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,050 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 37.3 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 81.4 | | 4.06 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.17 | J | 5.08 | 0.843 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.129 | J | 0.406 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0715 | J | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 16.7 | | 0.406 | 0.0345 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.214 | | 0.203 | 0.0305 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0453 | | 0.0166 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.34 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C.<br>The holding time was not met. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-511-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7029646**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 11:05 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL511 SDG#: PH035-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.279 | J | 1.04 | 0.0479 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 1.94 | JB | 5.18 | 0.0624 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 4.09 | JB | 5.18 | 0.0449 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 16.3 | | 5.18 | 0.0453 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 9.77 | B | 5.18 | 0.0416 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 508 | B | 5.18 | 0.0999 | 1 |
| 11031 | OCDD | 3268-87-9 | 5,740 | EB | 10.4 | 0.0722 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.972 | J | 1.04 | 0.0855 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.52 | JB | 5.18 | 0.0390 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 1.77 | JB | 5.18 | 0.0387 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 2.86 | JB | 5.18 | 0.0465 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.89 | JB | 5.18 | 0.0422 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.18 | U | 5.18 | 0.0459 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 2.35 | JB | 5.18 | 0.0407 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 37.2 | B | 5.18 | 0.0396 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 3.99 | JB | 5.18 | 0.0556 | 1 |
| 11031 | OCDF | 39001-02-0 | 96.4 | B | 10.4 | 0.0283 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 13.9 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 76 | 25 - 164 |
| 13C12-12378-PeCDD | 74 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 80 | 23 - 140 |
| 13C12-OCDD | 82 | 17 - 157 |
| 13C12-2378-TCDF | 68 | 24 - 169 |
| 13C12-12378-PeCDF | 72 | 24 - 185 |
| 13C12-23478-PeCDF | 68 | 21 - 178 |
| 13C12-123478-HxCDF | 77 | 26 - 152 |
| 13C12-123678-HxCDF | 80 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 88 | 28 - 143 |
| 13C12-1234789-HpCDF | 73 | 26 - 138 |
| 13C12-OCDF | 71 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029646**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 11:05 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL511 SDG#: PH035-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029646**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 11:05 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL511 SDG#: PH035-03

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 04/30/2013 11:54 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131130011A | 04/27/2013 13:45 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 04:52 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 2 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131130011A | 04/23/2013 18:10 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 11:13 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13114001 | 04/26/2013 02:37 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13114001 | 04/24/2013 13:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7029646**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 11:05 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL511 SDG#: PH035-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:54 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 09:23 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:23 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:23 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:23 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 08:53 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13112039401A | 04/22/2013 21:40 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13112162401B | 04/23/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-041913 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7029647**
**LLI Group # 1384434**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/19/2013 13:00 by SM

Submitted: 04/20/2013 09:20
Reported: 05/02/2013 14:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE19 SDG#: PH035-04EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/l | ug/l | ug/l | |
| 10589 | Aldrin | 309-00-2 | 0.0081 U | 0.0081 | 0.0016 | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0081 U | 0.0081 | 0.0024 | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0081 U | 0.0081 | 0.0027 | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0081 U | 0.0081 | 0.0016 | 1 |
| 10589 | Chlordane | 57-74-9 | 0.40 U | 0.40 | 0.13 | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.016 U | 0.016 | 0.0040 | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.016 U | 0.016 | 0.0040 | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.016 U | 0.016 | 0.0042 | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0081 U | 0.0081 | 0.0027 | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.016 U | 0.016 | 0.0043 | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0081 U | 0.0081 | 0.0035 | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.016 U | 0.016 | 0.012 | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.016 U | 0.016 | 0.0047 | 1 |
| 10589 | Endrin | 72-20-8 | 0.016 U | 0.016 | 0.0065 | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.081 U | 0.081 | 0.016 | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.016 U | 0.016 | 0.0040 | 1 |
| 10589 | Heptachlor | 76-44-8 | 0.0081 U | 0.0081 | 0.0016 | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0081 U | 0.0081 | 0.0019 | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.081 U | 0.081 | 0.024 | 1 |
| 10589 | Mirex | 2385-85-5 | 0.20 U | 0.20 | 0.068 | 1 |
| 10589 | Toxaphene | 8001-35-2 | 2.4 U | 2.4 | 0.81 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 131120022A | 04/24/2013 12:15 | Jamie L Brillhart | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 131120022A | 04/23/2013 10:00 | William H Saadeh | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384434
Reported: 05/02/13 at 02:25 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13115SLD026 | Sample number(s): 7029644-7029646 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 118 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 97 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 111 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 109 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 111 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 71-120 | | |
| Batch number: 131120022A | Sample number(s): 7029647 | | | | | | | | | |
| Aldrin | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 74 | 88 | 55-126 | 17 | 30 |
| Alpha BHC | 0.0080 | U | 0.0080 | 0.0024 | ug/l | 82 | 92 | 63-132 | 11 | 30 |
| Beta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 78 | 87 | 63-132 | 11 | 30 |
| Gamma BHC - Lindane | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 83 | 92 | 68-128 | 10 | 30 |
| Chlordane | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| p,p-DDD | 0.016 | U | 0.016 | 0.0040 | ug/l | 76 | 89 | 62-143 | 16 | 30 |
| p,p-DDE | 0.016 | U | 0.016 | 0.0040 | ug/l | 83 | 93 | 56-137 | 12 | 30 |
| p,p-DDT | 0.016 | U | 0.016 | 0.0042 | ug/l | 78 | 92 | 45-134 | 17 | 30 |
| Delta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 83 | 90 | 63-131 | 9 | 30 |
| Dieldrin | 0.016 | U | 0.016 | 0.0042 | ug/l | 83 | 92 | 65-135 | 11 | 30 |
| Endosulfan I | 0.0080 | U | 0.0080 | 0.0034 | ug/l | 81 | 91 | 48-124 | 11 | 30 |
| Endosulfan II | 0.016 | U | 0.016 | 0.012 | ug/l | 77 | 88 | 53-123 | 14 | 30 |
| Endosulfan Sulfate | 0.016 | U | 0.016 | 0.0046 | ug/l | 74 | 85 | 60-129 | 13 | 30 |
| Endrin | 0.016 | U | 0.016 | 0.0065 | ug/l | 81 | 90 | 43-139 | 11 | 30 |
| Endrin Aldehyde | 0.080 | U | 0.080 | 0.016 | ug/l | 69 | 78 | 55-123 | 12 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384434
Reported: 05/02/13 at 02:25 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Endrin Ketone | 0.016 | U | 0.016 | 0.0040 | ug/l | 68 | 82 | 51-138 | 18 | 30 |
| Heptachlor | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 73 | 85 | 57-126 | 16 | 30 |
| Heptachlor Epoxide | 0.0080 | U | 0.0080 | 0.0018 | ug/l | 79 | 88 | 65-128 | 11 | 30 |
| Methoxychlor | 0.080 | U | 0.080 | 0.024 | ug/l | 80 | 91 | 46-134 | 14 | 30 |
| Mirex | 0.20 | U | 0.20 | 0.068 | ug/l | | | | | |
| Toxaphene | 2.4 | U | 2.4 | 0.80 | ug/l | | | | | |
| Batch number: 131130011A | Sample number(s): 7029646 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 91 | | 73-119 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 98 | | 72-126 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 95 | | 76-123 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 101 | | 72-128 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 112 | | 76-138 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 76-126 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 87 | | 72-131 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 102 | | 73-128 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 109 | | 78-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 103 | | 62-125 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 105 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 72-138 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 91 | | 75-130 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 55-132 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 103 | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 91 | | 69-125 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 97 | | 78-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 90 | | 59-125 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 131160002A | Sample number(s): 7029644-7029646 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 81 | 81 | 36-106 | 0 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 99 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 103 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131140009A | Sample number(s): 7029644-7029646 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 94 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 55* | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 74 | | 49-107 | | |
| Batch number: 131150637001 | Sample number(s): 7029644-7029646 | | | | | | | | | |
| Aluminum | 10.3 | J | 40.0 | 7.71 | mg/kg | 105 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 105 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 104 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384434
Reported: 05/02/13 at 02:25 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 1.62 | J | 10.0 | 0.830 | mg/kg | 100 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |
| Calcium | 25.6 | | 20.0 | 4.02 | mg/kg | 107 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 103 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 101 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 104 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 101 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 106 | | 80-120 | | |
| Phosphorus | 1.45 | J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.45 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 102 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 102 | | 80-120 | | |
| Batch number: 131150637001A | Sample number(s): 7029644-7029646 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 100 | | 80-120 | | |
| Strontium | 0.179 | J | 0.400 | 0.0340 | mg/kg | 98 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 111 | | 80-120 | | |
| Batch number: 131150637001B | Sample number(s): 7029644-7029646 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 98 | | 80-120 | | |
| Batch number: 131150638001 | Sample number(s): 7029644-7029646 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0103 | mg/kg | 111 | | 85-120 | | |
| Batch number: 13112039401A | Sample number(s): 7029644-7029646 | | | | | | | | | |
| 15a pH by 9045C | | | | | | 100 | | 95-105 | | |
| Batch number: 13112162401B | Sample number(s): 7029644-7029646 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13114001 | Sample number(s): 7029644-7029646 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0193 | ng/kg | 90 | | 67-158 | | |
| 12378-PeCDD | 0.0221 | J | 5.00 | 0.0168 | ng/kg | 92 | | 70-142 | | |
| 123478-HxCDD | 0.0132 | J | 5.00 | 0.0107 | ng/kg | 99 | | 70-164 | | |
| 123678-HxCDD | 5.00 | U | 5.00 | 0.0113 | ng/kg | 96 | | 76-134 | | |
| 123789-HxCDD | 0.0184 | J | 5.00 | 0.0111 | ng/kg | 98 | | 64-162 | | |
| 1234678-HpCDD | 0.0680 | J | 5.00 | 0.0123 | ng/kg | 95 | | 70-140 | | |
| OCDD | 0.148 | J | 10.0 | 0.0153 | ng/kg | 96 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0176 | ng/kg | 94 | | 75-158 | | |
| 12378-PeCDF | 0.0555 | J | 5.00 | 0.00908 | ng/kg | 96 | | 80-134 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384434
Reported: 05/02/13 at 02:25 PM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 23478-PeCDF | 0.0295 J | 5.00 | 0.00879 | ng/kg | 96 | | 68-160 | | |
| 123478-HxCDF | 0.0510 J | 5.00 | 0.0109 | ng/kg | 99 | | 72-134 | | |
| 123678-HxCDF | 0.0214 J | 5.00 | 0.0102 | ng/kg | 97 | | 84-130 | | |
| 123789-HxCDF | 0.0300 J | 5.00 | 0.0125 | ng/kg | 99 | | 78-130 | | |
| 234678-HxCDF | 0.0286 J | 5.00 | 0.0105 | ng/kg | 98 | | 70-156 | | |
| 1234678-HpCDF | 0.0378 J | 5.00 | 0.00650 | ng/kg | 97 | | 82-122 | | |
| 1234789-HpCDF | 0.0182 J | 5.00 | 0.00892 | ng/kg | 98 | | 78-138 | | |
| OCDF | 0.0895 J | 10.0 | 0.0198 | ng/kg | 96 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00357 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13115SLD026 | Sample number(s): 7029644-7029646 UNSPK: P031213 | | | | | | | | |
| Acenaphthene | 100 | 103 | 48-127 | 3 | 30 | | | | |
| Acenaphthylene | 95 | 98 | 49-121 | 3 | 30 | | | | |
| Anthracene | 95 | 99 | 52-126 | 4 | 30 | | | | |
| Benzo(a)anthracene | 96 | 102 | 32-135 | 5 | 30 | | | | |
| Benzo(a)pyrene | 100 | 105 | 36-138 | 5 | 30 | | | | |
| Benzo(b)fluoranthene | 107 | 113 | 26-142 | 5 | 30 | | | | |
| Benzo(e)pyrene | 97 | 102 | 70-130 | 5 | 30 | | | | |
| Benzo(g,h,i)perylene | 63 | 73 | 33-141 | 13 | 30 | | | | |
| Benzo(k)fluoranthene | 87 | 87 | 47-129 | 0 | 30 | | | | |
| Butylbenzylphthalate | 130 | 121 | 59-153 | 7 | 30 | | | | |
| Di-n-butylphthalate | 105 | 109 | 62-154 | 4 | 30 | | | | |
| Chrysene | 92 | 97 | 29-148 | 5 | 30 | | | | |
| Dibenz(a,h)anthracene | 83 | 91 | 34-125 | 9 | 30 | | | | |
| Diethylphthalate | 96 | 101 | 76-127 | 5 | 30 | | | | |
| Dimethylphthalate | 93 | 96 | 62-136 | 2 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 111 | 125 | 39-167 | 10 | 30 | | | | |
| Fluoranthene | 91 | 95 | 47-135 | 4 | 30 | | | | |
| Fluorene | 98 | 99 | 50-129 | 2 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 72 | 81 | 17-136 | 10 | 30 | | | | |
| 1-Methylnaphthalene | 104 | 104 | 50-131 | 0 | 30 | | | | |
| 2-Methylnaphthalene | 105 | 106 | 28-144 | 0 | 30 | | | | |
| Naphthalene | 102 | 101 | 31-148 | 1 | 30 | | | | |
| N-Nitrosodimethylamine | 131* | 135* | 48-113 | 3 | 30 | | | | |
| Di-n-octylphthalate | 138 | 129 | 52-162 | 6 | 30 | | | | |
| Phenanthrene | 97 | 96 | 29-142 | 0 | 30 | | | | |
| Pyrene | 88 | 93 | 26-143 | 5 | 30 | | | | |
| Batch number: 131130011A | Sample number(s): 7029646 UNSPK: P031213 | | | | | | | | |
| Aldrin | 84 | 81 | 16-126 | 3 | 50 | | | | |
| Alpha BHC | 79 | 83 | 14-140 | 5 | 50 | | | | |
| Beta BHC | 77 | 82 | 10-173 | 6 | 50 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384434
Reported: 05/02/13 at 02:25 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Gamma BHC - Lindane | 80 | 86 | 30-137 | 8 | 50 | | | | |
| p,p-DDD | 93 | 91 | 43-149 | 2 | 50 | | | | |
| p,p-DDE | 88 | 85 | 18-161 | 3 | 50 | | | | |
| p,p-DDT | 92 | 105 | 12-193 | 12 | 50 | | | | |
| Delta BHC | 90 | 92 | 13-153 | 2 | 50 | | | | |
| Dieldrin | 98 | 88 | 19-154 | 11 | 50 | | | | |
| Endosulfan I | 88 | 80 | 16-137 | 9 | 50 | | | | |
| Endosulfan II | 80 | 81 | 10-156 | 1 | 50 | | | | |
| Endosulfan Sulfate | 86 | 84 | 10-181 | 2 | 50 | | | | |
| Endrin | 88 | 87 | 30-152 | 2 | 50 | | | | |
| Endrin Aldehyde | 92 | 87 | 10-152 | 6 | 35 | | | | |
| Endrin Ketone | 57 | 54 | 10-160 | 5 | 50 | | | | |
| Heptachlor | 83 | 81 | 16-152 | 1 | 50 | | | | |
| Heptachlor Epoxide | 87 | 93 | 17-167 | 7 | 50 | | | | |
| Methoxychlor | 79 | 87 | 34-168 | 10 | 50 | | | | |
| Batch number: 131160002A | Sample number(s): 7029644-7029646 UNSPK: P031213 | | | | | | | | |
| PCB-1016 | 108 | 102 | 16-146 | 6 | 50 | | | | |
| PCB-1260 | 114 | 102 | 40-134 | 11 | 50 | | | | |
| Batch number: 131140009A | Sample number(s): 7029644-7029646 UNSPK: P031213 | | | | | | | | |
| EFH (C12-C14) | 99 | 91 | 49-123 | 8 | 20 | | | | |
| EFH (C15-C20) | 124* | 137* | 49-123 | 10 | 20 | | | | |
| EFH (C21-C30) | 127* | 182* | 49-123 | 18 | 20 | | | | |
| EFH (C30-C40) | 203 (2) | 296 (2) | 49-123 | 14 | 20 | | | | |
| EFH (C8-C11) | 106 | 95 | 49-123 | 11 | 20 | | | | |
| Batch number: 131150637001 | Sample number(s): 7029644-7029646 UNSPK: P031213 BKG: P031213 | | | | | | | | |
| Aluminum | 2585 (2) | 2282 (2) | 75-125 | 3 | 20 | 13,100 | 14,600 | 11 | 20 |
| Antimony | 67* | 64* | 75-125 | 4 | 20 | 3.96 U | 0.540 J | 200* (1) | 20 |
| Arsenic | 95 | 105 | 75-125 | 7 | 20 | 4.95 | 5.12 | 3 (1) | 20 |
| Barium | 104 | 106 | 75-125 | 1 | 20 | 70.7 | 77.9 | 10 | 20 |
| Beryllium | 106 | 104 | 75-125 | 1 | 20 | 0.522 J | 0.579 J | 10 (1) | 20 |
| Boron | 101 | 100 | 75-125 | 1 | 20 | 5.72 J | 7.99 J | 33* (1) | 20 |
| Cadmium | 97 | 98 | 75-125 | 1 | 20 | 0.116 J | 0.138 J | 17 (1) | 20 |
| Calcium | 140 (2) | 198 (2) | 75-125 | 7 | 20 | 2,840 | 3,060 | 8 | 20 |
| Chromium | 107 | 104 | 75-125 | 2 | 20 | 19.7 | 20.4 | 3 | 20 |
| Cobalt | 100 | 100 | 75-125 | 0 | 20 | 4.62 | 5.28 | 13 (1) | 20 |
| Copper | 111 | 110 | 75-125 | 0 | 20 | 12.4 | 13.2 | 7 | 20 |
| Iron | 3126 (2) | 2463 (2) | 75-125 | 3 | 20 | 21,800 | 23,500 | 7 | 20 |
| Lead | 104 | 185* | 75-125 | 24* | 20 | 28.1 | 43.6 | 43* | 20 |
| Lithium | 103 | 101 | 75-125 | 1 | 20 | 25.6 | 25.7 | 0 | 20 |
| Magnesium | 249 (2) | 221 (2) | 75-125 | 1 | 20 | 5,100 | 5,180 | 2 | 20 |
| Manganese | 145 (2) | 132 (2) | 75-125 | 2 | 20 | 266 | 298 | 11 | 20 |
| Molybdenum | 99 | 99 | 75-125 | 0 | 20 | 0.291 J | 0.314 J | 8 (1) | 20 |
| Nickel | 103 | 101 | 75-125 | 1 | 20 | 10.5 | 11.2 | 6 | 20 |
| Phosphorus | 78 (2) | 113 (2) | 75-125 | 7 | 20 | 420 | 439 | 4 | 20 |
| Potassium | 140* | 137* | 75-125 | 1 | 20 | 3,350 | 3,630 | 8 | 20 |
| Sodium | 99 | 98 | 75-125 | 1 | 20 | 73.1 J | 77.5 J | 6 (1) | 20 |
| Tin | 94 | 95 | 75-125 | 1 | 20 | 3.02 J | 3.24 J | 7 (1) | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384434
Reported: 05/02/13 at 02:25 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Titanium | 359 (2) | 334 (2) | 75-125 | 2 | 20 | 1,120 | 1,230 | 9 | 20 |
| Vanadium | 114 | 112 | 75-125 | 1 | 20 | 35.4 | 39.1 | 10 | 20 |
| Zinc | 106 | 106 | 75-125 | 0 | 20 | 60.1 | 62.1 | 3 | 20 |
| Zirconium | 99 | 98 | 75-125 | 1 | 20 | 2.43 J | 2.76 J | 13 (1) | 20 |
| Batch number: 131150637001A | Sample number(s): 7029644-7029646 UNSPK: P031213 BKG: P031213 | | | | | | | | |
| Silver | 96 | 98 | 75-125 | 2 | 20 | 0.0269 J | 0.0419 J | 44* (1) | 20 |
| Strontium | 69* | 75 | 75-125 | 3 | 20 | 12.7 | 13.0 | 2 | 20 |
| Thallium | 87 | 90 | 75-125 | 2 | 20 | 0.272 | 0.264 | 3 (1) | 20 |
| Batch number: 131150637001B | Sample number(s): 7029644-7029646 UNSPK: P031213 BKG: P031213 | | | | | | | | |
| Selenium | 95 | 90 | 75-125 | 5 | 20 | 0.396 U | 0.396 U | 0 (1) | 20 |
| Batch number: 131150638001 | Sample number(s): 7029644-7029646 UNSPK: P031213 BKG: P031213 | | | | | | | | |
| 3a Mercury 7471A | 105 | 104 | 65-135 | 2 | 20 | 0.0161 | 0.0142 J | 13 (1) | 20 |
| Batch number: 13112039401A | Sample number(s): 7029644-7029646 BKG: 7029646 | | | | | | | | |
| 15a pH by 9045C | | | | | | 7.34 | 7.32 | 0 | 3 |
| Batch number: 13112162401B | Sample number(s): 7029644-7029646 BKG: P024684 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.2 | 3.4 | 7 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13115SLD026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7029644 | 105 | 107 | 105 |
| 7029645 | 97 | 113 | 102 |
| 7029646 | 101 | 97 | 100 |
| Blank | 90 | 108 | 103 |
| LCS | 94 | 111 | 105 |
| MS | 93 | 107 | 102 |
| MSD | 97 | 109 | 102 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 131120022A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7029647 | 93 | 86 |
| Blank | 93 | 80 |
| LCS | 85 | 66 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384434
Reported: 05/02/13 at 02:25 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| LCSD | 94 | 84 |
| Limits: | 60-140 | 20-120 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 131130011A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7029646 | 82 | 110 |
| Blank | 89 | 107 |
| LCS | 91 | 113 |
| MS | 77 | 88 |
| MSD | 82 | 85 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131160002A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7029644 | 108 | 119 |
| 7029645 | 118 | 112 |
| 7029646 | 106 | 100 |
| Blank | 121* | 104 |
| LCS | 120 | 108 |
| LCSD | 128* | 120 |
| MS | 127* | 112 |
| MSD | 119 | 106 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131140009A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7029644 | 96 | 91 |
| 7029645 | 91 | 94 |
| 7029646 | 95 | 93 |
| Blank | 87 | 77 |
| LCS | 91 | 91 |
| MS | 95 | 96 |
| MSD | 88 | 89 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13114001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7029644 | 82 | 76 | 83 | 83 | 81 | 88 |
| 7029645 | 74 | 71 | 78 | 82 | 78 | 78 |
| 7029646 | 76 | 68 | 77 | 80 | 78 | 77 |
| Blank | 74 | 74 | 82 | 86 | 83 | 80 |
| OPR | 68 | 69 | 77 | 81 | 78 | 77 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384434
Reported: 05/02/13 at 02:25 PM

## Surrogate Quality Control

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7029644 | 85 | 80 | 79 | 81 | 83 | 84 |
| 7029645 | 93 | 72 | 69 | 78 | 80 | 84 |
| 7029646 | 88 | 73 | 71 | 74 | 80 | 84 |
| Blank | 96 | 78 | 76 | 79 | 88 | 86 |
| OPR | 89 | 70 | 68 | 75 | 79 | 81 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7029644 | 89 | 83 | 80 | 74 | 75 |
| 7029645 | 88 | 81 | 78 | 66 | 74 |
| 7029646 | 87 | 80 | 82 | 68 | 72 |
| Blank | 86 | 87 | 84 | 65 | 74 |
| OPR | 79 | 78 | 75 | 61 | 70 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct#13013 Op#1384434 Sample# 7029644-47

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/19/2013
CarrierName: FedEx
AirbillNo: 7995 7103 4032

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130419-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-518-SA7-SB-0.0-0.5 | 4/19/13 08:50 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-518-SA7-SB-0.0-0.5 | 4/19/13 08:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-520-SA7-SB-0.0-0.5 | 4/19/13 09:50 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-520-SA7-SB-0.0-0.5 | 4/19/13 09:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-511-SA7-SB-0.0-0.5 | 4/19/13 11:05 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | X | | | X | | | | | | | | | | | |
| SL-511-SA7-SB-0.0-0.5 | 4/19/13 11:05 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB-041913 | 4/19/13 13:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Steven Mercer

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Catz | 4/19/13 | | | | | | | | | | |
| | | | | | | | | | Pat Gh | 4/20/13 | 0920 |

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C# 1384434

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** CDM Smith

**Date of Receipt:** 4/20/13

**Time of Receipt:** 0920

**Source Code:** 50

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present *:** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT121 | 1.7 | TB | WI | Y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** Pat G 3472 **Date/Time:** 4/20/13 1145

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 06, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/23/2013
Group Number: 1384759
SDG: PH036
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| SL-510-SA7-SB-0.0-0.5 Soil | 7031213 |
| SL-510-SA7-SB-0.0-0.5MS Soil | 7031214 |
| SL-510-SA7-SB-0.0-0.5MSD Soil | 7031215 |
| SL-510-SA7-SB-0.0-0.5DUP Soil | 7031216 |
| SL-810-SA7-SB-0.0-0.5 Soil | 7031217 |
| SL-503-SA7-SB-0.0-0.5 Soil | 7031218 |
| SL-504-SA7-SB-0.0-0.5 Soil | 7031219 |
| SL-504-SA7-SB-4.0-5.0 Soil | 7031220 |
| TB-042213 Water | 7031221 |
| SL-517-SA7-SB-0.0-0.5 Soil | 7031222 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-510-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7031213
**LLI Group #** 1384759
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.3 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 5.0 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.4 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 9.4 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.9 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 7.3 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 4.1 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.0 | | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.93 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.9 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.4 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 0.67 | J | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.72 | J | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031213**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | limits. The following corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 17 | J | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 14 | J | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 6.9 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 21 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,600 | | 41.1 | 7.93 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.11 | U | 4.11 | 0.514 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.14 | | 4.11 | 0.339 | 1 |
| 06946 | Barium | 7440-39-3 | 73.5 | | 1.03 | 0.0339 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.542 | J | 1.03 | 0.0689 | 1 |
| 07914 | Boron | 7440-42-8 | 5.94 | J | 10.3 | 0.853 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.120 | J | 1.03 | 0.0339 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,950 | | 20.6 | 4.13 | 1 |
| 06951 | Chromium | 7440-47-3 | 20.4 | | 3.08 | 0.0905 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.80 | | 1.03 | 0.0925 | 1 |
| 06953 | Copper | 7440-50-8 | 12.8 | | 2.06 | 0.185 | 1 |
| 01654 | Iron | 7439-89-6 | 22,600 | | 41.1 | 3.91 | 1 |
| 06955 | Lead | 7439-92-1 | 29.2 | | 3.08 | 0.483 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.6 | | 4.1 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,300 | | 10.3 | 1.78 | 1 |
| 06958 | Manganese | 7439-96-5 | 276 | | 1.03 | 0.0853 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.302 | J | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.9 | | 2.06 | 0.113 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 436 | | 10.3 | 0.524 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,480 | | 103 | 13.9 | 1 |
| 01667 | Sodium | 7440-23-5 | 75.9 | J | 103 | 17.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-510-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7031213**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06969 | Tin | 7440-31-5 | 3.14 | J | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,170 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.7 | | 1.03 | 0.113 | 1 |
| 06972 | Zinc | 7440-66-6 | 62.4 | | 4.11 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.52 | J | 5.14 | 0.853 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.411 | U | 0.411 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0279 | J | 0.206 | 0.0206 | 2 |
| 06144 | Strontium | 7440-24-6 | 13.2 | | 0.411 | 0.0350 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.283 | | 0.206 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0167 | | 0.0164 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.77 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.5 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.7 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031213**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.999 | U | 0.999 | 0.0212 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.203 | J | 5.00 | 0.0248 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.317 | J | 5.00 | 0.0266 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.925 | J | 5.00 | 0.0266 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.703 | JB | 5.00 | 0.0260 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 23.2 | B | 5.00 | 0.0296 | 1 |
| 11031 | OCDD | 3268-87-9 | 177 | B | 9.99 | 0.0224 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.258 | J | 0.999 | 0.0331 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.591 | JB | 5.00 | 0.0160 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.824 | JB | 5.00 | 0.0159 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 1.97 | JB | 5.00 | 0.0228 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.497 | JB | 5.00 | 0.0210 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.175 | JBQ | 5.00 | 0.0249 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.478 | JB | 5.00 | 0.0225 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 4.70 | JB | 5.00 | 0.0174 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.416 | JB | 5.00 | 0.0267 | 1 |
| 11031 | OCDF | 39001-02-0 | 10.9 | B | 9.99 | 0.0227 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.32 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 79 | 25 - 164 |
| 13C12-12378-PeCDD | 82 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 84 | 23 - 140 |
| 13C12-OCDD | 83 | 17 - 157 |
| 13C12-2378-TCDF | 78 | 24 - 169 |
| 13C12-12378-PeCDF | 85 | 24 - 185 |
| 13C12-23478-PeCDF | 81 | 21 - 178 |
| 13C12-123478-HxCDF | 90 | 26 - 152 |
| 13C12-123678-HxCDF | 94 | 26 - 123 |
| 13C12-234678-HxCDF | 89 | 28 - 136 |
| 13C12-123789-HxCDF | 91 | 29 - 147 |
| 13C12-1234678-HpCDF | 106 | 28 - 143 |
| 13C12-1234789-HpCDF | 79 | 26 - 138 |
| 13C12-OCDF | 75 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031213**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031213**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01BKG

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 04/30/2013 09:17 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131130011A | 04/27/2013 13:57 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131130012A | 04/27/2013 01:48 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131130012A | 04/23/2013 18:00 | Sally L Appleyard | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 2 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131130011A | 04/23/2013 18:10 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 07:25 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/01/2013 20:01 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031213**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:26 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 08:26 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:26 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:26 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:26 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 08:55 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13113039401A | 04/23/2013 20:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031214**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 35 | | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 33 | | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 33 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 35 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 36 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 42 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 34 | | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 23 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 39 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 45 | | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 36 | | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 35 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 29 | | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 33 | | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 32 | | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 46 | | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 36 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 34 | | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 27 | | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 36 | | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 36 | | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 36 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 45 | | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 48 | | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 35 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 34 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 2.9 | | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 2.8 | | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.7 | | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 2.8 | | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 6.5 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 6.8 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 7.5 | | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.2 | | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 6.9 | | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 3.1 | | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 5.6 | | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 6.0 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 6.2 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 6.7 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 4.0 | | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 2.9 | | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.0 | | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 29 | | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031214**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | limits. The following corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 16 | J | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 170 | | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 79 | | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 170 | | 18 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.2 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 12 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 32 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 18,900 | | 41.1 | 7.93 | 1 |
| 06944 | Antimony | 7440-36-0 | 34.4 | | 4.11 | 0.514 | 1 |
| 06935 | Arsenic | 7440-38-2 | 19.8 | | 4.11 | 0.339 | 1 |
| 06946 | Barium | 7440-39-3 | 288 | | 1.03 | 0.0339 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.97 | | 1.03 | 0.0689 | 1 |
| 07914 | Boron | 7440-42-8 | 213 | | 10.3 | 0.853 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.12 | | 1.03 | 0.0339 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,520 | | 20.6 | 4.13 | 1 |
| 06951 | Chromium | 7440-47-3 | 42.4 | | 3.08 | 0.0905 | 1 |
| 06952 | Cobalt | 7440-48-4 | 56.3 | | 1.03 | 0.0925 | 1 |
| 06953 | Copper | 7440-50-8 | 41.3 | | 2.06 | 0.185 | 1 |
| 01654 | Iron | 7439-89-6 | 25,900 | | 41.1 | 3.91 | 1 |
| 06955 | Lead | 7439-92-1 | 45.3 | | 3.08 | 0.483 | 1 |
| 01656 | Lithium | 7439-93-2 | 132 | | 4.1 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,810 | | 10.3 | 1.78 | 1 |
| 06958 | Manganese | 7439-96-5 | 351 | | 1.03 | 0.0853 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 203 | | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 63.7 | | 2.06 | 0.113 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 516 | | 10.3 | 0.524 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,920 | | 103 | 13.9 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,090 | | 103 | 17.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031214**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06969 | Tin | 7440-31-5 | 391 | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,540 | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 95.3 | 1.03 | 0.113 | 1 |
| 06972 | Zinc | 7440-66-6 | 117 | 4.11 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 104 | 5.14 | 0.853 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 1.94 | 0.411 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 9.88 | 0.206 | 0.0206 | 2 |
| 06144 | Strontium | 7440-24-6 | 18.8 | 0.411 | 0.0350 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.640 | 0.206 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.193 | 0.0168 | 0.0104 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 3.7 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-510-SA7-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7031214**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 18.4 | | 1.00 | 0.0312 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 96.9 | | 5.02 | 0.0384 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 102 | | 5.02 | 0.0362 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 99.4 | | 5.02 | 0.0383 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 101 | B | 5.02 | 0.0366 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 119 | B | 5.02 | 0.0359 | 1 |
| 11031 | OCDD | 3268-87-9 | 377 | B | 10.0 | 0.0321 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.0 | | 1.00 | 0.0402 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 99.4 | B | 5.02 | 0.0230 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 101 | B | 5.02 | 0.0230 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 105 | B | 5.02 | 0.0447 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 100 | B | 5.02 | 0.0409 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 103 | B | 5.02 | 0.0507 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 101 | B | 5.02 | 0.0448 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 104 | B | 5.02 | 0.0292 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 100 | B | 5.02 | 0.0446 | 1 |
| 11031 | OCDF | 39001-02-0 | 212 | B | 10.0 | 0.0326 | 1 |

| **Labeled Compounds** | **%Rec** | **Windows** |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 86 | 23 - 140 |
| 13C12-OCDD | 82 | 17 - 157 |
| 13C12-2378-TCDF | 79 | 24 - 169 |
| 13C12-12378-PeCDF | 88 | 24 - 185 |
| 13C12-23478-PeCDF | 85 | 21 - 178 |
| 13C12-123478-HxCDF | 88 | 26 - 152 |
| 13C12-123678-HxCDF | 93 | 26 - 123 |
| 13C12-234678-HxCDF | 87 | 28 - 136 |
| 13C12-123789-HxCDF | 83 | 29 - 147 |
| 13C12-1234678-HpCDF | 102 | 28 - 143 |
| 13C12-1234789-HpCDF | 80 | 26 - 138 |
| 13C12-OCDF | 77 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031214**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01MS

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 04/30/2013 09:48 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131130011A | 04/27/2013 14:09 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131130012A | 04/27/2013 02:06 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131130012A | 04/23/2013 18:00 | Sally L Appleyard | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 2 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131130011A | 04/23/2013 18:10 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 07:46 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/01/2013 20:58 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031214**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:38 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 08:33 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:33 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:33 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:33 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 09:01 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031215**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 36 | | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 34 | | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 34 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 37 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 38 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 44 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 35 | | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 27 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 40 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 42 | | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 38 | | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 37 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 31 | | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 35 | | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 33 | | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 50 | | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 37 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 34 | | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 30 | | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 36 | | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 37 | | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 36 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 47 | | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 45 | | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 35 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 35 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 2.8 | | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 2.9 | | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.9 | | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 3.1 | | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 6.4 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 6.6 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 8.5 | | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.2 | | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 6.2 | | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 2.8 | | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 5.7 | | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 5.8 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 6.1 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 6.3 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 3.8 | | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 2.9 | | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.3 | | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 32 | | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031215**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | limits. The following corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 170 | | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 65 | | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 170 | | 18 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.6 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 15 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 37 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 18,200 | | 41.1 | 7.93 | 1 |
| 06944 | Antimony | 7440-36-0 | 33.0 | | 4.11 | 0.514 | 1 |
| 06935 | Arsenic | 7440-38-2 | 21.3 | | 4.11 | 0.339 | 1 |
| 06946 | Barium | 7440-39-3 | 291 | | 1.03 | 0.0339 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.89 | | 1.03 | 0.0689 | 1 |
| 07914 | Boron | 7440-42-8 | 212 | | 10.3 | 0.853 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.18 | | 1.03 | 0.0339 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,760 | | 20.6 | 4.13 | 1 |
| 06951 | Chromium | 7440-47-3 | 41.7 | | 3.08 | 0.0905 | 1 |
| 06952 | Cobalt | 7440-48-4 | 56.2 | | 1.03 | 0.0925 | 1 |
| 06953 | Copper | 7440-50-8 | 41.2 | | 2.06 | 0.185 | 1 |
| 01654 | Iron | 7439-89-6 | 25,200 | | 41.1 | 3.91 | 1 |
| 06955 | Lead | 7439-92-1 | 57.8 | | 3.08 | 0.483 | 1 |
| 01656 | Lithium | 7439-93-2 | 131 | | 4.1 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,750 | | 10.3 | 1.78 | 1 |
| 06958 | Manganese | 7439-96-5 | 344 | | 1.03 | 0.0853 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 203 | | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 62.9 | | 2.06 | 0.113 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 552 | | 10.3 | 0.524 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,890 | | 103 | 13.9 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,090 | | 103 | 17.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031215**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06969 | Tin | 7440-31-5 | 394 | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,510 | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 94.1 | 1.03 | 0.113 | 1 |
| 06972 | Zinc | 7440-66-6 | 117 | 4.11 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 103 | 5.14 | 0.853 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 1.86 | 0.411 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 10.1 | 0.206 | 0.0206 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.3 | 0.411 | 0.0350 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.654 | 0.206 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.189 | 0.0166 | 0.0103 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 3.7 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-510-SA7-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7031215**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 18.9 | | 1.03 | 0.0341 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 99.3 | | 5.14 | 0.0413 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 103 | | 5.14 | 0.0431 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 103 | | 5.14 | 0.0430 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 103 | B | 5.14 | 0.0412 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 127 | B | 5.14 | 0.0467 | 1 |
| 11031 | OCDD | 3268-87-9 | 464 | B | 10.3 | 0.0343 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.3 | | 1.03 | 0.0460 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 101 | B | 5.14 | 0.0308 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 103 | B | 5.14 | 0.0294 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 106 | B | 5.14 | 0.0495 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 102 | B | 5.14 | 0.0475 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 103 | B | 5.14 | 0.0542 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 102 | B | 5.14 | 0.0470 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 106 | B | 5.14 | 0.0339 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 103 | B | 5.14 | 0.0484 | 1 |
| 11031 | OCDF | 39001-02-0 | 219 | B | 10.3 | 0.0366 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 84 | 25 - 181 |
| 13C12-123478-HxCDD | 88 | 32 - 141 |
| 13C12-123678-HxCDD | 92 | 28 - 130 |
| 13C12-123789-HxCDD | 88 | 28 - 130 |
| 13C12-1234678-HpCDD | 87 | 23 - 140 |
| 13C12-OCDD | 86 | 17 - 157 |
| 13C12-2378-TCDF | 78 | 24 - 169 |
| 13C12-12378-PeCDF | 86 | 24 - 185 |
| 13C12-23478-PeCDF | 84 | 21 - 178 |
| 13C12-123478-HxCDF | 89 | 26 - 152 |
| 13C12-123678-HxCDF | 94 | 26 - 123 |
| 13C12-234678-HxCDF | 90 | 28 - 136 |
| 13C12-123789-HxCDF | 88 | 29 - 147 |
| 13C12-1234678-HpCDF | 103 | 28 - 143 |
| 13C12-1234789-HpCDF | 83 | 26 - 138 |
| 13C12-OCDF | 80 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031215**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01MSD

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 04/30/2013 10:19 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131130011A | 04/27/2013 14:21 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131130012A | 04/27/2013 02:25 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131130012A | 04/23/2013 18:00 | Sally L Appleyard | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 2 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131130011A | 04/23/2013 18:10 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 08:07 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/01/2013 21:54 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031215**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:42 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 08:35 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:35 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:35 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:35 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 09:03 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031216**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,100 | | 41.1 | 7.93 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.560 | J | 4.11 | 0.514 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.32 | | 4.11 | 0.339 | 1 |
| 06946 | Barium | 7440-39-3 | 80.8 | | 1.03 | 0.0339 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.601 | J | 1.03 | 0.0689 | 1 |
| 07914 | Boron | 7440-42-8 | 8.30 | J | 10.3 | 0.853 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.143 | J | 1.03 | 0.0339 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,180 | | 20.6 | 4.13 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.1 | | 3.08 | 0.0905 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.48 | | 1.03 | 0.0925 | 1 |
| 06953 | Copper | 7440-50-8 | 13.8 | | 2.06 | 0.185 | 1 |
| 01654 | Iron | 7439-89-6 | 24,400 | | 41.1 | 3.91 | 1 |
| 06955 | Lead | 7439-92-1 | 45.3 | | 3.08 | 0.483 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.7 | | 4.1 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,380 | | 10.3 | 1.78 | 1 |
| 06958 | Manganese | 7439-96-5 | 309 | | 1.03 | 0.0853 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.326 | J | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.6 | | 2.06 | 0.113 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 455 | | 10.3 | 0.524 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,760 | | 103 | 13.9 | 1 |
| 01667 | Sodium | 7440-23-5 | 80.5 | J | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 3.36 | J | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,280 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.6 | | 1.03 | 0.113 | 1 |
| 06972 | Zinc | 7440-66-6 | 64.5 | | 4.11 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.87 | J | 5.14 | 0.853 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.411 | U | 0.411 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0435 | J | 0.206 | 0.0206 | 2 |
| 06144 | Strontium | 7440-24-6 | 13.5 | | 0.411 | 0.0350 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.275 | | 0.206 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0147 | J | 0.0167 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.84 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.7 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 3.7 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 3.6 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-SA7-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031216**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH036-01DUP

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 18:34 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 08:31 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:31 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:31 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 08:31 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 08:59 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13113039401A | 04/23/2013 20:00 | Luz M Groff | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-810-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031217**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

81000 SDG#: PH036-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.74 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.0 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.4 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.83 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 8.5 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.9 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 76 | | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.1 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 0.69 | J | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.69 | J | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.2 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.3 | J | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.4 | J | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.59 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance

*=This limit was used in the evaluation of the final result

**Sample Description: SL-810-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031217**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

81000 SDG#: PH036-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | limits. The following corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported. Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 32 | J | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 25 | | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 13 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 39 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,600 | | 40.8 | 7.87 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.940 | J | 4.08 | 0.510 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.19 | | 4.08 | 0.337 | 1 |
| 06946 | Barium | 7440-39-3 | 74.3 | | 1.02 | 0.0337 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.589 | J | 1.02 | 0.0684 | 1 |
| 07914 | Boron | 7440-42-8 | 2.59 | J | 10.2 | 0.847 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.0868 | J | 1.02 | 0.0337 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,670 | | 20.4 | 4.10 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.7 | | 3.06 | 0.0898 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.14 | | 1.02 | 0.0919 | 1 |
| 06953 | Copper | 7440-50-8 | 13.2 | | 2.04 | 0.184 | 1 |
| 01654 | Iron | 7439-89-6 | 24,100 | | 40.8 | 3.88 | 1 |
| 06955 | Lead | 7439-92-1 | 81.7 | | 3.06 | 0.480 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.9 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,060 | | 10.2 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 299 | | 1.02 | 0.0847 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.290 | J | 2.04 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.5 | | 2.04 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 486 | | 10.2 | 0.521 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-810-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031217**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

81000 SDG#: PH036-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01662 | Potassium | 7440-09-7 | 4,010 | | 102 | 13.8 | 1 |
| 01667 | Sodium | 7440-23-5 | 73.3 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 3.05 | J | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,190 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 38.6 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 69.1 | | 4.08 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.72 | J | 5.10 | 0.847 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.144 | J | 0.408 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0404 | J | 0.204 | 0.0204 | 2 |
| 06144 | Strontium | 7440-24-6 | 11.4 | | 0.408 | 0.0347 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.211 | | 0.204 | 0.0306 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0219 | | 0.0168 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.68 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.0 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-810-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031217**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

81000 SDG#: PH036-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.994 | U | 0.994 | 0.0259 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.135 | JQ | 4.97 | 0.0284 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.357 | JQ | 4.97 | 0.0388 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.790 | J | 4.97 | 0.0407 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.622 | JB | 4.97 | 0.0375 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 22.3 | B | 4.97 | 0.0368 | 1 |
| 11031 | OCDD | 3268-87-9 | 171 | B | 9.94 | 0.0294 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.249 | JQ | 0.994 | 0.0395 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.591 | JB | 4.97 | 0.0200 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.375 | JB | 4.97 | 0.0194 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.435 | JB | 4.97 | 0.0270 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.267 | JB | 4.97 | 0.0249 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.111 | JB | 4.97 | 0.0300 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.315 | JB | 4.97 | 0.0270 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 4.40 | JB | 4.97 | 0.0240 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.396 | JB | 4.97 | 0.0369 | 1 |
| 11031 | OCDF | 39001-02-0 | 11.8 | B | 9.94 | 0.0259 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.710 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 76 | 25 - 164 |
| 13C12-12378-PeCDD | 81 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 84 | 23 - 140 |
| 13C12-OCDD | 83 | 17 - 157 |
| 13C12-2378-TCDF | 75 | 24 - 169 |
| 13C12-12378-PeCDF | 82 | 24 - 185 |
| 13C12-23478-PeCDF | 79 | 21 - 178 |
| 13C12-123478-HxCDF | 87 | 26 - 152 |
| 13C12-123678-HxCDF | 91 | 26 - 123 |
| 13C12-234678-HxCDF | 86 | 28 - 136 |
| 13C12-123789-HxCDF | 84 | 29 - 147 |
| 13C12-1234678-HpCDF | 104 | 28 - 143 |
| 13C12-1234789-HpCDF | 77 | 26 - 138 |
| 13C12-OCDF | 74 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-810-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031217**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

81000 SDG#: PH036-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-810-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031217**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

81000 SDG#: PH036-02

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 04/30/2013 12:25 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131130011A | 04/27/2013 14:33 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 07:20 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 2 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131130011A | 04/23/2013 18:10 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 09:29 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/01/2013 22:51 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-810-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031217**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

81000 SDG#: PH036-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 19:58 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 09:25 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:25 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:25 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:25 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 09:09 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13113039401A | 04/23/2013 20:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-503-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031218**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 10:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50300 SDG#: PH036-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.45 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.3 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.2 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.92 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 5.3 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 4.0 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 8.4 | J | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 4.4 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.77 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.6 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 8.7 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 5.6 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.9 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.83 | J | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance

*=This limit was used in the evaluation of the final result

**Sample Description: SL-503-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031218**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 10:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50300 SDG#: PH036-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | limits. The following corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 16 | J | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 11 | J | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.3 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 13 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 48 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,100 | | 40.5 | 7.81 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.05 | U | 4.05 | 0.507 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.97 | | 4.05 | 0.334 | 1 |
| 06946 | Barium | 7440-39-3 | 103 | | 1.01 | 0.0334 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.454 | J | 1.01 | 0.0679 | 1 |
| 07914 | Boron | 7440-42-8 | 6.61 | J | 10.1 | 0.841 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.462 | J | 1.01 | 0.0334 | 1 |
| 01650 | Calcium | 7440-70-2 | 7,680 | | 20.3 | 4.07 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.7 | | 3.04 | 0.0892 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.89 | | 1.01 | 0.0912 | 1 |
| 06953 | Copper | 7440-50-8 | 13.4 | | 2.03 | 0.182 | 1 |
| 01654 | Iron | 7439-89-6 | 19,100 | | 40.5 | 3.85 | 1 |
| 06955 | Lead | 7439-92-1 | 23.7 | | 3.04 | 0.476 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.1 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,670 | | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 310 | | 1.01 | 0.0841 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.331 | J | 2.03 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.2 | | 2.03 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 561 | | 10.1 | 0.517 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,420 | | 101 | 13.7 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-503-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7031218**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 10:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50300 SDG#: PH036-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01667 | Sodium | 7440-23-5 | 70.3 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.92 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 926 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 32.2 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 71.9 | | 4.05 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.45 | J | 5.07 | 0.841 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.131 | J | 0.405 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0521 | J | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 37.0 | | 0.405 | 0.0345 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.220 | | 0.203 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0293 | | 0.0162 | 0.0100 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.88 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-503-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7031218**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 10:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50300 SDG#: PH036-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0642 | JQ | 0.998 | 0.0291 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.335 | J | 4.99 | 0.0396 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.442 | J | 4.99 | 0.0245 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.09 | JQ | 4.99 | 0.0246 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.00 | JB | 4.99 | 0.0232 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 25.0 | B | 4.99 | 0.0324 | 1 |
| 11031 | OCDD | 3268-87-9 | 192 | B | 9.98 | 0.0233 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.815 | J | 0.998 | 0.0465 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.856 | JB | 4.99 | 0.0213 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.547 | JB | 4.99 | 0.0206 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.420 | JB | 4.99 | 0.0228 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.402 | JB | 4.99 | 0.0212 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.141 | JB | 4.99 | 0.0241 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.309 | JB | 4.99 | 0.0220 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.35 | JB | 4.99 | 0.0240 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.247 | JB | 4.99 | 0.0357 | 1 |
| 11031 | OCDF | 39001-02-0 | 4.30 | JB | 9.98 | 0.0227 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.21 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 77 | 25 - 164 |
| 13C12-12378-PeCDD | 82 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 83 | 17 - 157 |
| 13C12-2378-TCDF | 74 | 24 - 169 |
| 13C12-12378-PeCDF | 81 | 24 - 185 |
| 13C12-23478-PeCDF | 79 | 21 - 178 |
| 13C12-123478-HxCDF | 85 | 26 - 152 |
| 13C12-123678-HxCDF | 90 | 26 - 123 |
| 13C12-234678-HxCDF | 84 | 28 - 136 |
| 13C12-123789-HxCDF | 84 | 29 - 147 |
| 13C12-1234678-HpCDF | 101 | 28 - 143 |
| 13C12-1234789-HpCDF | 76 | 26 - 138 |
| 13C12-OCDF | 73 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-503-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031218**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 10:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50300 SDG#: PH036-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-503-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031218**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 10:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50300 SDG#: PH036-03

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 04/30/2013 12:56 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131130011A | 04/27/2013 14:45 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 07:38 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 2 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131130011A | 04/23/2013 18:10 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 08:48 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/01/2013 23:47 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-503-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031218**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 10:45 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50300 SDG#: PH036-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:02 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 09:28 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:28 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:28 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:28 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 09:11 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13113039401A | 04/23/2013 20:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-504-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7031219**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 12:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH036-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 8.7 | J | 17 | 6.9 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 180 | U | 180 | 34 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 52 | | 17 | 6.9 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 190 | U | 190 | 62 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 190 | U | 190 | 62 | 10 |
| 12969 | Chrysene | 218-01-9 | 8.2 | J | 17 | 3.4 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 190 | U | 190 | 62 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 190 | U | 190 | 62 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 190 | U | 190 | 62 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 10 | J | 17 | 6.9 | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | U | 17 | 6.9 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.9 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Naphthalene | 91-20-3 | 17 | U | 17 | 6.9 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 190 | U | 190 | 62 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Pyrene | 129-00-0 | 8.7 | J | 17 | 6.9 | 10 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.9 | U | 1.9 | 1.9 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 5.1 | U | 5.1 | 5.1 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.42 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.40 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.39 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-504-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7031219**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 12:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH036-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | limits. The following corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported. Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 57 | | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 41 | | 18 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 77 | | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 230 | | 52 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 10 | 5 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,200 | | 39.7 | 7.64 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.866 | J | 3.97 | 0.496 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.04 | | 3.97 | 0.327 | 1 |
| 06946 | Barium | 7440-39-3 | 86.9 | | 0.991 | 0.0327 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.515 | J | 0.991 | 0.0664 | 1 |
| 07914 | Boron | 7440-42-8 | 2.39 | J | 9.91 | 0.823 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.239 | J | 0.991 | 0.0327 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,370 | | 19.8 | 3.98 | 1 |
| 06951 | Chromium | 7440-47-3 | 23.7 | | 2.97 | 0.0872 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.25 | | 0.991 | 0.0892 | 1 |
| 06953 | Copper | 7440-50-8 | 14.9 | | 1.98 | 0.178 | 1 |
| 01654 | Iron | 7439-89-6 | 25,100 | | 39.7 | 3.77 | 1 |
| 06955 | Lead | 7439-92-1 | 11.3 | | 2.97 | 0.466 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.6 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,290 | | 9.91 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 287 | | 0.991 | 0.0823 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.279 | J | 1.98 | 0.169 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.8 | | 1.98 | 0.109 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 495 | | 9.91 | 0.506 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,580 | | 99.1 | 13.4 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-504-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7031219**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 12:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH036-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01667 | Sodium | 7440-23-5 | 107 | | 99.1 | 16.6 | 1 |
| 06969 | Tin | 7440-31-5 | 3.18 | J | 9.91 | 0.218 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,200 | | 0.991 | 0.169 | 1 |
| 06971 | Vanadium | 7440-62-2 | 47.8 | | 0.991 | 0.109 | 1 |
| 06972 | Zinc | 7440-66-6 | 115 | | 3.97 | 0.198 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.35 | J | 4.96 | 0.823 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.397 | U | 0.397 | 0.0991 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0222 | J | 0.198 | 0.0198 | 2 |
| 06144 | Strontium | 7440-24-6 | 15.8 | | 0.397 | 0.0337 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.241 | | 0.198 | 0.0297 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0197 | | 0.0166 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.96 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.6 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.0 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-504-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031219**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 12:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH036-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0782 | J | 1.03 | 0.0251 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 1.13 | J | 5.13 | 0.0473 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 3.10 | J | 5.13 | 0.0381 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 7.06 | | 5.13 | 0.0374 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 5.53 | B | 5.13 | 0.0358 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 214 | B | 5.13 | 0.0604 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,470 | B | 10.3 | 0.0410 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 | C | 1.03 | 0.0577 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.35 | JB | 5.13 | 0.0266 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.950 | JB | 5.13 | 0.0248 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 1.49 | JB | 5.13 | 0.0398 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.22 | JB | 5.13 | 0.0383 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.13 | U | 5.13 | 0.0392 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 1.70 | JB | 5.13 | 0.0373 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 36.6 | B | 5.13 | 0.0381 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 2.32 | JB | 5.13 | 0.0471 | 1 |
| 11031 | OCDF | 39001-02-0 | 108 | B | 10.3 | 0.0270 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 6.64 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 84 | 25 - 164 |
| 13C12-12378-PeCDD | 83 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 85 | 23 - 140 |
| 13C12-OCDD | 88 | 17 - 157 |
| 13C12-2378-TCDF | 82 | 24 - 169 |
| 13C12-12378-PeCDF | 83 | 24 - 185 |
| 13C12-23478-PeCDF | 83 | 21 - 178 |
| 13C12-123478-HxCDF | 91 | 26 - 152 |
| 13C12-123678-HxCDF | 91 | 26 - 123 |
| 13C12-234678-HxCDF | 89 | 28 - 136 |
| 13C12-123789-HxCDF | 93 | 29 - 147 |
| 13C12-1234678-HpCDF | 95 | 28 - 143 |
| 13C12-1234789-HpCDF | 87 | 26 - 138 |
| 13C12-OCDF | 88 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-504-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031219**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 12:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH036-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-504-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031219**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 12:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH036-04

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 04/30/2013 13:27 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131130011A | 04/27/2013 14:57 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131130012A | 04/27/2013 02:43 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131130012A | 04/23/2013 18:00 | Sally L Appleyard | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131130011A | 04/23/2013 18:10 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 13:38 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/02/2013 00:44 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-504-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031219**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 12:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH036-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:06 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 09:30 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:30 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:30 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:30 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 09:13 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13113039401A | 04/23/2013 20:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-504-SA7-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7031220**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 13:55 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50445 SDG#: PH036-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.85 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.74 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 12 | | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.2 | | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 6.6 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.3 | J | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 0.86 | J | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.84 | J | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.1 | J | 1.8 | 0.71 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 23.15 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.88 | U | 0.88 | 0.31 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 1.5 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 4.0 | | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.88 | U | 0.88 | 0.48 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.72 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.88 | U | 0.88 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.88 | U | 0.88 | 0.65 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-504-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031220**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 13:55 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50445 SDG#: PH036-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Methoxychlor | 72-43-5 | 7.1 | U | 7.1 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |
| | The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits. The following corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported. Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 13 | J | 35 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 8.3 | J | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 4.7 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 57 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 77 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,700 | | 41.5 | 8.00 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.826 | J | 4.15 | 0.519 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.06 | | 4.15 | 0.342 | 1 |
| 06946 | Barium | 7440-39-3 | 82.5 | | 1.04 | 0.0342 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.657 | J | 1.04 | 0.0695 | 1 |
| 07914 | Boron | 7440-42-8 | 1.56 | J | 10.4 | 0.861 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.0757 | J | 1.04 | 0.0342 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,380 | | 20.7 | 4.17 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.3 | | 3.11 | 0.0913 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.82 | | 1.04 | 0.0934 | 1 |
| 06953 | Copper | 7440-50-8 | 12.4 | | 2.07 | 0.187 | 1 |
| 01654 | Iron | 7439-89-6 | 24,800 | | 41.5 | 3.94 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-504-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031220**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 13:55 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50445 SDG#: PH036-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06955 | Lead | 7439-92-1 | 7.48 | | 3.11 | 0.488 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.4 | | 4.1 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,540 | | 10.4 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 265 | | 1.04 | 0.0861 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.289 | J | 2.07 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.3 | | 2.07 | 0.114 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 339 | | 10.4 | 0.529 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,060 | | 104 | 14.0 | 1 |
| 01667 | Sodium | 7440-23-5 | 98.1 | J | 104 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 3.42 | J | 10.4 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,180 | | 1.04 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 35.4 | | 1.04 | 0.114 | 1 |
| 06972 | Zinc | 7440-66-6 | 62.0 | | 4.15 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.53 | J | 5.19 | 0.861 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.415 | U | 0.415 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0686 | J | 0.207 | 0.0207 | 2 |
| 06144 | Strontium | 7440-24-6 | 16.3 | | 0.415 | 0.0353 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.231 | | 0.207 | 0.0311 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0170 | J | 0.0175 | 0.0108 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.33 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.5 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-504-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031220**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 13:55 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50445 SDG#: PH036-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0195 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.163 | J | 5.20 | 0.0254 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.329 | JQ | 5.20 | 0.0280 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.835 | J | 5.20 | 0.0286 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.755 | JB | 5.20 | 0.0275 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 21.2 | B | 5.20 | 0.0275 | 1 |
| 11031 | OCDD | 3268-87-9 | 153 | B | 10.4 | 0.0222 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.133 | J | 1.04 | 0.0306 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.203 | JBQ | 5.20 | 0.0152 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.187 | JB | 5.20 | 0.0145 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.235 | JBQ | 5.20 | 0.0240 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.206 | JBQ | 5.20 | 0.0232 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.181 | JB | 5.20 | 0.0246 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.255 | JBQ | 5.20 | 0.0227 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 3.96 | JB | 5.20 | 0.0236 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.313 | JBQ | 5.20 | 0.0322 | 1 |
| 11031 | OCDF | 39001-02-0 | 11.1 | B | 10.4 | 0.0227 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.711 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 75 | 25 - 164 |
| 13C12-12378-PeCDD | 78 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 81 | 28 - 130 |
| 13C12-1234678-HpCDD | 82 | 23 - 140 |
| 13C12-OCDD | 81 | 17 - 157 |
| 13C12-2378-TCDF | 71 | 24 - 169 |
| 13C12-12378-PeCDF | 79 | 24 - 185 |
| 13C12-23478-PeCDF | 77 | 21 - 178 |
| 13C12-123478-HxCDF | 84 | 26 - 152 |
| 13C12-123678-HxCDF | 87 | 26 - 123 |
| 13C12-234678-HxCDF | 84 | 28 - 136 |
| 13C12-123789-HxCDF | 87 | 29 - 147 |
| 13C12-1234678-HpCDF | 95 | 28 - 143 |
| 13C12-1234789-HpCDF | 79 | 26 - 138 |
| 13C12-OCDF | 76 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-504-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031220**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 13:55 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50445 SDG#: PH036-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-504-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031220**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 13:55 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50445 SDG#: PH036-05

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 04/30/2013 13:59 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13108A16D | 04/26/2013 18:19 | Laura M Krieger | 23.15 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201311330846 | 04/23/2013 21:20 | Lois E Hiltz | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131130011A | 04/27/2013 15:09 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 07:56 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 2 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131130011A | 04/23/2013 18:10 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 12:57 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/02/2013 01:40 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-504-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031220**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 13:55 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50445 SDG#: PH036-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:10 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 09:40 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:40 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:40 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:40 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 09:15 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13113039401A | 04/23/2013 20:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-042213 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7031221**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 08:00

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

CTB22 SDG#: PH036-06TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13115B20A | 04/26/2013 11:35 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13115B20A | 04/26/2013 11:35 | Catherine J Schwarz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031222**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 14:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51700 SDG#: PH036-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 14 | J | 17 | 6.8 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 170 | U | 170 | 34 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 8.6 | J | 17 | 6.8 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Chrysene | 218-01-9 | 9.1 | J | 17 | 3.4 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 180 | U | 180 | 61 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 150 | J | 180 | 61 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 11 | J | 17 | 6.8 | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | U | 17 | 6.8 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.8 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 13 | J | 17 | 6.8 | 10 |
| 12969 | Naphthalene | 91-20-3 | 8.6 | J | 17 | 6.8 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 180 | U | 180 | 61 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 14 | J | 17 | 6.8 | 10 |
| 12969 | Pyrene | 129-00-0 | 10 | J | 17 | 6.8 | 10 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 170 | U | 170 | 51 | 5 |
| 10592 | Aroclor 5442 | 12642-23-8 | 170 | U | 170 | 51 | 5 |
| 10592 | Aroclor 5460 | 11126-42-4 | 250 | | 170 | 51 | 5 |
| 10592 | PCB-1016 | 12674-11-2 | 87 | U | 87 | 17 | 5 |
| 10592 | PCB-1221 | 11104-28-2 | 87 | U | 87 | 26 | 5 |
| 10592 | PCB-1232 | 11141-16-5 | 87 | U | 87 | 21 | 5 |
| 10592 | PCB-1242 | 53469-21-9 | 87 | U | 87 | 17 | 5 |
| 10592 | PCB-1248 | 12672-29-6 | 87 | U | 87 | 17 | 5 |
| 10592 | PCB-1254 | 11097-69-1 | 87 | U | 87 | 22 | 5 |
| 10592 | PCB-1260 | 11096-82-5 | 280 | | 87 | 20 | 5 |
| 10592 | PCB-1262 | 37324-23-5 | 87 | U | 87 | 17 | 5 |
| 10592 | PCB-1268 | 11100-14-4 | 87 | U | 87 | 17 | 5 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 9.5 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 29 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031222**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 14:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51700 SDG#: PH036-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,500 | | 40.5 | 7.80 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.06 | J | 4.05 | 0.506 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.22 | | 4.05 | 0.334 | 1 |
| 06946 | Barium | 7440-39-3 | 80.8 | | 1.01 | 0.0334 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.510 | J | 1.01 | 0.0678 | 1 |
| 07914 | Boron | 7440-42-8 | 3.35 | J | 10.1 | 0.839 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.399 | J | 1.01 | 0.0334 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,080 | | 20.2 | 4.07 | 1 |
| 06951 | Chromium | 7440-47-3 | 30.2 | | 3.03 | 0.0890 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.57 | | 1.01 | 0.0910 | 1 |
| 06953 | Copper | 7440-50-8 | 15.1 | | 2.02 | 0.182 | 1 |
| 01654 | Iron | 7439-89-6 | 22,300 | | 40.5 | 3.84 | 1 |
| 06955 | Lead | 7439-92-1 | 17.5 | | 3.03 | 0.475 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.3 | | 4.0 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,870 | | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 434 | | 1.01 | 0.0839 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.345 | J | 2.02 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 18.2 | | 2.02 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 460 | | 10.1 | 0.516 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,300 | | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 86.4 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 3.19 | J | 10.1 | 0.222 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,100 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.9 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 94.5 | | 4.05 | 0.202 | 1 |
| 10146 | Zirconium | 7440-67-7 | 12.5 | | 5.06 | 0.839 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.405 | U | 0.405 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0593 | J | 0.202 | 0.0202 | 2 |
| 06144 | Strontium | 7440-24-6 | 16.7 | | 0.405 | 0.0344 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.245 | | 0.202 | 0.0303 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.123 | | 0.0166 | 0.0103 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.67 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.7 C. | | | | | | |
| **Wet Chemistry** | | **EPA 160.3 modified** | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.1 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031222**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 14:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51700 SDG#: PH036-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.126 | J | 1.02 | 0.0248 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.758 | JQ | 5.08 | 0.0555 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.84 | J | 5.08 | 0.0378 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 5.96 | | 5.08 | 0.0393 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 3.72 | JB | 5.08 | 0.0388 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 187 | B | 5.08 | 0.0706 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,350 | B | 10.2 | 0.0489 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 3.69 | C | 1.02 | 0.0728 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 18.0 | B | 5.08 | 0.0332 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 2.93 | JB | 5.08 | 0.0331 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 2.90 | JB | 5.08 | 0.0455 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 4.56 | JB | 5.08 | 0.0434 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.08 | U | 5.08 | 0.0475 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 2.02 | JB | 5.08 | 0.0439 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 30.9 | B | 5.08 | 0.0369 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 1.86 | JB | 5.08 | 0.0435 | 1 |
| 11031 | OCDF | 39001-02-0 | 99.7 | B | 10.2 | 0.0246 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 6.64 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 96 | 25 - 164 |
| 13C12-12378-PeCDD | 93 | 25 - 181 |
| 13C12-123478-HxCDD | 105 | 32 - 141 |
| 13C12-123678-HxCDD | 103 | 28 - 130 |
| 13C12-123789-HxCDD | 103 | 28 - 130 |
| 13C12-1234678-HpCDD | 104 | 23 - 140 |
| 13C12-OCDD | 105 | 17 - 157 |
| 13C12-2378-TCDF | 96 | 24 - 169 |
| 13C12-12378-PeCDF | 96 | 24 - 185 |
| 13C12-23478-PeCDF | 93 | 21 - 178 |
| 13C12-123478-HxCDF | 107 | 26 - 152 |
| 13C12-123678-HxCDF | 108 | 26 - 123 |
| 13C12-234678-HxCDF | 108 | 28 - 136 |
| 13C12-123789-HxCDF | 111 | 29 - 147 |
| 13C12-1234678-HpCDF | 111 | 28 - 143 |
| 13C12-1234789-HpCDF | 105 | 26 - 138 |
| 13C12-OCDF | 104 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031222**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 14:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51700 SDG#: PH036-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031222**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 14:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51700 SDG#: PH036-07*

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 04/30/2013 14:30 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 08:51 | Monica M Souders | 5 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 2 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 10:52 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/02/2013 02:37 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131150637001 | 04/28/2013 20:14 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131150637001B | 04/29/2013 09:42 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:42 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:42 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7031222**
**LLI Group # 1384759**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/22/2013 14:50 by SM

Submitted: 04/23/2013 09:25
Reported: 05/06/2013 19:22

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51700 SDG#: PH036-07*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 131150637001A | 04/29/2013 09:42 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 09:17 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131150637001 | 04/25/2013 22:32 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13113039401A | 04/23/2013 20:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384759
Reported: 05/06/13 at 07:22 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13115SLD026 | Sample number(s): 7031213-7031215,7031217-7031220,7031222 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 118 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 97 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 111 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 109 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 111 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 71-120 | | |
| Batch number: 13108A16D | Sample number(s): 7031220 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 89 | 82 | 67-119 | 8 | 30 |
| Batch number: 13115B20A | Sample number(s): 7031221 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 95 | 97 | 75-135 | 2 | 30 |
| Batch number: 131130011A | Sample number(s): 7031213-7031215,7031217-7031220 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 91 | | 73-119 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 98 | | 72-126 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 95 | | 76-123 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 101 | | 72-128 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 112 | | 76-138 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 76-126 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 87 | | 72-131 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 102 | | 73-128 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384759
Reported: 05/06/13 at 07:22 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 109 | | 78-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 103 | | 62-125 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 105 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 72-138 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 91 | | 75-130 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 55-132 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 103 | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 91 | | 69-125 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 97 | | 78-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 90 | | 59-125 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 131130012A | Sample number(s): 7031213-7031215,7031219 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 70 | 70 | 36-106 | 0 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 102 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 106 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131160002A | Sample number(s): 7031217-7031218,7031220,7031222 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 81 | 81 | 36-106 | 0 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 99 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 103 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131140009A | Sample number(s): 7031213-7031215,7031217-7031220,7031222 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 94 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 55* | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 74 | | 49-107 | | |
| Batch number: 131150637001 | Sample number(s): 7031213-7031220,7031222 | | | | | | | | | |
| Aluminum | 10.3 | J | 40.0 | 7.71 | mg/kg | 105 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 105 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 104 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 1.62 | J | 10.0 | 0.830 | mg/kg | 100 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384759
Reported: 05/06/13 at 07:22 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 25.6 | | 20.0 | 4.02 | mg/kg | 107 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 103 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 101 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 104 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 101 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 106 | | 80-120 | | |
| Phosphorus | 1.45 | J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 | U | 100. | 13.5 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 | U | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.45 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 102 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 102 | | 80-120 | | |
| Batch number: 131150637001A | Sample number(s): 7031213-7031220,7031222 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 100 | | 80-120 | | |
| Strontium | 0.179 | J | 0.400 | 0.0340 | mg/kg | 98 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 111 | | 80-120 | | |
| Batch number: 131150637001B | Sample number(s): 7031213-7031220,7031222 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 98 | | 80-120 | | |
| Batch number: 131150638001 | Sample number(s): 7031213-7031220,7031222 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0103 | mg/kg | 111 | | 85-120 | | |
| Batch number: 13113039401A | Sample number(s): 7031213,7031216-7031220,7031222 | | | | | | | | | |
| 15a pH by 9045C | | | | | | 99 | | 95-105 | | |
| Batch number: 13115162401B | Sample number(s): 7031213-7031220,7031222 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13120002 | Sample number(s): 7031213-7031215,7031217-7031220,7031222 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0200 | ng/kg | 93 | | 67-158 | | |
| 12378-PeCDD | 5.00 | U | 5.00 | 0.0209 | ng/kg | 96 | | 70-142 | | |
| 123478-HxCDD | 5.00 | U | 5.00 | 0.0137 | ng/kg | 102 | | 70-164 | | |
| 123678-HxCDD | 5.00 | U | 5.00 | 0.0147 | ng/kg | 99 | | 76-134 | | |
| 123789-HxCDD | 0.0225 | J | 5.00 | 0.0141 | ng/kg | 99 | | 64-162 | | |
| 1234678-HpCDD | 0.0731 | J | 5.00 | 0.0152 | ng/kg | 98 | | 70-140 | | |
| OCDD | 0.155 | J | 10.0 | 0.0149 | ng/kg | 98 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0167 | ng/kg | 96 | | 75-158 | | |
| 12378-PeCDF | 0.0365 | J | 5.00 | 0.00978 | ng/kg | 100 | | 80-134 | | |
| 23478-PeCDF | 0.0100 | J | 5.00 | 0.00992 | ng/kg | 101 | | 68-160 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384759
Reported: 05/06/13 at 07:22 PM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 123478-HxCDF | 0.0375 J | 5.00 | 0.0105 | ng/kg | 103 | | 72-134 | | |
| 123678-HxCDF | 0.0203 J | 5.00 | 0.00971 | ng/kg | 100 | | 84-130 | | |
| 123789-HxCDF | 0.0140 J | 5.00 | 0.0114 | ng/kg | 101 | | 78-130 | | |
| 234678-HxCDF | 0.0283 J | 5.00 | 0.0104 | ng/kg | 100 | | 70-156 | | |
| 1234678-HpCDF | 0.0401 J | 5.00 | 0.00639 | ng/kg | 98 | | 82-122 | | |
| 1234789-HpCDF | 0.0269 J | 5.00 | 0.0103 | ng/kg | 100 | | 78-138 | | |
| OCDF | 0.107 J | 10.0 | 0.0237 | ng/kg | 99 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00349 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13115SLD026 | Sample number(s): 7031213-7031215,7031217-7031220,7031222 UNSPK: 7031213 | | | | | | | | |
| Acenaphthene | 100 | 103 | 48-127 | 3 | 30 | | | | |
| Acenaphthylene | 95 | 98 | 49-121 | 3 | 30 | | | | |
| Anthracene | 95 | 99 | 52-126 | 4 | 30 | | | | |
| Benzo(a)anthracene | 96 | 102 | 32-135 | 5 | 30 | | | | |
| Benzo(a)pyrene | 100 | 105 | 36-138 | 5 | 30 | | | | |
| Benzo(b)fluoranthene | 107 | 113 | 26-142 | 5 | 30 | | | | |
| Benzo(e)pyrene | 97 | 102 | 70-130 | 5 | 30 | | | | |
| Benzo(g,h,i)perylene | 63 | 73 | 33-141 | 13 | 30 | | | | |
| Benzo(k)fluoranthene | 87 | 87 | 47-129 | 0 | 30 | | | | |
| Butylbenzylphthalate | 130 | 121 | 59-153 | 7 | 30 | | | | |
| Di-n-butylphthalate | 105 | 109 | 62-154 | 4 | 30 | | | | |
| Chrysene | 92 | 97 | 29-148 | 5 | 30 | | | | |
| Dibenz(a,h)anthracene | 83 | 91 | 34-125 | 9 | 30 | | | | |
| Diethylphthalate | 96 | 101 | 76-127 | 5 | 30 | | | | |
| Dimethylphthalate | 93 | 96 | 62-136 | 2 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 111 | 125 | 39-167 | 10 | 30 | | | | |
| Fluoranthene | 91 | 95 | 47-135 | 4 | 30 | | | | |
| Fluorene | 98 | 99 | 50-129 | 2 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 72 | 81 | 17-136 | 10 | 30 | | | | |
| 1-Methylnaphthalene | 104 | 104 | 50-131 | 0 | 30 | | | | |
| 2-Methylnaphthalene | 105 | 106 | 28-144 | 0 | 30 | | | | |
| Naphthalene | 102 | 101 | 31-148 | 1 | 30 | | | | |
| N-Nitrosodimethylamine | 131* | 135* | 48-113 | 3 | 30 | | | | |
| Di-n-octylphthalate | 138 | 129 | 52-162 | 6 | 30 | | | | |
| Phenanthrene | 97 | 96 | 29-142 | 0 | 30 | | | | |
| Pyrene | 88 | 93 | 26-143 | 5 | 30 | | | | |
| Batch number: 131130011A | Sample number(s): 7031213-7031215,7031217-7031220 UNSPK: 7031213 | | | | | | | | |
| Aldrin | 84 | 81 | 16-126 | 3 | 50 | | | | |
| Alpha BHC | 79 | 83 | 14-140 | 5 | 50 | | | | |
| Beta BHC | 77 | 82 | 10-173 | 6 | 50 | | | | |
| Gamma BHC - Lindane | 80 | 86 | 30-137 | 8 | 50 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384759
Reported: 05/06/13 at 07:22 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| p,p-DDD | 93 | 91 | 43-149 | 2 | 50 | | | | |
| p,p-DDE | 88 | 85 | 18-161 | 3 | 50 | | | | |
| p,p-DDT | 92 | 105 | 12-193 | 12 | 50 | | | | |
| Delta BHC | 90 | 92 | 13-153 | 2 | 50 | | | | |
| Dieldrin | 98 | 88 | 19-154 | 11 | 50 | | | | |
| Endosulfan I | 88 | 80 | 16-137 | 9 | 50 | | | | |
| Endosulfan II | 80 | 81 | 10-156 | 1 | 50 | | | | |
| Endosulfan Sulfate | 86 | 84 | 10-181 | 2 | 50 | | | | |
| Endrin | 88 | 87 | 30-152 | 2 | 50 | | | | |
| Endrin Aldehyde | 92 | 87 | 10-152 | 6 | 35 | | | | |
| Endrin Ketone | 57 | 54 | 10-160 | 5 | 50 | | | | |
| Heptachlor | 83 | 81 | 16-152 | 1 | 50 | | | | |
| Heptachlor Epoxide | 87 | 93 | 17-167 | 7 | 50 | | | | |
| Methoxychlor | 79 | 87 | 34-168 | 10 | 50 | | | | |
| Batch number: 131130012A | Sample number(s): 7031213-7031215,7031219 UNSPK: 7031213 | | | | | | | | |
| PCB-1016 | 100 | 95 | 16-146 | 4 | 50 | | | | |
| PCB-1260 | 95 | 99 | 40-134 | 4 | 50 | | | | |
| Batch number: 131160002A | Sample number(s): 7031217-7031218,7031220,7031222 UNSPK: P031213 | | | | | | | | |
| PCB-1016 | 108 | 102 | 16-146 | 6 | 50 | | | | |
| PCB-1260 | 114 | 102 | 40-134 | 11 | 50 | | | | |
| Batch number: 131140009A | Sample number(s): 7031213-7031215,7031217-7031220,7031222 UNSPK: 7031213 | | | | | | | | |
| EFH (C12-C14) | 99 | 91 | 49-123 | 8 | 20 | | | | |
| EFH (C15-C20) | 124* | 137* | 49-123 | 10 | 20 | | | | |
| EFH (C21-C30) | 127* | 182* | 49-123 | 18 | 20 | | | | |
| EFH (C30-C40) | 203 (2) | 296 (2) | 49-123 | 14 | 20 | | | | |
| EFH (C8-C11) | 106 | 95 | 49-123 | 11 | 20 | | | | |
| Batch number: 131150637001 | Sample number(s): 7031213-7031220,7031222 UNSPK: 7031213 BKG: 7031213 | | | | | | | | |
| Aluminum | 2585 (2) | 2282 (2) | 75-125 | 3 | 20 | 13,100 | 14,600 | 11 | 20 |
| Antimony | 67* | 64* | 75-125 | 4 | 20 | 3.96 U | 0.540 J | 200* (1) | 20 |
| Arsenic | 95 | 105 | 75-125 | 7 | 20 | 4.95 | 5.12 | 3 (1) | 20 |
| Barium | 104 | 106 | 75-125 | 1 | 20 | 70.7 | 77.9 | 10 | 20 |
| Beryllium | 106 | 104 | 75-125 | 1 | 20 | 0.522 J | 0.579 J | 10 (1) | 20 |
| Boron | 101 | 100 | 75-125 | 1 | 20 | 5.72 J | 7.99 J | 33* (1) | 20 |
| Cadmium | 97 | 98 | 75-125 | 1 | 20 | 0.116 J | 0.138 J | 17 (1) | 20 |
| Calcium | 140 (2) | 198 (2) | 75-125 | 7 | 20 | 2,840 | 3,060 | 8 | 20 |
| Chromium | 107 | 104 | 75-125 | 2 | 20 | 19.7 | 20.4 | 3 | 20 |
| Cobalt | 100 | 100 | 75-125 | 0 | 20 | 4.62 | 5.28 | 13 (1) | 20 |
| Copper | 111 | 110 | 75-125 | 0 | 20 | 12.4 | 13.2 | 7 | 20 |
| Iron | 3126 (2) | 2463 (2) | 75-125 | 3 | 20 | 21,800 | 23,500 | 7 | 20 |
| Lead | 104 | 185* | 75-125 | 24* | 20 | 28.1 | 43.6 | 43* | 20 |
| Lithium | 103 | 101 | 75-125 | 1 | 20 | 25.6 | 25.7 | 0 | 20 |
| Magnesium | 249 (2) | 221 (2) | 75-125 | 1 | 20 | 5,100 | 5,180 | 2 | 20 |
| Manganese | 145 (2) | 132 (2) | 75-125 | 2 | 20 | 266 | 298 | 11 | 20 |
| Molybdenum | 99 | 99 | 75-125 | 0 | 20 | 0.291 J | 0.314 J | 8 (1) | 20 |
| Nickel | 103 | 101 | 75-125 | 1 | 20 | 10.5 | 11.2 | 6 | 20 |
| Phosphorus | 78 (2) | 113 (2) | 75-125 | 7 | 20 | 420 | 439 | 4 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384759
Reported: 05/06/13 at 07:22 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Potassium | 140* | 137* | 75-125 | 1 | 20 | 3,350 | 3,630 | 8 | 20 |
| Sodium | 99 | 98 | 75-125 | 1 | 20 | 73.1 J | 77.5 J | 6 (1) | 20 |
| Tin | 94 | 95 | 75-125 | 1 | 20 | 3.02 J | 3.24 J | 7 (1) | 20 |
| Titanium | 359 (2) | 334 (2) | 75-125 | 2 | 20 | 1,120 | 1,230 | 9 | 20 |
| Vanadium | 114 | 112 | 75-125 | 1 | 20 | 35.4 | 39.1 | 10 | 20 |
| Zinc | 106 | 106 | 75-125 | 0 | 20 | 60.1 | 62.1 | 3 | 20 |
| Zirconium | 99 | 98 | 75-125 | 1 | 20 | 2.43 J | 2.76 J | 13 (1) | 20 |
| Batch number: 131150637001A | Sample number(s): 7031213-7031220,7031222 UNSPK: 7031213 BKG: 7031213 | | | | | | | | |
| Silver | 96 | 98 | 75-125 | 2 | 20 | 0.0269 J | 0.0419 J | 44* (1) | 20 |
| Strontium | 69* | 75 | 75-125 | 3 | 20 | 12.7 | 13.0 | 2 | 20 |
| Thallium | 87 | 90 | 75-125 | 2 | 20 | 0.272 | 0.264 | 3 (1) | 20 |
| Batch number: 131150637001B | Sample number(s): 7031213-7031220,7031222 UNSPK: 7031213 BKG: 7031213 | | | | | | | | |
| Selenium | 95 | 90 | 75-125 | 5 | 20 | 0.396 U | 0.396 U | 0 (1) | 20 |
| Batch number: 131150638001 | Sample number(s): 7031213-7031220,7031222 UNSPK: 7031213 BKG: 7031213 | | | | | | | | |
| 3a Mercury 7471A | 105 | 104 | 65-135 | 2 | 20 | 0.0161 | 0.0142 J | 13 (1) | 20 |
| Batch number: 13113039401A | Sample number(s): 7031213,7031216-7031220,7031222 BKG: 7031213 | | | | | | | | |
| 15a pH by 9045C | | | | | | 6.77 | 6.84 | 1 | 3 |
| Batch number: 13115162401B | Sample number(s): 7031213-7031220,7031222 BKG: 7031213 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.7 | 3.6 | 4 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 3.7 | 3.6 | 4 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 3.7 | 3.6 | 4 | 20 |
| Batch number: 13120002 | Sample number(s): 7031213-7031215,7031217-7031220,7031222 UNSPK: 7031213 | | | | | | | | |
| 2378-TCDD | 92 | 92 | 40-135 | 2 | 20 | | | | |
| 12378-PeCDD | 96 | 96 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDD | 101 | 100 | 40-135 | 2 | 20 | | | | |
| 123678-HxCDD | 98 | 99 | 40-135 | 4 | 20 | | | | |
| 123789-HxCDD | 100 | 99 | 40-135 | 2 | 20 | | | | |
| 1234678-HpCDD | 96 | 101 | 40-135 | 6 | 20 | | | | |
| OCDD | 99 | 139* | 40-135 | 21* | 20 | | | | |
| 2378-TCDF | 99 | 97 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDF | 99 | 97 | 40-135 | 1 | 20 | | | | |
| 23478-PeCDF | 100 | 99 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 103 | 101 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDF | 99 | 98 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 102 | 100 | 40-135 | 0 | 20 | | | | |
| 234678-HxCDF | 100 | 99 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 99 | 98 | 40-135 | 2 | 20 | | | | |
| 1234789-HpCDF | 100 | 100 | 40-135 | 3 | 20 | | | | |
| OCDF | 100 | 101 | 40-135 | 3 | 20 | | | | |

## Surrogate Quality Control

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384759
Reported: 05/06/13 at 07:22 PM

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13115SLD026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7031213 | 95 | 106 | 101 |
| 7031214 | 93 | 107 | 102 |
| 7031215 | 97 | 109 | 102 |
| 7031217 | 93 | 106 | 97 |
| 7031218 | 97 | 97 | 101 |
| 7031219 | 103 | 101 | 96 |
| 7031220 | 94 | 109 | 99 |
| 7031222 | 101 | 111 | 102 |
| Blank | 90 | 108 | 103 |
| LCS | 94 | 111 | 105 |
| MS | 93 | 107 | 102 |
| MSD | 97 | 109 | 102 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13108A16D

| | Trifluorotoluene-F |
|---|---|
| 7031220 | 82 |
| Blank | 85 |
| LCS | 86 |
| LCSD | 80 |
| Limits: | 61-122 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13115B20A

| | Trifluorotoluene-F |
|---|---|
| 7031221 | 89 |
| Blank | 88 |
| LCS | 113 |
| LCSD | 112 |
| Limits: | 63-135 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 131130011A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7031213 | 85 | 89 |
| 7031214 | 77 | 88 |
| 7031215 | 82 | 85 |
| 7031217 | 79 | 98 |
| 7031218 | 88 | 93 |
| 7031219 | 87 | 97 |
| 7031220 | 88 | 81 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384759
Reported: 05/06/13 at 07:22 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| Blank | 89 | 107 |
| LCS | 91 | 113 |
| MS | 77 | 88 |
| MSD | 82 | 85 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131130012A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7031213 | 112 | 99 |
| 7031214 | 120 | 103 |
| 7031215 | 118 | 104 |
| 7031219 | 107 | 96 |
| Blank | 122* | 97 |
| LCS | 118 | 102 |
| LCSD | 122* | 106 |
| MS | 120 | 103 |
| MSD | 118 | 104 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131160002A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7031217 | 122* | 106 |
| 7031218 | 129* | 107 |
| 7031220 | 127* | 109 |
| 7031222 | 123* | 132* |
| Blank | 121* | 104 |
| LCS | 120 | 108 |
| LCSD | 128* | 120 |
| MS | 127* | 112 |
| MSD | 119 | 106 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131140009A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7031213 | 89 | 90 |
| 7031214 | 95 | 96 |
| 7031215 | 88 | 89 |
| 7031217 | 86 | 89 |
| 7031218 | 92 | 96 |
| 7031219 | 92 | 95 |
| 7031220 | 98 | 100 |
| 7031222 | 87 | 89 |
| Blank | 87 | 77 |
| LCS | 91 | 91 |
| MS | 95 | 96 |
| MSD | 88 | 89 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384759
Reported: 05/06/13 at 07:22 PM

## Surrogate Quality Control

Limits: 37-125 66-123

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13120002

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7031213 | 79 | 81 | 90 | 94 | 89 | 91 |
| 7031214 | 80 | 85 | 88 | 93 | 87 | 83 |
| 7031215 | 80 | 84 | 89 | 94 | 90 | 88 |
| 7031217 | 76 | 79 | 87 | 91 | 86 | 84 |
| 7031218 | 77 | 79 | 85 | 90 | 84 | 84 |
| 7031219 | 84 | 83 | 91 | 91 | 89 | 93 |
| 7031220 | 75 | 77 | 84 | 87 | 84 | 87 |
| 7031222 | 96 | 93 | 107 | 108 | 108 | 111 |
| Blank | 79 | 84 | 96 | 101 | 96 | 98 |
| MS | 80 | 85 | 88 | 93 | 87 | 83 |
| MSD | 80 | 84 | 89 | 94 | 90 | 88 |
| OPR | 70 | 72 | 83 | 89 | 83 | 82 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7031213 | 106 | 79 | 75 | 82 | 86 | 86 |
| 7031214 | 102 | 80 | 77 | 85 | 86 | 86 |
| 7031215 | 103 | 83 | 80 | 84 | 88 | 92 |
| 7031217 | 104 | 77 | 74 | 81 | 84 | 85 |
| 7031218 | 101 | 76 | 73 | 82 | 85 | 85 |
| 7031219 | 95 | 87 | 88 | 83 | 85 | 87 |
| 7031220 | 95 | 79 | 76 | 78 | 83 | 84 |
| 7031222 | 111 | 105 | 104 | 93 | 105 | 103 |
| Blank | 121 | 87 | 81 | 90 | 94 | 93 |
| MS | 102 | 80 | 77 | 85 | 86 | 86 |
| MSD | 103 | 83 | 80 | 84 | 88 | 92 |
| OPR | 105 | 72 | 68 | 75 | 82 | 83 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7031213 | 85 | 84 | 83 | 78 | 85 |
| 7031214 | 84 | 86 | 82 | 79 | 88 |
| 7031215 | 88 | 87 | 86 | 78 | 86 |
| 7031217 | 84 | 84 | 83 | 75 | 82 |
| 7031218 | 84 | 83 | 83 | 74 | 81 |
| 7031219 | 85 | 85 | 88 | 82 | 83 |
| 7031220 | 81 | 82 | 81 | 71 | 79 |
| 7031222 | 103 | 104 | 105 | 96 | 96 |
| Blank | 92 | 95 | 93 | 78 | 88 |
| MS | 84 | 86 | 82 | 79 | 88 |
| MSD | 88 | 87 | 86 | 78 | 86 |
| OPR | 83 | 81 | 79 | 66 | 75 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1384759
Reported: 05/06/13 at 07:22 PM

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

13013 1384759 7031213-22

**CDM Smith**

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 4/22/2013 | Contact Name: | Pam Hartman | COC No: | 20130422-01 |
| CarrierName: | FedEx | Contact Phone: | (818)466-8007 | Cooler #: | 1 |
| AirbillNo: | 7995 8528 1095 | | | Lab: | Lancaster |
| | | | | Lab Phone: | 717-556-7259 |
| | | | | Lab Address | 2425 New Holland Pike<br>Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-510-SA7-SB-0.0-0.5MS | 4/22/13 08:45 | SO | None | 6 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | X | | | | X | | | | | | | | | | | |
| SL-510-SA7-SB-0.0-0.5MS | 4/22/13 08:45 | SO | None | 1 - 8 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-810-SA7-SB-0.0-0.5 | 4/22/13 08:50 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | X | | | | X | | | | | | | | | | | |
| SL-810-SA7-SB-0.0-0.5 | 4/22/13 08:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-503-SA7-SB-0.0-0.5 | 4/22/13 10:45 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | X | | | | X | | | | | | | | | | | |
| SL-503-SA7-SB-0.0-0.5 | 4/22/13 10:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-504-SA7-SB-0.0-0.5 | 4/22/13 12:50 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | X | | | | X | | | | | | | | | | | |
| SL-504-SA7-SB-0.0-0.5 | 4/22/13 12:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-504-SA7-SB-4.0-5.0 | 4/22/13 13:55 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | X | | | | X | | | | | | | | | | | |
| SL-504-SA7-SB-4.0-5.0 | 4/22/13 13:55 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-504-SA7-SB-4.0-5.0 | 4/22/13 13:55 | SO | None | 1 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| TB-042213 | 4/22/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-517-SA7-SB-0.0-0.5 | 4/22/13 14:50 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-517-SA7-SB-0.0-0.5 | 4/22/13 14:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Steve Mercer

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Gh | 4/22/13 | | | | | | | | | | |
| | | | | | | | | | CEshler | 4/23/13 | 0925 |

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# Environmental Sample Administration Receipt Documentation Log

1384759

**Client/Project:** CDM Smith

**Date of Receipt:** 4/23/13

**Time of Receipt:** 0925

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | 2737 | 3.2 | TB | WI | Y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** Ø

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** [signature] 3647 **Date/Time:** 4/23/13 1015

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 06, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/24/2013
Group Number: 1385148
SDG: PH037
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| TB-042313 Water | 7032823 |
| SL-526-SA7-SB-0.0-0.5 Soil | 7032824 |
| SL-526-SA7-SB-3.5-4.5 Soil | 7032825 |
| SL-512-SA7-SB-0.0-0.5 Soil | 7032826 |
| SL-525-SA7-SB-0.0-0.5 Soil | 7032827 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

eurofins | Lancaster Laboratories

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

# Analysis Report

**Sample Description: TB-042313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7032823**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 08:00

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLT23 SDG#: PH037-01

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13115B20A | 04/26/2013 11:56 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13115B20A | 04/26/2013 11:56 | Catherine J Schwarz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032824**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 09:25 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL526 SDG#: PH037-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.88 | J | 1.8 | 0.74 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.86 | J | 1.8 | 0.74 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | | 1.8 | 0.74 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.94 | J | 1.8 | 0.74 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 0.75 | J | 1.8 | 0.74 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.9 | | 1.8 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 36 | | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.3 | | 1.8 | 0.74 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.3 | J | 1.8 | 0.74 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.0 | J | 1.8 | 0.74 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.2 | J | 1.8 | 0.74 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 0.81 | J | 1.8 | 0.74 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.4 | J | 1.8 | 0.74 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.0 | | 1.8 | 0.74 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 3.6 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 15 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 27 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-526-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7032824**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 09:25 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL526 SDG#: PH037-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,400 | | 43.3 | 8.35 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.33 | U | 4.33 | 0.542 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.97 | | 4.33 | 0.357 | 1 |
| 06946 | Barium | 7440-39-3 | 69.9 | | 1.08 | 0.0357 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.629 | J | 1.08 | 0.0726 | 1 |
| 07914 | Boron | 7440-42-8 | 12.6 | | 10.8 | 0.899 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.233 | J | 1.08 | 0.0357 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,050 | | 21.7 | 4.35 | 1 |
| 06951 | Chromium | 7440-47-3 | 20.3 | | 3.25 | 0.0953 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.64 | | 1.08 | 0.0975 | 1 |
| 06953 | Copper | 7440-50-8 | 11.1 | | 2.17 | 0.195 | 1 |
| 01654 | Iron | 7439-89-6 | 21,500 | | 43.3 | 4.12 | 1 |
| 06955 | Lead | 7439-92-1 | 6.86 | | 3.25 | 0.509 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.4 | | 4.3 | 0.60 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,640 | | 10.8 | 1.87 | 1 |
| 06958 | Manganese | 7439-96-5 | 251 | | 1.08 | 0.0899 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.354 | J | 2.17 | 0.184 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.24 | | 2.17 | 0.119 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 300 | | 10.8 | 0.552 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,980 | | 108 | 14.6 | 1 |
| 01667 | Sodium | 7440-23-5 | 90.5 | J | 108 | 18.1 | 1 |
| 06969 | Tin | 7440-31-5 | 3.05 | J | 10.8 | 0.238 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,140 | | 1.08 | 0.184 | 1 |
| 06971 | Vanadium | 7440-62-2 | 38.1 | | 1.08 | 0.119 | 1 |
| 06972 | Zinc | 7440-66-6 | 50.5 | | 4.33 | 0.217 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.78 | J | 5.42 | 0.899 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.159 | J | 0.433 | 0.108 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0470 | J | 0.217 | 0.0217 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.8 | | 0.433 | 0.0368 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.297 | | 0.217 | 0.0325 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0165 | J | 0.0178 | 0.0110 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.26 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22 C. | | | | | | |
| **Wet Chemistry** | | **EPA 160.3 modified** | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032824**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 09:25 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL526 SDG#: PH037-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0301 | JQ | 1.06 | 0.0258 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.231 | JQ | 5.30 | 0.0330 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.212 | JQ | 5.30 | 0.0341 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.518 | J | 5.30 | 0.0355 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.401 | JB | 5.30 | 0.0337 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 8.17 | B | 5.30 | 0.0285 | 1 |
| 11031 | OCDD | 3268-87-9 | 92.6 | B | 10.6 | 0.0275 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0866 | JQ | 1.06 | 0.0331 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.70 | JB | 5.30 | 0.0193 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.258 | JBQ | 5.30 | 0.0184 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.206 | JB | 5.30 | 0.0283 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.226 | JB | 5.30 | 0.0256 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.129 | JBQ | 5.30 | 0.0282 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.184 | JB | 5.30 | 0.0250 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.65 | JB | 5.30 | 0.0225 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.149 | JB | 5.30 | 0.0299 | 1 |
| 11031 | OCDF | 39001-02-0 | 2.71 | JB | 10.6 | 0.0267 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.333 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 81 | 25 - 164 |
| 13C12-12378-PeCDD | 81 | 25 - 181 |
| 13C12-123478-HxCDD | 88 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 86 | 23 - 140 |
| 13C12-OCDD | 85 | 17 - 157 |
| 13C12-2378-TCDF | 76 | 24 - 169 |
| 13C12-12378-PeCDF | 82 | 24 - 185 |
| 13C12-23478-PeCDF | 80 | 21 - 178 |
| 13C12-123478-HxCDF | 89 | 26 - 152 |
| 13C12-123678-HxCDF | 93 | 26 - 123 |
| 13C12-234678-HxCDF | 89 | 28 - 136 |
| 13C12-123789-HxCDF | 89 | 29 - 147 |
| 13C12-1234678-HpCDF | 100 | 28 - 143 |
| 13C12-1234789-HpCDF | 82 | 26 - 138 |
| 13C12-OCDF | 78 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032824**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 09:25 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL526 SDG#: PH037-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032824**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 09:25 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL526 SDG#: PH037-02

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 05/03/2013 04:18 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 09:10 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 06:02 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/02/2013 06:31 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:33 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:05 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:05 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:05 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032824**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 09:25 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL526 SDG#: PH037-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:05 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 09:19 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13114039401A | 04/24/2013 23:01 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-3.5-4.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032825**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 10:55 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5263 SDG#: PH037-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.6 | U | 1.6 | 0.3 | 36.13 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-3.5-4.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032825**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 10:55 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5263 SDG#: PH037-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 9.2 | | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 24 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 20,000 | | 41.4 | 7.98 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.729 | J | 4.14 | 0.518 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.22 | | 4.14 | 0.342 | 1 |
| 06946 | Barium | 7440-39-3 | 65.3 | | 1.04 | 0.0342 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.817 | J | 1.04 | 0.0693 | 1 |
| 07914 | Boron | 7440-42-8 | 11.6 | | 10.4 | 0.859 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.0952 | J | 1.04 | 0.0342 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,520 | | 20.7 | 4.16 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.9 | | 3.11 | 0.0911 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.89 | | 1.04 | 0.0932 | 1 |
| 06953 | Copper | 7440-50-8 | 9.60 | | 2.07 | 0.186 | 1 |
| 01654 | Iron | 7439-89-6 | 23,500 | | 41.4 | 3.93 | 1 |
| 06955 | Lead | 7439-92-1 | 6.34 | | 3.11 | 0.486 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.5 | | 4.1 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,360 | | 10.4 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 171 | | 1.04 | 0.0859 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.528 | J | 2.07 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.17 | | 2.07 | 0.114 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 164 | | 10.4 | 0.528 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,370 | | 104 | 14.0 | 1 |
| 01667 | Sodium | 7440-23-5 | 118 | | 104 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 3.24 | J | 10.4 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,100 | | 1.04 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.4 | | 1.04 | 0.114 | 1 |
| 06972 | Zinc | 7440-66-6 | 41.0 | | 4.14 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.90 | J | 5.18 | 0.859 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.104 | J | 0.414 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0711 | J | 0.207 | 0.0207 | 2 |
| 06144 | Strontium | 7440-24-6 | 22.4 | | 0.414 | 0.0352 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.280 | | 0.207 | 0.0311 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0156 | J | 0.0174 | 0.0108 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.78 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-3.5-4.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032825**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 10:55 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5263 SDG#: PH037-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.1 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-526-SA7-SB-3.5-4.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7032825**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 10:55 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5263 SDG#: PH037-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0193 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0848 | JQ | 5.16 | 0.0208 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0344 | JQ | 5.16 | 0.0198 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0768 | JQ | 5.16 | 0.0201 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0729 | JB | 5.16 | 0.0187 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.41 | JB | 5.16 | 0.0233 | 1 |
| 11031 | OCDD | 3268-87-9 | 72.0 | B | 10.3 | 0.0206 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0316 | J | 1.03 | 0.0198 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.316 | JB | 5.16 | 0.0134 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0855 | JB | 5.16 | 0.0128 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0698 | JB | 5.16 | 0.0156 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0623 | JBQ | 5.16 | 0.0150 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.16 | U | 5.16 | 0.0157 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0431 | JBQ | 5.16 | 0.0144 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.358 | JB | 5.16 | 0.0141 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0558 | JBQ | 5.16 | 0.0174 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.578 | JB | 10.3 | 0.0202 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0920 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 74 | 25 - 164 |
| 13C12-12378-PeCDD | 79 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 84 | 23 - 140 |
| 13C12-OCDD | 85 | 17 - 157 |
| 13C12-2378-TCDF | 71 | 24 - 169 |
| 13C12-12378-PeCDF | 79 | 24 - 185 |
| 13C12-23478-PeCDF | 79 | 21 - 178 |
| 13C12-123478-HxCDF | 87 | 26 - 152 |
| 13C12-123678-HxCDF | 90 | 26 - 123 |
| 13C12-234678-HxCDF | 87 | 28 - 136 |
| 13C12-123789-HxCDF | 90 | 29 - 147 |
| 13C12-1234678-HpCDF | 97 | 28 - 143 |
| 13C12-1234789-HpCDF | 84 | 26 - 138 |
| 13C12-OCDF | 82 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-3.5-4.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032825**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 10:55 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5263 SDG#: PH037-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-3.5-4.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032825**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 10:55 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5263 SDG#: PH037-03

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 05/03/2013 04:49 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13108A16D | 04/26/2013 18:57 | Laura M Krieger | 36.13 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201311430857 | 04/24/2013 15:42 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 09:28 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 06:23 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/02/2013 07:28 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:36 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-3.5-4.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032825**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 10:55 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5263 SDG#: PH037-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:07 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:07 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:07 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:07 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 09:21 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13114039401A | 04/24/2013 23:01 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-512-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7032826**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 11:35 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL512 SDG#: PH037-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.90 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.99 | J | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 7.8 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 29 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-512-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032826**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 11:35 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL512 SDG#: PH037-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,900 | | 40.6 | 7.83 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.627 | J | 4.06 | 0.508 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.66 | | 4.06 | 0.335 | 1 |
| 06946 | Barium | 7440-39-3 | 70.4 | | 1.02 | 0.0335 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.556 | J | 1.02 | 0.0680 | 1 |
| 07914 | Boron | 7440-42-8 | 1.09 | J | 10.2 | 0.843 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.152 | J | 1.02 | 0.0335 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,070 | | 20.3 | 4.08 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.3 | | 3.05 | 0.0894 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.43 | | 1.02 | 0.0914 | 1 |
| 06953 | Copper | 7440-50-8 | 10.9 | | 2.03 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 20,000 | | 40.6 | 3.86 | 1 |
| 06955 | Lead | 7439-92-1 | 5.65 | | 3.05 | 0.477 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.7 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,600 | | 10.2 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 270 | | 1.02 | 0.0843 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.186 | J | 2.03 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.79 | | 2.03 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 315 | | 10.2 | 0.518 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,670 | | 102 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 63.8 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.76 | J | 10.2 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,120 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.8 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 51.2 | | 4.06 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.31 | J | 5.08 | 0.843 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.164 | J | 0.406 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.203 | U | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.9 | | 0.406 | 0.0345 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.239 | | 0.203 | 0.0305 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0133 | J | 0.0162 | 0.0100 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.24 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.9 C. | | | | | | |
| **Wet Chemistry** | | **EPA 160.3 modified** | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-512-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032826**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 11:35 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL512 SDG#: PH037-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.999 | U | 0.999 | 0.0196 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0631 | JQ | 4.99 | 0.0196 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0741 | J | 4.99 | 0.0222 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.196 | JQ | 4.99 | 0.0219 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.187 | JB | 4.99 | 0.0213 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 3.84 | JB | 4.99 | 0.0188 | 1 |
| 11031 | OCDD | 3268-87-9 | 39.4 | B | 9.99 | 0.0163 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0662 | JQ | 0.999 | 0.0189 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.175 | JB | 4.99 | 0.0122 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0832 | JBQ | 4.99 | 0.0121 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0849 | JBQ | 4.99 | 0.0180 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0905 | JBQ | 4.99 | 0.0167 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0642 | JBQ | 4.99 | 0.0193 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0843 | JB | 4.99 | 0.0169 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.796 | JB | 4.99 | 0.0119 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0704 | JBQ | 4.99 | 0.0178 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.66 | JB | 9.99 | 0.0189 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0985 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 77 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 80 | 23 - 140 |
| 13C12-OCDD | 79 | 17 - 157 |
| 13C12-2378-TCDF | 71 | 24 - 169 |
| 13C12-12378-PeCDF | 80 | 24 - 185 |
| 13C12-23478-PeCDF | 77 | 21 - 178 |
| 13C12-123478-HxCDF | 82 | 26 - 152 |
| 13C12-123678-HxCDF | 87 | 26 - 123 |
| 13C12-234678-HxCDF | 82 | 28 - 136 |
| 13C12-123789-HxCDF | 80 | 29 - 147 |
| 13C12-1234678-HpCDF | 95 | 28 - 143 |
| 13C12-1234789-HpCDF | 75 | 26 - 138 |
| 13C12-OCDF | 73 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-512-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032826**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 11:35 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL512 SDG#: PH037-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-512-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032826**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 11:35 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL512 SDG#: PH037-04

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 05/03/2013 05:21 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 09:47 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/26/2013 06:44 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/02/2013 08:24 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:47 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:14 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:14 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:14 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-512-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032826**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 11:35 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL512 SDG#: PH037-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:14 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 09:23 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13114039401A | 04/24/2013 23:01 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-525-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7032827**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 14:20 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL525 SDG#: PH037-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.50 | J | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.1 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.6 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 4.1 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.4 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.6 | J | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 3.5 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 11 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.7 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 2.6 | | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.5 | J | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.81 | J | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.96 | J | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.0 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.9 | | 1.7 | 0.70 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 47 | | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 23 | J | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 72 | | 52 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 10 | 5 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032827**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 14:20 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL525 SDG#: PH037-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. A target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits. The following corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,000 | | 40.9 | 7.88 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.545 | J | 4.09 | 0.511 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.95 | | 4.09 | 0.337 | 1 |
| 06946 | Barium | 7440-39-3 | 66.2 | | 1.02 | 0.0337 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.510 | J | 1.02 | 0.0685 | 1 |
| 07914 | Boron | 7440-42-8 | 3.20 | J | 10.2 | 0.849 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.231 | J | 1.02 | 0.0337 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,910 | | 20.4 | 4.11 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.1 | | 3.07 | 0.0900 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.90 | | 1.02 | 0.0920 | 1 |
| 06953 | Copper | 7440-50-8 | 10.7 | | 2.04 | 0.184 | 1 |
| 01654 | Iron | 7439-89-6 | 18,200 | | 40.9 | 3.88 | 1 |
| 06955 | Lead | 7439-92-1 | 12.5 | | 3.07 | 0.480 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.1 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,950 | | 10.2 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 228 | | 1.02 | 0.0849 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.388 | J | 2.04 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.31 | | 2.04 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 305 | | 10.2 | 0.521 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,300 | | 102 | 13.8 | 1 |
| 01667 | Sodium | 7440-23-5 | 67.4 | J | 102 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 2.79 | J | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,080 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 31.7 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 53.1 | | 4.09 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.29 | J | 5.11 | 0.849 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.182 | J | 0.409 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0696 | J | 0.204 | 0.0204 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.5 | | 0.409 | 0.0348 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.286 | | 0.204 | 0.0307 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0311 | | 0.0164 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.66 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.8 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032827**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 14:20 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL525 SDG#: PH037-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.1 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-525-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7032827**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 14:20 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL525 SDG#: PH037-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.0354 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.235 | J | 5.08 | 0.0588 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.290 | J | 5.08 | 0.0472 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.23 | J | 5.08 | 0.0476 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.719 | JB | 5.08 | 0.0451 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 17.8 | B | 5.08 | 0.0428 | 1 |
| 11031 | OCDD | 3268-87-9 | 174 | B | 10.2 | 0.0343 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.350 | J | 1.02 | 0.0780 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 4.47 | JB | 5.08 | 0.0426 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.726 | JBQ | 5.08 | 0.0416 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.393 | JB | 5.08 | 0.0433 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.544 | JB | 5.08 | 0.0411 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.129 | JB | 5.08 | 0.0474 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.571 | JB | 5.08 | 0.0440 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 6.02 | B | 5.08 | 0.0344 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.351 | JB | 5.08 | 0.0483 | 1 |
| 11031 | OCDF | 39001-02-0 | 7.98 | JB | 10.2 | 0.0340 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.09 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 51 | 25 - 164 |
| 13C12-12378-PeCDD | 52 | 25 - 181 |
| 13C12-123478-HxCDD | 57 | 32 - 141 |
| 13C12-123678-HxCDD | 59 | 28 - 130 |
| 13C12-123789-HxCDD | 56 | 28 - 130 |
| 13C12-1234678-HpCDD | 55 | 23 - 140 |
| 13C12-OCDD | 55 | 17 - 157 |
| 13C12-2378-TCDF | 48 | 24 - 169 |
| 13C12-12378-PeCDF | 54 | 24 - 185 |
| 13C12-23478-PeCDF | 52 | 21 - 178 |
| 13C12-123478-HxCDF | 57 | 26 - 152 |
| 13C12-123678-HxCDF | 59 | 26 - 123 |
| 13C12-234678-HxCDF | 57 | 28 - 136 |
| 13C12-123789-HxCDF | 57 | 29 - 147 |
| 13C12-1234678-HpCDF | 65 | 28 - 143 |
| 13C12-1234789-HpCDF | 54 | 26 - 138 |
| 13C12-OCDF | 52 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032827**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 14:20 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL525 SDG#: PH037-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032827**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 14:20 by SM

Submitted: 04/24/2013 09:30
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL525 SDG#: PH037-05*

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13115SLD026 | 05/03/2013 05:52 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13115SLD026 | 04/25/2013 15:45 | Nicholas W Shroyer | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 10:05 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131140009A | 04/27/2013 03:18 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131140009A | 04/25/2013 02:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/02/2013 09:21 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:51 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:16 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:16 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:16 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7032827**
**LLI Group # 1385148**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/23/2013 14:20 by SM

Submitted: 04/24/2013 09:30
Reported: 05/06/2013 13:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL525 SDG#: PH037-05*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:16 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131150638001 | 04/26/2013 09:25 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131150638001 | 04/26/2013 03:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13114039401A | 04/24/2013 23:01 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13115162401B | 04/25/2013 19:23 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385148
Reported: 05/06/13 at 01:36 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13115SLD026 | Sample number(s): 7032824-7032827 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 118 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 97 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 111 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 109 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 111 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 71-120 | | |
| Batch number: 13108A16D | Sample number(s): 7032825 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 89 | 82 | 67-119 | 8 | 30 |
| Batch number: 13115B20A | Sample number(s): 7032823 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 95 | 97 | 75-135 | 2 | 30 |
| Batch number: 131160002A | Sample number(s): 7032824-7032827 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 81 | 81 | 36-106 | 0 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 99 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385148
Reported: 05/06/13 at 01:36 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 103 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131140009A | Sample number(s): 7032824-7032827 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 94 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 55* | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 74 | | 49-107 | | |
| Batch number: 131150638001 | Sample number(s): 7032824-7032827 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0103 | mg/kg | 111 | | 85-120 | | |
| Batch number: 131220637001 | Sample number(s): 7032824-7032827 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 101 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 104 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 104 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 99 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Calcium | 20.0 | U | 20.0 | 4.02 | mg/kg | 103 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 102 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 106 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 109 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 101 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 99 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 105 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 1.44 | J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 100 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.47 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 102 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 101 | | 80-120 | | |
| Batch number: 131220637001A | Sample number(s): 7032824-7032827 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 109 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0340 | mg/kg | 110 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 105 | | 80-120 | | |
| Batch number: 131220637001B | Sample number(s): 7032824-7032827 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 107 | | 80-120 | | |
| Batch number: 13114039401A | Sample number(s): 7032824-7032827 | | | | | | | | | |
| 15a pH by 9045C | | | | | | 99 | | 95-105 | | |
| Batch number: 13115162401B | Sample number(s): 7032824-7032827 | | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385148
Reported: 05/06/13 at 01:36 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13120002 | Sample number(s): 7032824-7032827 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0200 | ng/kg | 93 | | 67-158 | | |
| 12378-PeCDD | 5.00 U | 5.00 | 0.0209 | ng/kg | 96 | | 70-142 | | |
| 123478-HxCDD | 5.00 U | 5.00 | 0.0137 | ng/kg | 102 | | 70-164 | | |
| 123678-HxCDD | 5.00 U | 5.00 | 0.0147 | ng/kg | 99 | | 76-134 | | |
| 123789-HxCDD | 0.0225 J | 5.00 | 0.0141 | ng/kg | 99 | | 64-162 | | |
| 1234678-HpCDD | 0.0731 J | 5.00 | 0.0152 | ng/kg | 98 | | 70-140 | | |
| OCDD | 0.155 J | 10.0 | 0.0149 | ng/kg | 98 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0167 | ng/kg | 96 | | 75-158 | | |
| 12378-PeCDF | 0.0365 J | 5.00 | 0.00978 | ng/kg | 100 | | 80-134 | | |
| 23478-PeCDF | 0.0100 J | 5.00 | 0.00992 | ng/kg | 101 | | 68-160 | | |
| 123478-HxCDF | 0.0375 J | 5.00 | 0.0105 | ng/kg | 103 | | 72-134 | | |
| 123678-HxCDF | 0.0203 J | 5.00 | 0.00971 | ng/kg | 100 | | 84-130 | | |
| 123789-HxCDF | 0.0140 J | 5.00 | 0.0114 | ng/kg | 101 | | 78-130 | | |
| 234678-HxCDF | 0.0283 J | 5.00 | 0.0104 | ng/kg | 100 | | 70-156 | | |
| 1234678-HpCDF | 0.0401 J | 5.00 | 0.00639 | ng/kg | 98 | | 82-122 | | |
| 1234789-HpCDF | 0.0269 J | 5.00 | 0.0103 | ng/kg | 100 | | 78-138 | | |
| OCDF | 0.107 J | 10.0 | 0.0237 | ng/kg | 99 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00349 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13115SLD026 | Sample number(s): 7032824-7032827 UNSPK: P031213 | | | | | | | | |
| Acenaphthene | 100 | 103 | 48-127 | 3 | 30 | | | | |
| Acenaphthylene | 95 | 98 | 49-121 | 3 | 30 | | | | |
| Anthracene | 95 | 99 | 52-126 | 4 | 30 | | | | |
| Benzo(a)anthracene | 96 | 102 | 32-135 | 5 | 30 | | | | |
| Benzo(a)pyrene | 100 | 105 | 36-138 | 5 | 30 | | | | |
| Benzo(b)fluoranthene | 107 | 113 | 26-142 | 5 | 30 | | | | |
| Benzo(e)pyrene | 97 | 102 | 70-130 | 5 | 30 | | | | |
| Benzo(g,h,i)perylene | 63 | 73 | 33-141 | 13 | 30 | | | | |
| Benzo(k)fluoranthene | 87 | 87 | 47-129 | 0 | 30 | | | | |
| Butylbenzylphthalate | 130 | 121 | 59-153 | 7 | 30 | | | | |
| Di-n-butylphthalate | 105 | 109 | 62-154 | 4 | 30 | | | | |
| Chrysene | 92 | 97 | 29-148 | 5 | 30 | | | | |
| Dibenz(a,h)anthracene | 83 | 91 | 34-125 | 9 | 30 | | | | |
| Diethylphthalate | 96 | 101 | 76-127 | 5 | 30 | | | | |
| Dimethylphthalate | 93 | 96 | 62-136 | 2 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385148
Reported: 05/06/13 at 01:36 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 111 | 125 | 39-167 | 10 | 30 | | | | |
| Fluoranthene | 91 | 95 | 47-135 | 4 | 30 | | | | |
| Fluorene | 98 | 99 | 50-129 | 2 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 72 | 81 | 17-136 | 10 | 30 | | | | |
| 1-Methylnaphthalene | 104 | 104 | 50-131 | 0 | 30 | | | | |
| 2-Methylnaphthalene | 105 | 106 | 28-144 | 0 | 30 | | | | |
| Naphthalene | 102 | 101 | 31-148 | 1 | 30 | | | | |
| N-Nitrosodimethylamine | 131* | 135* | 48-113 | 3 | 30 | | | | |
| Di-n-octylphthalate | 138 | 129 | 52-162 | 6 | 30 | | | | |
| Phenanthrene | 97 | 96 | 29-142 | 0 | 30 | | | | |
| Pyrene | 88 | 93 | 26-143 | 5 | 30 | | | | |
| Batch number: 131160002A | Sample number(s): 7032824-7032827 UNSPK: P031213 | | | | | | | | |
| PCB-1016 | 108 | 102 | 16-146 | 6 | 50 | | | | |
| PCB-1260 | 114 | 102 | 40-134 | 11 | 50 | | | | |
| Batch number: 131140009A | Sample number(s): 7032824-7032827 UNSPK: P031213 | | | | | | | | |
| EFH (C12-C14) | 99 | 91 | 49-123 | 8 | 20 | | | | |
| EFH (C15-C20) | 124* | 137* | 49-123 | 10 | 20 | | | | |
| EFH (C21-C30) | 127* | 182* | 49-123 | 18 | 20 | | | | |
| EFH (C30-C40) | 203 (2) | 296 (2) | 49-123 | 14 | 20 | | | | |
| EFH (C8-C11) | 106 | 95 | 49-123 | 11 | 20 | | | | |
| Batch number: 131150638001 | Sample number(s): 7032824-7032827 UNSPK: P031213 BKG: P031213 | | | | | | | | |
| 3a Mercury 7471A | 105 | 104 | 65-135 | 2 | 20 | 0.0161 | 0.0142 J | 13 (1) | 20 |
| Batch number: 131220637001 | Sample number(s): 7032824-7032827 UNSPK: P036179 BKG: P036179 | | | | | | | | |
| Aluminum | 1523 (2) | 1646 (2) | 75-125 | 2 | 20 | 11,400 | 10,900 | 5 | 20 |
| Antimony | 57* | 57* | 75-125 | 0 | 20 | 4.52 | 3.96 U | 200* (1) | 20 |
| Arsenic | 102 | 102 | 75-125 | 0 | 20 | 4.34 | 3.98 | 9 (1) | 20 |
| Barium | 101 | 98 | 75-125 | 2 | 20 | 101 | 88.6 | 13 | 20 |
| Beryllium | 106 | 106 | 75-125 | 0 | 20 | 0.451 J | 0.421 J | 7 (1) | 20 |
| Boron | 101 | 101 | 75-125 | 1 | 20 | 15.3 | 12.8 | 18 (1) | 20 |
| Cadmium | 84 | 84 | 75-125 | 0 | 20 | 1.16 | 0.273 J | 124* (1) | 20 |
| Calcium | 275 (2) | -53 (2) | 75-125 | 16 | 20 | 7,750 | 5,970 | 26* | 20 |
| Chromium | 110 | 118 | 75-125 | 4 | 20 | 15.0 | 16.5 | 9 | 20 |
| Cobalt | 95 | 95 | 75-125 | 0 | 20 | 7.43 | 3.86 | 63* (1) | 20 |
| Copper | 115 | 113 | 75-125 | 1 | 20 | 12.1 | 11.6 | 4 | 20 |
| Iron | 1009 (2) | 1510 (2) | 75-125 | 3 | 20 | 17,500 | 17,100 | 2 | 20 |
| Lead | 50* | 44* | 75-125 | 3 | 20 | 23.2 | 13.4 | 54* (1) | 20 |
| Lithium | 107 | 106 | 75-125 | 1 | 20 | 19.7 | 20.1 | 2 (1) | 20 |
| Magnesium | 264 (2) | 282 (2) | 75-125 | 1 | 20 | 4,380 | 4,170 | 5 | 20 |
| Manganese | 37 (2) | 41 (2) | 75-125 | 0 | 20 | 346 | 290 | 18 | 20 |
| Molybdenum | 99 | 98 | 75-125 | 0 | 20 | 2.73 | 0.348 J | 155* (1) | 20 |
| Nickel | 105 | 106 | 75-125 | 0 | 20 | 8.69 | 9.72 | 11 (1) | 20 |
| Phosphorus | -28 (2) | -49 (2) | 75-125 | 3 | 20 | 663 | 462 | 36* | 20 |
| Potassium | 129* | 135* | 75-125 | 1 | 20 | 3,020 | 2,970 | 2 | 20 |
| Sodium | 104 | 102 | 75-125 | 1 | 20 | 86.7 J | 77.4 J | 11 (1) | 20 |
| Tin | 94 | 94 | 75-125 | 0 | 20 | 10.6 | 2.69 J | 119* (1) | 20 |
| Titanium | 315 (2) | 362 (2) | 75-125 | 4 | 20 | 953 | 968 | 2 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385148
Reported: 05/06/13 at 01:36 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Vanadium | 111 | 111 | 75-125 | 0 | 20 | 28.6 | 27.7 | 3 | 20 |
| Zinc | 107 | 103 | 75-125 | 2 | 20 | 69.3 | 62.6 | 10 | 20 |
| Zirconium | 98 | 98 | 75-125 | 0 | 20 | 2.43 J | 2.34 J | 4 (1) | 20 |
| Batch number: 131220637001A | Sample number(s): 7032824-7032827 UNSPK: P036179 BKG: P036179 | | | | | | | | |
| Silver | 111 | 113 | 75-125 | 2 | 20 | 0.0343 J | 0.0481 J | 33* (1) | 20 |
| Strontium | 39 (2) | 88 (2) | 75-125 | 9 | 20 | 36.6 | 36.0 | 2 | 20 |
| Thallium | 109 | 109 | 75-125 | 0 | 20 | 0.225 | 0.245 | 9 (1) | 20 |
| Batch number: 131220637001B | Sample number(s): 7032824-7032827 UNSPK: P036179 BKG: P036179 | | | | | | | | |
| Selenium | 111 | 108 | 75-125 | 2 | 20 | 0.185 J | 0.220 J | 17 (1) | 20 |
| Batch number: 13114039401A | Sample number(s): 7032824-7032827 BKG: 7032827 | | | | | | | | |
| 15a pH by 9045C | | | | | | 6.66 | 6.63 | 0 | 3 |
| Batch number: 13115162401B | Sample number(s): 7032824-7032827 BKG: P031213 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.7 | 3.6 | 4 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13115SLD026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7032824 | 90 | 102 | 102 |
| 7032825 | 91 | 104 | 102 |
| 7032826 | 91 | 104 | 104 |
| 7032827 | 88 | 92 | 96 |
| Blank | 90 | 108 | 103 |
| LCS | 94 | 111 | 105 |
| MS | 93 | 107 | 102 |
| MSD | 97 | 109 | 102 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13108A16D

| | Trifluorotoluene-F |
|---|---|
| 7032825 | 83 |
| Blank | 85 |
| LCS | 86 |
| LCSD | 80 |
| Limits: | 61-122 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385148
Reported: 05/06/13 at 01:36 PM

## Surrogate Quality Control

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13115B20A

| | Trifluorotoluene-F |
|---|---|
| 7032823 | 87 |
| Blank | 88 |
| LCS | 113 |
| LCSD | 112 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131160002A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7032824 | 123* | 106 |
| 7032825 | 121* | 112 |
| 7032826 | 129* | 110 |
| 7032827 | 117 | 106 |
| Blank | 121* | 104 |
| LCS | 120 | 108 |
| LCSD | 128* | 120 |
| MS | 127* | 112 |
| MSD | 119 | 106 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131140009A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7032824 | 94 | 89 |
| 7032825 | 99 | 96 |
| 7032826 | 88 | 89 |
| 7032827 | 102 | 102 |
| Blank | 87 | 77 |
| LCS | 91 | 91 |
| MS | 95 | 96 |
| MSD | 88 | 89 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13120002

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7032824 | 81 | 80 | 89 | 93 | 89 | 89 |
| 7032825 | 74 | 79 | 87 | 90 | 87 | 90 |
| 7032826 | 73 | 77 | 82 | 87 | 82 | 80 |
| 7032827 | 51 | 52 | 57 | 59 | 57 | 57 |
| Blank | 79 | 84 | 96 | 101 | 96 | 98 |
| OPR | 70 | 72 | 83 | 89 | 83 | 82 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385148
Reported: 05/06/13 at 01:36 PM

## Surrogate Quality Control

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7032824 | 100 | 82 | 78 | 81 | 88 | 87 |
| 7032825 | 97 | 84 | 82 | 79 | 84 | 86 |
| 7032826 | 95 | 75 | 73 | 77 | 80 | 83 |
| 7032827 | 65 | 54 | 52 | 52 | 57 | 59 |
| Blank | 121 | 87 | 81 | 90 | 94 | 93 |
| OPR | 105 | 72 | 68 | 75 | 82 | 83 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7032824 | 86 | 86 | 85 | 76 | 82 |
| 7032825 | 85 | 84 | 85 | 71 | 79 |
| 7032826 | 80 | 80 | 79 | 71 | 80 |
| 7032827 | 56 | 55 | 55 | 48 | 54 |
| Blank | 92 | 95 | 93 | 78 | 88 |
| OPR | 83 | 81 | 79 | 66 | 75 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct#13013 Cp#1385148 Sample#7032823-27

# SSFL Phase 3 Chain of Custody

**CDM Smith**

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 4/23/2013 | Contact Name: | Pam Hartman | COC No: | 20130423-01 |
| CarrierName: | FedEx | Contact Phone: | (818)466-8007 | Cooler #: | 1 |
| AirbillNo: | 7995 9629 9381 | | | Lab: | Lancaster |
| | | | | Lab Phone: | 717-556-7259 |
| | | | | Lab Address | 2425 New Holland Pike<br>Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-042313 | 4/23/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-526-SA7-SB-0.0-0.5 | 4/23/13 09:25 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-526-SA7-SB-0.0-0.5 | 4/23/13 09:25 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-526-SA7-SB-3.5-4.5 | 4/23/13 10:55 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-526-SA7-SB-3.5-4.5 | 4/23/13 10:55 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-526-SA7-SB-3.5-4.5 | 4/23/13 10:55 | SO | None | 1 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-512-SA7-SB-0.0-0.5 | 4/23/13 11:35 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-512-SA7-SB-0.0-0.5 | 4/23/13 11:35 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-525-SA7-SB-0.0-0.5 | 4/23/13 14:20 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| SL-525-SA7-SB-0.0-0.5 | 4/23/13 14:20 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |

Special Instructions:

Sampler: Steven Mercer

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Cotter | 4/23/13 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Pat Gh | 4/24/13 | 0930 |

eurofins | Lancaster Laboratories

C# 1385148

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** COM Smith

**Date of Receipt:** 4/24/13

**Time of Receipt:** 0930

**Source Code:** SO

**Shipping Container Sealed** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT121 | 1.9 | TB | WI | y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** Ø

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** Pat Gh 3472 **Date/Time:** 4/24/13 1050

Issued by Dept. 6042 Management

2174.06

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 09, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/25/2013
Group Number: 1385520
SDG: PH038
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| TB-042413 Water | 7034498 |
| SL-525-SA7-SB-6.5-7.5 Soil | 7034499 |
| SL-529-SA7-SB-0.0-0.5 Soil | 7034500 |
| SL-528-SA7-SB-0.0-0.5 Soil | 7034501 |
| SL-527-SA7-SB-0.0-0.5 Soil | 7034502 |
| SL-527-SA7-SB-2.5-3.5 Soil | 7034503 |
| EB-042413 Water | 7034504 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

**Sample Description: TB-042413 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7034498**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 08:00

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLT24 SDG#: PH038-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13115B20A | 04/26/2013 12:18 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13115B20A | 04/26/2013 12:18 | Catherine J Schwarz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-525-SA7-SB-6.5-7.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7034499**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 09:10 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5256 SDG#: PH038-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.0 | J | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 3.9 | | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 7.9 | J | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.72 | J | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.79 | J | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 0.98 | J | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.73 | J | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.99 | J | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.2 | U | 1.2 | 0.2 | 27.72 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 14 | J | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-525-SA7-SB-6.5-7.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7034499
**LLI Group #** 1385520
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 04/24/2013 09:10 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5256 SDG#: PH038-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C15-C20) | n.a. | 4.4 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 59 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 81 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,600 | | 41.2 | 7.95 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.754 | J | 4.12 | 0.515 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.02 | | 4.12 | 0.340 | 1 |
| 06946 | Barium | 7440-39-3 | 56.5 | | 1.03 | 0.0340 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.603 | J | 1.03 | 0.0691 | 1 |
| 07914 | Boron | 7440-42-8 | 10.3 | J | 10.3 | 0.856 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.142 | J | 1.03 | 0.0340 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,680 | | 20.6 | 4.14 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.0 | | 3.09 | 0.0907 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.23 | | 1.03 | 0.0928 | 1 |
| 06953 | Copper | 7440-50-8 | 11.1 | | 2.06 | 0.186 | 1 |
| 01654 | Iron | 7439-89-6 | 18,000 | | 41.2 | 3.92 | 1 |
| 06955 | Lead | 7439-92-1 | 7.48 | | 3.09 | 0.485 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.3 | | 4.1 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,960 | | 10.3 | 1.78 | 1 |
| 06958 | Manganese | 7439-96-5 | 256 | | 1.03 | 0.0856 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.641 | J | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.84 | | 2.06 | 0.113 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 255 | | 10.3 | 0.526 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,490 | | 103 | 13.9 | 1 |
| 01667 | Sodium | 7440-23-5 | 84.5 | J | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 2.76 | J | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,060 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 30.1 | | 1.03 | 0.113 | 1 |
| 06972 | Zinc | 7440-66-6 | 47.8 | | 4.12 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.41 | J | 5.15 | 0.856 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.412 | U | 0.412 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0459 | J | 0.206 | 0.0206 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.8 | | 0.412 | 0.0351 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.253 | | 0.206 | 0.0309 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0155 | J | 0.0172 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.06 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 20.5 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-6.5-7.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034499**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 09:10 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5256 SDG#: PH038-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.9 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-6.5-7.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034499**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 09:10 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5256 SDG#: PH038-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.05 | U | 1.05 | 0.0208 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0676 | JQ | 5.25 | 0.0269 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.138 | J | 5.25 | 0.0277 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.432 | J | 5.25 | 0.0276 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.248 | JB | 5.25 | 0.0271 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 7.37 | B | 5.25 | 0.0204 | 1 |
| 11031 | OCDD | 3268-87-9 | 72.5 | B | 10.5 | 0.0234 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0980 | J | 1.05 | 0.0371 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.81 | JB | 5.25 | 0.0204 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.368 | JB | 5.25 | 0.0201 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.179 | JBQ | 5.25 | 0.0240 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.237 | JB | 5.25 | 0.0234 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0412 | JBQ | 5.25 | 0.0250 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.232 | JB | 5.25 | 0.0231 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.28 | JB | 5.25 | 0.0174 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.166 | JB | 5.25 | 0.0234 | 1 |
| 11031 | OCDF | 39001-02-0 | 3.30 | JB | 10.5 | 0.0180 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.424 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 74 | 25 - 164 |
| 13C12-12378-PeCDD | 77 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 82 | 28 - 130 |
| 13C12-123789-HxCDD | 79 | 28 - 130 |
| 13C12-1234678-HpCDD | 75 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 70 | 24 - 169 |
| 13C12-12378-PeCDF | 77 | 24 - 185 |
| 13C12-23478-PeCDF | 76 | 21 - 178 |
| 13C12-123478-HxCDF | 83 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 82 | 29 - 147 |
| 13C12-1234678-HpCDF | 88 | 28 - 143 |
| 13C12-1234789-HpCDF | 75 | 26 - 138 |
| 13C12-OCDF | 74 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-6.5-7.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034499**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 09:10 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5256 SDG#: PH038-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-6.5-7.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034499**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 09:10 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5256 SDG#: PH038-02

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 12:02 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13108A16D | 04/26/2013 19:35 | Laura M Krieger | 27.72 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201311530874 | 04/25/2013 15:58 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 10:24 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 09:22 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/02/2013 10:17 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:56 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:19 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-6.5-7.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034499**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 09:10 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5256 SDG#: PH038-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:19 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:19 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:19 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 09:33 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039401A | 04/26/2013 00:03 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401A | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-529-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7034500**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 10:00 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL529 SDG#: PH038-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.2 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 7.2 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 9.0 | J | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.0 | J | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 6.7 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.2 | J | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.1 | J | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.96 | J | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.4 | J | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.0 | J | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.96 | J | 1.7 | 0.70 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.0 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034500**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 10:00 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL529 SDG#: PH038-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,390 | | 40.7 | 7.85 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.598 | J | 4.07 | 0.509 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.64 | | 4.07 | 0.336 | 1 |
| 06946 | Barium | 7440-39-3 | 59.0 | | 1.02 | 0.0336 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.536 | J | 1.02 | 0.0682 | 1 |
| 07914 | Boron | 7440-42-8 | 3.76 | J | 10.2 | 0.845 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.151 | J | 1.02 | 0.0336 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,830 | | 20.4 | 4.09 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.2 | | 3.05 | 0.0896 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.26 | | 1.02 | 0.0916 | 1 |
| 06953 | Copper | 7440-50-8 | 8.58 | | 2.04 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 21,800 | | 40.7 | 3.87 | 1 |
| 06955 | Lead | 7439-92-1 | 8.52 | | 3.05 | 0.478 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.1 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,430 | | 10.2 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 211 | | 1.02 | 0.0845 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.04 | U | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.25 | | 2.04 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 338 | | 10.2 | 0.519 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,850 | | 102 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 45.9 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.84 | J | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 971 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 33.3 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 55.5 | | 4.07 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.55 | J | 5.09 | 0.845 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.358 | J | 0.407 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0393 | J | 0.204 | 0.0204 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.9 | | 0.407 | 0.0346 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.398 | | 0.204 | 0.0305 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0141 | J | 0.0167 | 0.010 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.06 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 20.6 C. | | | | | | |
| **Wet Chemistry** | | **EPA 160.3 modified** | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034500**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 10:00 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL529 SDG#: PH038-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.01 | U | 1.01 | 0.0177 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.117 | J | 5.04 | 0.0213 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.182 | JQ | 5.04 | 0.0248 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.05 | J | 5.04 | 0.0263 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.43 | JB | 5.04 | 0.0256 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 4.89 | JB | 5.04 | 0.0180 | 1 |
| 11031 | OCDD | 3268-87-9 | 32.6 | B | 10.1 | 0.0149 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0747 | JQ | 1.01 | 0.0255 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.103 | JB | 5.04 | 0.0120 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.141 | JB | 5.04 | 0.0112 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0820 | JB | 5.04 | 0.0176 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.544 | JB | 5.04 | 0.0163 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0871 | JB | 5.04 | 0.0187 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0783 | JB | 5.04 | 0.0167 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.599 | JB | 5.04 | 0.0175 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0441 | JBQ | 5.04 | 0.0222 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.07 | JB | 10.1 | 0.0157 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.555 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 75 | 25 - 164 |
| 13C12-12378-PeCDD | 79 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 78 | 23 - 140 |
| 13C12-OCDD | 79 | 17 - 157 |
| 13C12-2378-TCDF | 71 | 24 - 169 |
| 13C12-12378-PeCDF | 80 | 24 - 185 |
| 13C12-23478-PeCDF | 78 | 21 - 178 |
| 13C12-123478-HxCDF | 84 | 26 - 152 |
| 13C12-123678-HxCDF | 87 | 26 - 123 |
| 13C12-234678-HxCDF | 85 | 28 - 136 |
| 13C12-123789-HxCDF | 85 | 29 - 147 |
| 13C12-1234678-HpCDF | 90 | 28 - 143 |
| 13C12-1234789-HpCDF | 78 | 26 - 138 |
| 13C12-OCDF | 78 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034500**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 10:00 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL529 SDG#: PH038-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034500**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 10:00 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL529 SDG#: PH038-03

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 12:33 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 10:42 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 04:12 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/02/2013 11:14 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:59 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:59 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:59 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:59 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:59 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:59 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:59 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:59 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 2 | 131220637001 | 05/05/2013 10:48 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:59 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:21 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:21 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:21 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:21 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034500**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 10:00 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL529 SDG#: PH038-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 09:35 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039401A | 04/26/2013 00:03 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401A | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-528-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7034501**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 10:55 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL528 SDG#: PH038-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.85 | J | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 3.0 | J | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 8.3 | J | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-528-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034501**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 10:55 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL528 SDG#: PH038-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,700 | | 40.3 | 7.76 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.903 | J | 4.03 | 0.503 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.35 | | 4.03 | 0.332 | 1 |
| 06946 | Barium | 7440-39-3 | 72.4 | | 1.01 | 0.0332 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.560 | J | 1.01 | 0.0674 | 1 |
| 07914 | Boron | 7440-42-8 | 10.1 | | 10.1 | 0.835 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.181 | J | 1.01 | 0.0332 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,850 | | 20.1 | 4.05 | 1 |
| 06951 | Chromium | 7440-47-3 | 23.4 | | 3.02 | 0.0886 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.60 | | 1.01 | 0.0906 | 1 |
| 06953 | Copper | 7440-50-8 | 15.4 | | 2.01 | 0.181 | 1 |
| 01654 | Iron | 7439-89-6 | 24,700 | | 40.3 | 3.82 | 1 |
| 06955 | Lead | 7439-92-1 | 6.10 | | 3.02 | 0.473 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.4 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,430 | | 10.1 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 330 | | 1.01 | 0.0835 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 1.49 | J | 2.01 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.7 | | 2.01 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 401 | | 10.1 | 0.513 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,130 | | 101 | 13.6 | 1 |
| 01667 | Sodium | 7440-23-5 | 55.9 | J | 101 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 2.86 | J | 10.1 | 0.221 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,310 | | 1.01 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 44.6 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 57.5 | | 4.03 | 0.201 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.30 | J | 5.03 | 0.835 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.180 | J | 0.403 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0256 | J | 0.201 | 0.0201 | 2 |
| 06144 | Strontium | 7440-24-6 | 18.6 | | 0.403 | 0.0342 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.364 | | 0.201 | 0.0302 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0122 | J | 0.0170 | 0.0102 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.63 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 20.6 C. | | | | | | |
| **Wet Chemistry** | | **EPA 160.3 modified** | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-528-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7034501**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 10:55 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL528 SDG#: PH038-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.996 | U | 0.996 | 0.0177 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0390 | JQ | 4.98 | 0.0158 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0758 | JQ | 4.98 | 0.0170 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0704 | JQ | 4.98 | 0.0176 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0866 | JBQ | 4.98 | 0.0174 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.988 | JB | 4.98 | 0.0139 | 1 |
| 11031 | OCDD | 3268-87-9 | 7.79 | JB | 9.96 | 0.0134 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0416 | JQ | 0.996 | 0.0191 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0856 | JB | 4.98 | 0.00936 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0636 | JBQ | 4.98 | 0.00892 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0558 | JB | 4.98 | 0.0126 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0417 | JBQ | 4.98 | 0.0120 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0289 | JBQ | 4.98 | 0.0137 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0444 | JB | 4.98 | 0.0125 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.247 | JB | 4.98 | 0.00962 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0394 | JBQ | 4.98 | 0.0131 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.507 | JB | 9.96 | 0.0170 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0274 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 79 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 82 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 80 | 23 - 140 |
| 13C12-OCDD | 82 | 17 - 157 |
| 13C12-2378-TCDF | 72 | 24 - 169 |
| 13C12-12378-PeCDF | 80 | 24 - 185 |
| 13C12-23478-PeCDF | 79 | 21 - 178 |
| 13C12-123478-HxCDF | 83 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 83 | 29 - 147 |
| 13C12-1234678-HpCDF | 96 | 28 - 143 |
| 13C12-1234789-HpCDF | 77 | 26 - 138 |
| 13C12-OCDF | 75 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-528-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034501**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 10:55 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL528 SDG#: PH038-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-528-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034501**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 10:55 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL528 SDG#: PH038-04

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 13:04 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 11:00 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 04:32 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/02/2013 12:11 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:03 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:24 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:24 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:24 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:24 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-528-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034501**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 10:55 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL528 SDG#: PH038-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 09:37 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039401A | 04/26/2013 00:03 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401A | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-527-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7034502**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 13:15 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL527 SDG#: PH038-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.42 | J | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.2 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.6 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.8 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.2 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 13 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 3.2 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 0.90 | J | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 22 | | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 4.3 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | J | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.4 | J | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.1 | J | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.6 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.3 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.6 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.6 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 7.8 | J | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034502**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 13:15 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL527 SDG#: PH038-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,800 | | 40.3 | 7.76 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.726 | J | 4.03 | 0.504 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.93 | J | 4.03 | 0.332 | 1 |
| 06946 | Barium | 7440-39-3 | 96.9 | | 1.01 | 0.0332 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.569 | J | 1.01 | 0.0675 | 1 |
| 07914 | Boron | 7440-42-8 | 11.9 | | 10.1 | 0.836 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.294 | J | 1.01 | 0.0332 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,850 | | 20.1 | 4.05 | 1 |
| 06951 | Chromium | 7440-47-3 | 25.1 | | 3.02 | 0.0886 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.80 | | 1.01 | 0.0906 | 1 |
| 06953 | Copper | 7440-50-8 | 14.9 | | 2.01 | 0.181 | 1 |
| 01654 | Iron | 7439-89-6 | 24,300 | | 40.3 | 3.83 | 1 |
| 06955 | Lead | 7439-92-1 | 13.2 | | 3.02 | 0.473 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.7 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,170 | | 10.1 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 342 | | 1.01 | 0.0836 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.370 | J | 2.01 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.6 | | 2.01 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 437 | | 10.1 | 0.514 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,590 | | 101 | 13.6 | 1 |
| 01667 | Sodium | 7440-23-5 | 66.6 | J | 101 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 3.03 | J | 10.1 | 0.222 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,370 | | 1.01 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 44.6 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 61.6 | | 4.03 | 0.201 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.54 | J | 5.04 | 0.836 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.182 | J | 0.403 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0447 | J | 0.201 | 0.0201 | 2 |
| 06144 | Strontium | 7440-24-6 | 27.8 | | 0.403 | 0.0342 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.360 | | 0.201 | 0.0302 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0239 | | 0.0169 | 0.0101 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.54 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 20.6 C. | | | | | | |
| **Wet Chemistry** | | **EPA 160.3 modified** | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034502**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 13:15 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL527 SDG#: PH038-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0353 | JQ | 1.03 | 0.0264 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.140 | J | 5.17 | 0.0328 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.215 | J | 5.17 | 0.0381 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.460 | J | 5.17 | 0.0382 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.373 | JB | 5.17 | 0.0384 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 8.96 | B | 5.17 | 0.0294 | 1 |
| 11031 | OCDD | 3268-87-9 | 89.5 | B | 10.3 | 0.0244 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.214 | JQ | 1.03 | 0.0470 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.254 | JB | 5.17 | 0.0245 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.433 | JB | 5.17 | 0.0245 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.209 | JB | 5.17 | 0.0261 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.197 | JB | 5.17 | 0.0251 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0452 | JB | 5.17 | 0.0267 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.206 | JB | 5.17 | 0.0247 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.69 | JB | 5.17 | 0.0308 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.143 | JB | 5.17 | 0.0407 | 1 |
| 11031 | OCDF | 39001-02-0 | 3.64 | JB | 10.3 | 0.0228 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.584 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 68 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 76 | 28 - 130 |
| 13C12-1234678-HpCDD | 75 | 23 - 140 |
| 13C12-OCDD | 74 | 17 - 157 |
| 13C12-2378-TCDF | 65 | 24 - 169 |
| 13C12-12378-PeCDF | 70 | 24 - 185 |
| 13C12-23478-PeCDF | 69 | 21 - 178 |
| 13C12-123478-HxCDF | 78 | 26 - 152 |
| 13C12-123678-HxCDF | 80 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 82 | 29 - 147 |
| 13C12-1234678-HpCDF | 85 | 28 - 143 |
| 13C12-1234789-HpCDF | 74 | 26 - 138 |
| 13C12-OCDF | 73 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034502**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 13:15 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL527 SDG#: PH038-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034502**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 13:15 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL527 SDG#: PH038-05

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 13:35 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 11:19 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 04:53 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/02/2013 13:07 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:07 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:26 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:26 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:26 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:26 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034502**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 13:15 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL527 SDG#: PH038-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 09:39 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039401A | 04/26/2013 00:03 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401A | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-SA7-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034503**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 14:40 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5272 SDG#: PH038-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 0.77 | J | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 0.3 | J | 1.1 | 0.2 | 27.41 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-SA7-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034503**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 14:40 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5272 SDG#: PH038-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 3.1 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 8.8 | J | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,000 | | 41.0 | 7.91 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.830 | J | 4.10 | 0.513 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.93 | J | 4.10 | 0.339 | 1 |
| 06946 | Barium | 7440-39-3 | 63.1 | | 1.03 | 0.0339 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.795 | J | 1.03 | 0.0687 | 1 |
| 07914 | Boron | 7440-42-8 | 9.37 | J | 10.3 | 0.852 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.189 | J | 1.03 | 0.0339 | 1 |
| 01650 | Calcium | 7440-70-2 | 1,740 | | 20.5 | 4.12 | 1 |
| 06951 | Chromium | 7440-47-3 | 26.8 | | 3.08 | 0.0903 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.28 | | 1.03 | 0.0923 | 1 |
| 06953 | Copper | 7440-50-8 | 14.0 | | 2.05 | 0.185 | 1 |
| 01654 | Iron | 7439-89-6 | 22,500 | | 41.0 | 3.90 | 1 |
| 06955 | Lead | 7439-92-1 | 4.78 | | 3.08 | 0.482 | 1 |
| 01656 | Lithium | 7439-93-2 | 17.7 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,820 | | 10.3 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 277 | | 1.03 | 0.0852 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.238 | J | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.0 | | 2.05 | 0.113 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 349 | | 10.3 | 0.523 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,210 | | 103 | 13.9 | 1 |
| 01667 | Sodium | 7440-23-5 | 97.8 | J | 103 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 2.90 | J | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,370 | | 1.03 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 42.6 | | 1.03 | 0.113 | 1 |
| 06972 | Zinc | 7440-66-6 | 52.2 | | 4.10 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.63 | J | 5.13 | 0.852 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.109 | J | 0.410 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.205 | U | 0.205 | 0.0205 | 2 |
| 06144 | Strontium | 7440-24-6 | 11.7 | | 0.410 | 0.0349 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.314 | | 0.205 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0167 | U | 0.0167 | 0.0100 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.40 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 20.7 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-SA7-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034503**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 14:40 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5272 SDG#: PH038-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.5 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-SA7-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034503**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 14:40 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5272 SDG#: PH038-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0364 | JQ | 1.01 | 0.0230 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0809 | JQ | 5.07 | 0.0213 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0312 | JQ | 5.07 | 0.0173 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0901 | J | 5.07 | 0.0170 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0781 | JBQ | 5.07 | 0.0165 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.254 | JB | 5.07 | 0.0165 | 1 |
| 11031 | OCDD | 3268-87-9 | 1.67 | JB | 10.1 | 0.0178 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0271 | J | 1.01 | 0.0220 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.146 | JBQ | 5.07 | 0.0115 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.109 | JB | 5.07 | 0.0112 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0547 | JBQ | 5.07 | 0.0118 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0489 | JB | 5.07 | 0.0110 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0360 | JBQ | 5.07 | 0.0134 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0390 | JB | 5.07 | 0.0117 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0800 | JB | 5.07 | 0.0115 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0654 | JBQ | 5.07 | 0.0176 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.145 | JB | 10.1 | 0.0246 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0570 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 78 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 65 | 24 - 169 |
| 13C12-12378-PeCDF | 76 | 24 - 185 |
| 13C12-23478-PeCDF | 74 | 21 - 178 |
| 13C12-123478-HxCDF | 78 | 26 - 152 |
| 13C12-123678-HxCDF | 83 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 75 | 29 - 147 |
| 13C12-1234678-HpCDF | 98 | 28 - 143 |
| 13C12-1234789-HpCDF | 71 | 26 - 138 |
| 13C12-OCDF | 67 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-SA7-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034503**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 14:40 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5272 SDG#: PH038-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-SA7-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034503**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 14:40 by SM

Submitted: 04/25/2013 09:30
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5272 SDG#: PH038-06

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 14:06 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13108A16D | 04/26/2013 20:13 | Laura M Krieger | 27.41 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201311530874 | 04/25/2013 15:59 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131160002A | 04/27/2013 11:37 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131160002A | 04/26/2013 22:15 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 05:14 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13120002 | 05/02/2013 14:04 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13120002 | 04/30/2013 11:15 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:10 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:28 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-SA7-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7034503**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 14:40 by SM

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5272 SDG#: PH038-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:28 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:28 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:28 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 09:41 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039401A | 04/26/2013 00:03 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401A | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-042413 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7034504**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:00 by VC

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE24 SDG#: PH038-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | |
| 12971 | Acenaphthene | 83-32-9 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 | U | 1.1 | 0.054 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.15 | J | 1.1 | 0.054 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.089 | J | 1.1 | 0.054 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 | U | 1.1 | 0.054 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.20 | J | 1.1 | 0.054 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.011 | J | 0.054 | 0.011 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.053 | J | 0.054 | 0.033 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.1 | U | 1.1 | 0.054 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.054 | U | 0.054 | 0.033 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.054 | U | 0.054 | 0.011 | 1 |

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10589 | Aldrin | 309-00-2 | 0.0084 | U | 0.0084 | 0.0017 | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0084 | U | 0.0084 | 0.0025 | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0084 | U | 0.0084 | 0.0028 | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0084 | U | 0.0084 | 0.0017 | 1 |
| 10589 | Chlordane | 57-74-9 | 0.42 | U | 0.42 | 0.13 | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.017 | U | 0.017 | 0.0042 | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.017 | U | 0.017 | 0.0042 | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.017 | U | 0.017 | 0.0044 | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0084 | U | 0.0084 | 0.0028 | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.017 | U | 0.017 | 0.0044 | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0084 | U | 0.0084 | 0.0036 | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.017 | U | 0.017 | 0.013 | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.017 | U | 0.017 | 0.0049 | 1 |
| 10589 | Endrin | 72-20-8 | 0.017 | U | 0.017 | 0.0068 | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.084 | U | 0.084 | 0.017 | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.017 | U | 0.017 | 0.0042 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-042413 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7034504**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:00 by VC

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE24 SDG#: PH038-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10589 | Heptachlor | 76-44-8 | 0.0084 | U | 0.0084 | 0.0017 | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0084 | U | 0.0084 | 0.0019 | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.084 | U | 0.084 | 0.025 | 1 |
| 10589 | Mirex | 2385-85-5 | 0.21 | U | 0.21 | 0.071 | 1 |
| 10589 | Toxaphene | 8001-35-2 | 2.5 | U | 2.5 | 0.84 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10591 | Aroclor 5432 | 63496-31-1 | 0.42 | U | 0.42 | 0.084 | 1 |
| 10591 | Aroclor 5442 | 12642-23-8 | 0.42 | U | 0.42 | 0.084 | 1 |
| 10591 | Aroclor 5460 | 11126-42-4 | 0.42 | U | 0.42 | 0.084 | 1 |
| 10591 | PCB-1016 | 12674-11-2 | 0.42 | U | 0.42 | 0.084 | 1 |
| 10591 | PCB-1221 | 11104-28-2 | 0.42 | U | 0.42 | 0.084 | 1 |
| 10591 | PCB-1232 | 11141-16-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 10591 | PCB-1242 | 53469-21-9 | 0.42 | U | 0.42 | 0.084 | 1 |
| 10591 | PCB-1248 | 12672-29-6 | 0.42 | U | 0.42 | 0.084 | 1 |
| 10591 | PCB-1254 | 11097-69-1 | 0.42 | U | 0.42 | 0.084 | 1 |
| 10591 | PCB-1260 | 11096-82-5 | 0.42 | U | 0.42 | 0.13 | 1 |
| 10591 | PCB-1262 | 37324-23-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 10591 | PCB-1268 | 11100-14-4 | 0.42 | U | 0.42 | 0.13 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.58 | U | 0.58 | 0.097 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.58 | U | 0.58 | 0.097 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.58 | U | 0.58 | 0.097 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.58 | U | 0.58 | 0.097 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.58 | U | 0.58 | 0.097 | 1 |

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0743 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0035 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.0319 | J | 0.100 | 0.0083 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00036 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 | U | 0.400 | 0.0640 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0011 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 | U | 0.0100 | 0.00066 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 | U | 0.0200 | 0.0021 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-042413 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7034504**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:00 by VC

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE24 SDG#: PH038-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0333 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0051 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0060 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0606 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 U | 0.0200 | 0.0029 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0011 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0052 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.145 | 1 |
| 01767 | Sodium | 7440-23-5 | 0.228 J | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0035 J | 0.0400 | 0.0022 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0092 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00010 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00022 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000070 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b. pH (9040B and 9040C) | n.a. | 5.7 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-042413 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7034504**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:00 by VC

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE24 SDG#: PH038-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.93 | U | 1.93 | 0.230 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 9.65 | U | 9.65 | 0.259 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 9.65 | U | 9.65 | 0.136 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.65 | U | 9.65 | 0.150 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 0.282 | JBQ | 9.65 | 0.136 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.448 | JB | 9.65 | 0.152 | 1 |
| 10915 | OCDD | 3268-87-9 | 0.854 | JBQ | 19.3 | 0.234 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.93 | U | 1.93 | 0.143 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.561 | JBQ | 9.65 | 0.137 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.409 | JBQ | 9.65 | 0.152 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.251 | JB | 9.65 | 0.0877 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.255 | JB | 9.65 | 0.0881 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.240 | JB | 9.65 | 0.0831 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.178 | JB | 9.65 | 0.0900 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.199 | JBQ | 9.65 | 0.0523 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.191 | JBQ | 9.65 | 0.0633 | 1 |
| 10915 | OCDF | 39001-02-0 | 0.673 | JBQ | 19.3 | 0.175 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0969 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 57 | 25 - 164 |
| 13C12-12378-PeCDD | 56 | 25 - 181 |
| 13C12-123478-HxCDD | 74 | 32 - 141 |
| 13C12-123678-HxCDD | 71 | 28 - 130 |
| 13C12-123789-HxCDD | 71 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 88 | 17 - 157 |
| 13C12-2378-TCDF | 60 | 24 - 169 |
| 13C12-12378-PeCDF | 68 | 24 - 185 |
| 13C12-23478-PeCDF | 57 | 21 - 178 |
| 13C12-123478-HxCDF | 70 | 26 - 152 |
| 13C12-123678-HxCDF | 68 | 26 - 123 |
| 13C12-234678-HxCDF | 67 | 28 - 136 |
| 13C12-123789-HxCDF | 83 | 29 - 147 |
| 13C12-1234678-HpCDF | 75 | 28 - 143 |
| 13C12-1234789-HpCDF | 75 | 26 - 138 |
| 13C12-OCDF | 78 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: EB-042413 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7034504**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:00 by VC

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE24 SDG#: PH038-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB-042413 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7034504**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:00 by VC

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE24 SDG#: PH038-07EB*

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119WAI026 | 05/07/2013 00:32 | Holly Berry | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13119WAI026 | 04/30/2013 10:20 | Elizabeth A Sholder | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13115B20A | 04/26/2013 12:40 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13115B20A | 04/26/2013 12:40 | Catherine J Schwarz | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 131190017A | 05/03/2013 21:00 | Jamie L Brillhart | 1 |
| 10591 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 131190018A | 05/03/2013 00:26 | Monica M Souders | 1 |
| 11121 | PCB Waters Update IV Ext | SW-846 3510C | 1 | 131190018A | 04/30/2013 10:30 | William H Saadeh | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 131190017A | 04/30/2013 10:30 | William H Saadeh | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200026A | 05/01/2013 22:20 | Heather E Williams | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 131200026A | 05/01/2013 07:10 | Catherine R Wiker | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13122002 | 05/03/2013 22:18 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13122002 | 05/02/2013 08:00 | Deborah M Zimmerman | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-042413 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7034504**
**LLI Group # 1385520**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:00 by VC

Submitted: 04/25/2013 09:30
Reported: 05/09/2013 09:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SLE24 SDG#: PH038-07EB*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07070 | Titanium | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 131180635001 | 04/29/2013 18:37 | Katlin N Cataldi | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 131180639001B | 04/30/2013 14:04 | David K Beck | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 131180639001A | 04/30/2013 14:04 | David K Beck | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 131180639001A | 04/30/2013 14:04 | David K Beck | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 131180639001A | 04/30/2013 14:04 | David K Beck | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 131205713006 | 05/02/2013 10:28 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 131180635001 | 04/29/2013 09:52 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 131180639001 | 04/29/2013 10:00 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 131205713006 | 05/01/2013 18:20 | Nelli S Markaryan | 1 |
| 12152 | 28b. pH (9040B and 9040C) | SW-846 9040C | 1 | 13115002101A | 04/25/2013 23:31 | Clayton C Litchmore | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385520
Reported: 05/09/13 at 09:39 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13119SLC026 | Sample number(s): 7034499-7034503 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 115 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 100 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 86 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 92 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 90 | | 71-120 | | |
| Batch number: 13119WAI026 | Sample number(s): 7034504 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 101 | 65-124 | 1 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 106 | 107 | 72-113 | 1 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 103 | 102 | 70-117 | 0 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 101 | 75-115 | 0 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 100 | 72-120 | 1 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 107 | 74-130 | 1 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 88 | 88 | 70-130 | 0 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 99 | 63-121 | 1 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 111 | 74-118 | 0 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 73 | 66 | 40-138 | 10 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 97 | 95 | 70-145 | 2 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 103 | 75-112 | 1 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 99 | 66-122 | 0 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 101 | 97 | 74-129 | 5 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 89 | 79 | 40-119 | 11 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385520
Reported: 05/09/13 at 09:39 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 0.16 | J | 1.0 | 0.050 | ug/l | 87 | 100 | 70-143 | 14 | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 105 | 73-116 | 0 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 100 | 74-115 | 1 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 94 | 95 | 66-122 | 1 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 106 | 71-120 | 0 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 103 | 74-119 | 1 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 101 | 101 | 67-118 | 0 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 81 | 80 | 36-120 | 1 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 67 | 64 | 57-145 | 3 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 102 | 102 | 72-109 | 0 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 106 | 71-116 | 1 | 30 |
| Batch number: 13108A16D | Sample number(s): 7034499,7034503 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 89 | 82 | 67-119 | 8 | 30 |
| Batch number: 13115B20A | Sample number(s): 7034498,7034504 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 95 | 97 | 75-135 | 2 | 30 |
| Batch number: 131160002A | Sample number(s): 7034499-7034503 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 81 | 81 | 36-106 | 0 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 99 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 103 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131190017A | Sample number(s): 7034504 | | | | | | | | | |
| Aldrin | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 85 | 92 | 55-126 | 8 | 30 |
| Alpha BHC | 0.0080 | U | 0.0080 | 0.0024 | ug/l | 102 | 108 | 63-132 | 6 | 30 |
| Beta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 95 | 104 | 63-132 | 8 | 30 |
| Gamma BHC - Lindane | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 106 | 116 | 68-128 | 9 | 30 |
| Chlordane | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| p,p-DDD | 0.016 | U | 0.016 | 0.0040 | ug/l | 113 | 129 | 62-143 | 14 | 30 |
| p,p-DDE | 0.016 | U | 0.016 | 0.0040 | ug/l | 101 | 108 | 56-137 | 6 | 30 |
| p,p-DDT | 0.016 | U | 0.016 | 0.0042 | ug/l | 135* | 149* | 45-134 | 9 | 30 |
| Delta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 101 | 109 | 63-131 | 8 | 30 |
| Dieldrin | 0.016 | U | 0.016 | 0.0042 | ug/l | 106 | 110 | 65-135 | 3 | 30 |
| Endosulfan I | 0.0080 | U | 0.0080 | 0.0034 | ug/l | 97 | 109 | 48-124 | 12 | 30 |
| Endosulfan II | 0.016 | U | 0.016 | 0.012 | ug/l | 112 | 122 | 53-123 | 8 | 30 |
| Endosulfan Sulfate | 0.016 | U | 0.016 | 0.0046 | ug/l | 112 | 128 | 60-129 | 13 | 30 |
| Endrin | 0.016 | U | 0.016 | 0.0065 | ug/l | 100 | 108 | 43-139 | 8 | 30 |
| Endrin Aldehyde | 0.080 | U | 0.080 | 0.016 | ug/l | 101 | 115 | 55-123 | 13 | 20 |
| Endrin Ketone | 0.016 | U | 0.016 | 0.0040 | ug/l | 116 | 122 | 51-138 | 5 | 30 |
| Heptachlor | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 96 | 109 | 57-126 | 13 | 30 |
| Heptachlor Epoxide | 0.0080 | U | 0.0080 | 0.0018 | ug/l | 99 | 105 | 65-128 | 6 | 30 |
| Methoxychlor | 0.080 | U | 0.080 | 0.024 | ug/l | 154* | 174* | 46-134 | 12 | 30 |
| Mirex | 0.20 | U | 0.20 | 0.068 | ug/l | | | | | |
| Toxaphene | 2.4 | U | 2.4 | 0.80 | ug/l | | | | | |
| Batch number: 131190018A | Sample number(s): 7034504 | | | | | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385520
Reported: 05/09/13 at 09:39 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 67 | 70 | 35-84 | 3 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 99 | 101 | 69-120 | 2 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 93 | 98 | 69-128 | 6 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 131200001A | Sample number(s): 7034499-7034503 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 93 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 99 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 97 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 63* | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 80 | | 49-107 | | |
| Batch number: 131200026A | Sample number(s): 7034504 | | | | | | | | | |
| EFH (C12-C14) | 0.60 | U | 0.60 | 0.10 | mg/l | 77 | 80 | 70-130 | 4 | 30 |
| EFH (C15-C20) | 0.60 | U | 0.60 | 0.10 | mg/l | 80 | 84 | 70-130 | 4 | 30 |
| EFH (C21-C30) | 0.60 | U | 0.60 | 0.10 | mg/l | 83 | 87 | 70-130 | 4 | 30 |
| EFH (C30 - C40) | 0.60 | U | 0.60 | 0.10 | mg/l | 64* | 67* | 70-130 | 6 | 30 |
| EFH (C8-C11) | 0.60 | U | 0.60 | 0.10 | mg/l | 67* | 72 | 70-130 | 8 | 30 |
| Batch number: 131180635001 | Sample number(s): 7034504 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0743 | mg/l | 100 | 103 | 90-112 | 2 | 20 |
| Antimony | 0.0400 | U | 0.0400 | 0.0035 | mg/l | 104 | 103 | 88-111 | 1 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 98 | 96 | 90-113 | 2 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 103 | 103 | 90-110 | 0 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 100 | 100 | 88-110 | 0 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0083 | mg/l | 97 | 95 | 89-110 | 2 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00036 | mg/l | 101 | 102 | 90-112 | 0 | 20 |
| Calcium | 0.400 | U | 0.400 | 0.0640 | mg/l | 101 | 102 | 90-110 | 1 | 20 |
| Chromium | 0.0300 | U | 0.0300 | 0.0011 | mg/l | 100 | 100 | 90-110 | 0 | 20 |
| Cobalt | 0.0100 | U | 0.0100 | 0.00066 | mg/l | 101 | 102 | 90-110 | 1 | 20 |
| Copper | 0.0200 | U | 0.0200 | 0.0021 | mg/l | 102 | 102 | 90-112 | 0 | 20 |
| Iron | 0.400 | U | 0.400 | 0.0333 | mg/l | 98 | 99 | 90-112 | 2 | 20 |
| Lead | 0.0300 | U | 0.0300 | 0.0051 | mg/l | 102 | 104 | 88-110 | 2 | 20 |
| Lithium | 0.0400 | U | 0.0400 | 0.0060 | mg/l | 101 | 101 | 90-110 | 1 | 20 |
| Magnesium | 0.200 | U | 0.200 | 0.0606 | mg/l | 99 | 100 | 90-110 | 1 | 20 |
| Manganese | 0.0100 | U | 0.0100 | 0.00083 | mg/l | 102 | 102 | 90-110 | 0 | 20 |
| Molybdenum | 0.0200 | U | 0.0200 | 0.0029 | mg/l | 102 | 103 | 90-110 | 1 | 20 |
| Nickel | 0.0200 | U | 0.0200 | 0.0011 | mg/l | 104 | 104 | 90-111 | 0 | 20 |
| Phosphorus | 0.200 | U | 0.200 | 0.0052 | mg/l | 99 | 100 | 90-110 | 1 | 20 |
| Potassium | 1.00 | U | 1.00 | 0.145 | mg/l | 100 | 100 | 85-115 | 1 | 20 |
| Sodium | 2.00 | U | 2.00 | 0.167 | mg/l | 101 | 102 | 87-114 | 1 | 20 |
| Tin | 0.0400 | U | 0.0400 | 0.0022 | mg/l | 99 | 100 | 90-110 | 1 | 20 |
| Titanium | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 102 | 102 | 90-113 | 1 | 20 |
| Vanadium | 0.0100 | U | 0.0100 | 0.0013 | mg/l | 102 | 103 | 90-110 | 1 | 20 |
| Zinc | 0.0400 | U | 0.0400 | 0.0020 | mg/l | 102 | 102 | 90-110 | 0 | 20 |
| Zirconium | 0.100 | U | 0.100 | 0.0092 | mg/l | 103 | 105 | 90-110 | 2 | 20 |
| Batch number: 131180639001A | Sample number(s): 7034504 | | | | | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385520
Reported: 05/09/13 at 09:39 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Silver | 0.0010 U | 0.0010 | 0.00010 | mg/l | 99 | 100 | 90-115 | 1 | 20 |
| Strontium | 0.0020 U | 0.0020 | 0.00022 | mg/l | 96 | 100 | 80-120 | 4 | 20 |
| Thallium | 0.0010 U | 0.0010 | 0.00015 | mg/l | 98 | 100 | 80-120 | 2 | 20 |
| Batch number: 131180639001B | Sample number(s): 7034504 | | | | | | | | |
| Selenium | 0.0040 U | 0.0040 | 0.00050 | mg/l | 98 | 106 | 80-120 | 8 | 20 |
| Batch number: 131205713006 | Sample number(s): 7034504 | | | | | | | | |
| 3b Mercury 7470A | 0.00020 U | 0.00020 | 0.00007 0 | mg/l | 92 | 92 | 90-115 | 1 | 20 |
| Batch number: 131220637001 | Sample number(s): 7034499-7034503 | | | | | | | | |
| Aluminum | 40.0 U | 40.0 | 7.71 | mg/kg | 101 | | 80-120 | | |
| Antimony | 4.00 U | 4.00 | 0.500 | mg/kg | 104 | | 80-120 | | |
| Arsenic | 4.00 U | 4.00 | 0.330 | mg/kg | 104 | | 80-120 | | |
| Barium | 1.00 U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 10.0 U | 10.0 | 0.830 | mg/kg | 99 | | 80-120 | | |
| Cadmium | 1.00 U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Calcium | 20.0 U | 20.0 | 4.02 | mg/kg | 103 | | 80-120 | | |
| Chromium | 3.00 U | 3.00 | 0.0880 | mg/kg | 102 | | 80-120 | | |
| Cobalt | 1.00 U | 1.00 | 0.0900 | mg/kg | 106 | | 80-120 | | |
| Copper | 2.00 U | 2.00 | 0.180 | mg/kg | 109 | | 80-120 | | |
| Iron | 40.0 U | 40.0 | 3.80 | mg/kg | 101 | | 80-120 | | |
| Lead | 3.00 U | 3.00 | 0.470 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 10.0 U | 10.0 | 1.73 | mg/kg | 99 | | 80-120 | | |
| Manganese | 1.00 U | 1.00 | 0.0830 | mg/kg | 105 | | 80-120 | | |
| Molybdenum | 2.00 U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 U | 2.00 | 0.110 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 1.44 J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | 100. | 13.5 | mg/kg | 100 | | 80-120 | | |
| Sodium | 100 U | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.47 J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 U | 1.00 | 0.110 | mg/kg | 102 | | 80-120 | | |
| Zinc | 4.00 U | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 U | 5.00 | 0.830 | mg/kg | 101 | | 80-120 | | |
| Batch number: 131220637001A | Sample number(s): 7034499-7034503 | | | | | | | | |
| Silver | 0.200 U | 0.200 | 0.0200 | mg/kg | 109 | | 80-120 | | |
| Strontium | 0.400 U | 0.400 | 0.0340 | mg/kg | 110 | | 80-120 | | |
| Thallium | 0.200 U | 0.200 | 0.0300 | mg/kg | 105 | | 80-120 | | |
| Batch number: 131220637001B | Sample number(s): 7034499-7034503 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 107 | | 80-120 | | |
| Batch number: 131220638001 | Sample number(s): 7034499-7034503 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 108 | | 85-120 | | |
| Batch number: 13115002101A | Sample number(s): 7034504 | | | | | | | | |
| 28b. pH (9040B and 9040C) | | | | | 100 | | 99-103 | | |
| Batch number: 13116039401A | Sample number(s): 7034499-7034503 | | | | | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385520
Reported: 05/09/13 at 09:39 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 15a pH by 9045C | | | | | 99 | | 95-105 | | |
| Batch number: 13121162401A | Sample number(s): 7034499-7034503 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13120002 | Sample number(s): 7034499-7034503 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0200 | ng/kg | 93 | | 67-158 | | |
| 12378-PeCDD | 5.00 U | 5.00 | 0.0209 | ng/kg | 96 | | 70-142 | | |
| 123478-HxCDD | 5.00 U | 5.00 | 0.0137 | ng/kg | 102 | | 70-164 | | |
| 123678-HxCDD | 5.00 U | 5.00 | 0.0147 | ng/kg | 99 | | 76-134 | | |
| 123789-HxCDD | 0.0225 J | 5.00 | 0.0141 | ng/kg | 99 | | 64-162 | | |
| 1234678-HpCDD | 0.0731 J | 5.00 | 0.0152 | ng/kg | 98 | | 70-140 | | |
| OCDD | 0.155 J | 10.0 | 0.0149 | ng/kg | 98 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0167 | ng/kg | 96 | | 75-158 | | |
| 12378-PeCDF | 0.0365 J | 5.00 | 0.00978 | ng/kg | 100 | | 80-134 | | |
| 23478-PeCDF | 0.0100 J | 5.00 | 0.00992 | ng/kg | 101 | | 68-160 | | |
| 123478-HxCDF | 0.0375 J | 5.00 | 0.0105 | ng/kg | 103 | | 72-134 | | |
| 123678-HxCDF | 0.0203 J | 5.00 | 0.00971 | ng/kg | 100 | | 84-130 | | |
| 123789-HxCDF | 0.0140 J | 5.00 | 0.0114 | ng/kg | 101 | | 78-130 | | |
| 234678-HxCDF | 0.0283 J | 5.00 | 0.0104 | ng/kg | 100 | | 70-156 | | |
| 1234678-HpCDF | 0.0401 J | 5.00 | 0.00639 | ng/kg | 98 | | 82-122 | | |
| 1234789-HpCDF | 0.0269 J | 5.00 | 0.0103 | ng/kg | 100 | | 78-138 | | |
| OCDF | 0.107 J | 10.0 | 0.0237 | ng/kg | 99 | | 63-170 | | |
| Batch number: 13122002 | Sample number(s): 7034504 | | | | | | | | |
| 2378-TCDD | 0.231 J | 2.00 | 0.221 | pg/l | 93 | | 60-150 | | |
| 12378-PeCDD | 0.315 J | 10.0 | 0.205 | pg/l | 92 | | 60-150 | | |
| 123478-HxCDD | 0.249 J | 10.0 | 0.142 | pg/l | 90 | | 60-150 | | |
| 123678-HxCDD | 0.211 J | 10.0 | 0.151 | pg/l | 90 | | 60-150 | | |
| 123789-HxCDD | 0.197 J | 10.0 | 0.147 | pg/l | 90 | | 60-150 | | |
| 1234678-HpCDD | 0.480 J | 10.0 | 0.153 | pg/l | 90 | | 60-150 | | |
| OCDD | 0.631 J | 20.0 | 0.293 | pg/l | 89 | | 60-150 | | |
| 2378-TCDF | 0.183 J | 2.00 | 0.174 | pg/l | 96 | | 60-150 | | |
| 12378-PeCDF | 0.487 J | 10.0 | 0.143 | pg/l | 91 | | 60-150 | | |
| 23478-PeCDF | 0.214 J | 10.0 | 0.127 | pg/l | 91 | | 60-150 | | |
| 123478-HxCDF | 0.185 J | 10.0 | 0.0968 | pg/l | 88 | | 60-150 | | |
| 123678-HxCDF | 0.186 J | 10.0 | 0.0935 | pg/l | 88 | | 60-150 | | |
| 123789-HxCDF | 0.423 J | 10.0 | 0.111 | pg/l | 89 | | 60-150 | | |
| 234678-HxCDF | 0.377 J | 10.0 | 0.0974 | pg/l | 89 | | 60-150 | | |
| 1234678-HpCDF | 0.366 J | 10.0 | 0.0562 | pg/l | 90 | | 60-150 | | |
| 1234789-HpCDF | 0.365 J | 10.0 | 0.0753 | pg/l | 90 | | 60-150 | | |
| OCDF | 0.595 J | 20.0 | 0.252 | pg/l | 89 | | 60-150 | | |
| Batch number: 13120002 | Sample number(s): 7034499-7034503 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00349 | | | ng/kg | | | | | |
| Batch number: 13122002 | Sample number(s): 7034504 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0796 | | | pg/l | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385520
Reported: 05/09/13 at 09:39 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13119SLC026 | Sample number(s): 7034499-7034503 UNSPK: P036179 | | | | | | | | | |
| Acenaphthene | 95 | 91 | 48-127 | 4 | 30 | | | | | |
| Acenaphthylene | 88 | 86 | 49-121 | 2 | 30 | | | | | |
| Anthracene | 94 | 87 | 52-126 | 8 | 30 | | | | | |
| Benzo(a)anthracene | 159* | 85 | 32-135 | 55* | 30 | | | | | |
| Benzo(a)pyrene | 143* | 85 | 36-138 | 45* | 30 | | | | | |
| Benzo(b)fluoranthene | 163* | 91 | 26-142 | 43* | 30 | | | | | |
| Benzo(e)pyrene | 123 | 86 | 70-130 | 31* | 30 | | | | | |
| Benzo(g,h,i)perylene | 74 | 50 | 33-141 | 35* | 30 | | | | | |
| Benzo(k)fluoranthene | 121 | 88 | 47-129 | 25 | 30 | | | | | |
| Butylbenzylphthalate | 103 | 106 | 59-153 | 3 | 30 | | | | | |
| Di-n-butylphthalate | 101 | 97 | 62-154 | 4 | 30 | | | | | |
| Chrysene | 163* | 81 | 29-148 | 55* | 30 | | | | | |
| Dibenz(a,h)anthracene | 78 | 65 | 34-125 | 17 | 30 | | | | | |
| Diethylphthalate | 106 | 103 | 76-127 | 3 | 30 | | | | | |
| Dimethylphthalate | 91 | 89 | 62-136 | 3 | 30 | | | | | |
| Bis(2-Ethylhexyl)phthalate | 76 | 63 | 39-167 | 10 | 30 | | | | | |
| Fluoranthene | 205* | 85 | 47-135 | 70* | 30 | | | | | |
| Fluorene | 90 | 89 | 50-129 | 1 | 30 | | | | | |
| Indeno(1,2,3-cd)pyrene | 87 | 61 | 17-136 | 32* | 30 | | | | | |
| 1-Methylnaphthalene | 98 | 98 | 50-131 | 0 | 30 | | | | | |
| 2-Methylnaphthalene | 98 | 98 | 28-144 | 0 | 30 | | | | | |
| Naphthalene | 97 | 96 | 31-148 | 0 | 30 | | | | | |
| N-Nitrosodimethylamine | 93 | 93 | 48-113 | 0 | 30 | | | | | |
| Di-n-octylphthalate | 108 | 116 | 52-162 | 8 | 30 | | | | | |
| Phenanthrene | 124 | 92 | 29-142 | 28 | 30 | | | | | |
| Pyrene | 195* | 76 | 26-143 | 75* | 30 | | | | | |
| Batch number: 131160002A | Sample number(s): 7034499-7034503 UNSPK: P031213 | | | | | | | | | |
| PCB-1016 | 108 | 102 | 16-146 | 6 | 50 | | | | | |
| PCB-1260 | 114 | 102 | 40-134 | 11 | 50 | | | | | |
| Batch number: 131200001A | Sample number(s): 7034499-7034503 UNSPK: P036179 | | | | | | | | | |
| EFH (C12-C14) | 147* | 137* | 49-123 | 4 | 20 | | | | | |
| EFH (C15-C20) | 418 (2) | 352 (2) | 49-123 | 7 | 20 | | | | | |
| EFH (C21-C30) | 1125 (2) | 986 (2) | 49-123 | 7 | 20 | | | | | |
| EFH (C30-C40) | 406 (2) | 755 (2) | 49-123 | 14 | 20 | | | | | |
| EFH (C8-C11) | 140* | 151* | 49-123 | 4 | 20 | | | | | |
| Batch number: 131220637001 | Sample number(s): 7034499-7034503 UNSPK: P036179 BKG: P036179 | | | | | | | | | |
| Aluminum | 1523 (2) | 1646 (2) | 75-125 | 2 | 20 | 11,400 | 10,900 | | 5 | 20 |
| Antimony | 57* | 57* | 75-125 | 0 | 20 | 4.52 | 3.96 | U | 200* (1) | 20 |
| Arsenic | 102 | 102 | 75-125 | 0 | 20 | 4.34 | 3.98 | | 9 (1) | 20 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385520
Reported: 05/09/13 at 09:39 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 101 | 98 | 75-125 | 2 | 20 | 101 | 88.6 | 13 | 20 |
| Beryllium | 106 | 106 | 75-125 | 0 | 20 | 0.451 J | 0.421 J | 7 (1) | 20 |
| Boron | 101 | 101 | 75-125 | 1 | 20 | 15.3 | 12.8 | 18 (1) | 20 |
| Cadmium | 84 | 84 | 75-125 | 0 | 20 | 1.16 | 0.273 J | 124* (1) | 20 |
| Calcium | 275 (2) | -53 (2) | 75-125 | 16 | 20 | 7,750 | 5,970 | 26* | 20 |
| Chromium | 110 | 118 | 75-125 | 4 | 20 | 15.0 | 16.5 | 9 | 20 |
| Cobalt | 95 | 95 | 75-125 | 0 | 20 | 7.43 | 3.86 | 63* (1) | 20 |
| Copper | 115 | 113 | 75-125 | 1 | 20 | 12.1 | 11.6 | 4 | 20 |
| Iron | 1009 (2) | 1510 (2) | 75-125 | 3 | 20 | 17,500 | 17,100 | 2 | 20 |
| Lead | 50* | 44* | 75-125 | 3 | 20 | 23.2 | 13.4 | 54* (1) | 20 |
| Lithium | 107 | 106 | 75-125 | 1 | 20 | 19.7 | 20.1 | 2 (1) | 20 |
| Magnesium | 264 (2) | 282 (2) | 75-125 | 1 | 20 | 4,380 | 4,170 | 5 | 20 |
| Manganese | 37 (2) | 41 (2) | 75-125 | 0 | 20 | 346 | 290 | 18 | 20 |
| Molybdenum | 99 | 98 | 75-125 | 0 | 20 | 2.73 | 0.348 J | 155* (1) | 20 |
| Nickel | 105 | 106 | 75-125 | 0 | 20 | 8.69 | 9.72 | 11 (1) | 20 |
| Phosphorus | -28 (2) | -49 (2) | 75-125 | 3 | 20 | 663 | 462 | 36* | 20 |
| Potassium | 129* | 135* | 75-125 | 1 | 20 | 3,020 | 2,970 | 2 | 20 |
| Sodium | 104 | 102 | 75-125 | 1 | 20 | 86.7 J | 77.4 J | 11 (1) | 20 |
| Tin | 94 | 94 | 75-125 | 0 | 20 | 10.6 | 2.69 J | 119* (1) | 20 |
| Titanium | 315 (2) | 362 (2) | 75-125 | 4 | 20 | 953 | 968 | 2 | 20 |
| Vanadium | 111 | 111 | 75-125 | 0 | 20 | 28.6 | 27.7 | 3 | 20 |
| Zinc | 107 | 103 | 75-125 | 2 | 20 | 69.3 | 62.6 | 10 | 20 |
| Zirconium | 98 | 98 | 75-125 | 0 | 20 | 2.43 J | 2.34 J | 4 (1) | 20 |
| Batch number: 131220637001A | Sample number(s): 7034499-7034503 UNSPK: P036179 BKG: P036179 | | | | | | | | |
| Silver | 111 | 113 | 75-125 | 2 | 20 | 0.0343 J | 0.0481 J | 33* (1) | 20 |
| Strontium | 39 (2) | 88 (2) | 75-125 | 9 | 20 | 36.6 | 36.0 | 2 | 20 |
| Thallium | 109 | 109 | 75-125 | 0 | 20 | 0.225 | 0.245 | 9 (1) | 20 |
| Batch number: 131220637001B | Sample number(s): 7034499-7034503 UNSPK: P036179 BKG: P036179 | | | | | | | | |
| Selenium | 111 | 108 | 75-125 | 2 | 20 | 0.185 J | 0.220 J | 17 (1) | 20 |
| Batch number: 131220638001 | Sample number(s): 7034499-7034503 UNSPK: P036179 BKG: P036179 | | | | | | | | |
| 3a Mercury 7471A | 109 | 101 | 65-135 | 9 | 20 | 0.0567 | 0.0552 | 3 (1) | 20 |
| Batch number: 13115002101A | Sample number(s): 7034504 BKG: P034041 | | | | | | | | |
| 28b. pH (9040B and 9040C) | | | | | | 7.3 | 7.4 | 1 | 3 |
| Batch number: 13116039401A | Sample number(s): 7034499-7034503 BKG: 7034499 | | | | | | | | |
| 15a pH by 9045C | | | | | | 7.06 | 7.13 | 1 | 3 |
| Batch number: 13121162401A | Sample number(s): 7034499-7034503 BKG: P036179 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.6 | 6.1 | 28* | 20 |
| Batch number: 13120002 | Sample number(s): 7034499-7034503 UNSPK: P031213 | | | | | | | | |
| 2378-TCDD | 92 | 92 | 40-135 | 2 | 20 | | | | |
| 12378-PeCDD | 96 | 96 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDD | 101 | 100 | 40-135 | 2 | 20 | | | | |
| 123678-HxCDD | 98 | 99 | 40-135 | 4 | 20 | | | | |
| 123789-HxCDD | 100 | 99 | 40-135 | 2 | 20 | | | | |
| 1234678-HpCDD | 96 | 101 | 40-135 | 6 | 20 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385520
Reported: 05/09/13 at 09:39 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| OCDD | 99 | 139* | 40-135 | 21* | 20 | | | | |
| 2378-TCDF | 99 | 97 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDF | 99 | 97 | 40-135 | 1 | 20 | | | | |
| 23478-PeCDF | 100 | 99 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 103 | 101 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDF | 99 | 98 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 102 | 100 | 40-135 | 0 | 20 | | | | |
| 234678-HxCDF | 100 | 99 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 99 | 98 | 40-135 | 2 | 20 | | | | |
| 1234789-HpCDF | 100 | 100 | 40-135 | 3 | 20 | | | | |
| OCDF | 100 | 101 | 40-135 | 3 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13119SLC026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7034499 | 90 | 104 | 90 |
| 7034500 | 91 | 106 | 98 |
| 7034501 | 91 | 104 | 98 |
| 7034502 | 90 | 109 | 94 |
| 7034503 | 91 | 103 | 95 |
| Blank | 89 | 102 | 98 |
| LCS | 90 | 102 | 99 |
| MS | 88 | 97 | 94 |
| MSD | 86 | 97 | 96 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 13119WAI026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7034504 | 95 | 102 | 92 |
| Blank | 99 | 105 | 91 |
| LCS | 96 | 105 | 95 |
| LCSD | 96 | 107 | 96 |
| Limits: | 64-120 | 62-141 | 58-134 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13108A16D

*- Outside of specification
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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385520
Reported: 05/09/13 at 09:39 AM

## Surrogate Quality Control

| | Trifluorotoluene-F |
|---|---|
| 7034499 | 81 |
| 7034503 | 80 |
| Blank | 85 |
| LCS | 86 |
| LCSD | 80 |
| Limits: | 61-122 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13115B20A

| | Trifluorotoluene-F |
|---|---|
| 7034498 | 89 |
| 7034504 | 88 |
| Blank | 88 |
| LCS | 113 |
| LCSD | 112 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131160002A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7034499 | 112 | 103 |
| 7034500 | 120 | 107 |
| 7034501 | 126* | 105 |
| 7034502 | 97 | 88 |
| 7034503 | 128* | 101 |
| Blank | 121* | 104 |
| LCS | 120 | 108 |
| LCSD | 128* | 120 |
| MS | 127* | 112 |
| MSD | 119 | 106 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 131190017A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7034504 | 102 | 137* |
| Blank | 94 | 114 |
| LCS | 89 | 115 |
| LCSD | 95 | 131* |
| Limits: | 60-140 | 20-120 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 131190018A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7034504 | 106 | 87 |
| Blank | 113 | 89 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385520
Reported: 05/09/13 at 09:39 AM

## Surrogate Quality Control

| | | |
|---|---|---|
| LCS | 124* | 65 |
| LCSD | 126* | 80 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131200001A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7034499 | 86 | 87 |
| 7034500 | 95 | 100 |
| 7034501 | 95 | 98 |
| 7034502 | 88 | 93 |
| 7034503 | 83 | 85 |
| Blank | 99 | 104 |
| LCS | 93 | 97 |
| MS | 102 | 85 |
| MSD | 95 | 82 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 131200026A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7034504 | 73 | 67* |
| Blank | 64 | 69 |
| LCS | 75 | 83 |
| LCSD | 78 | 87 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13120002

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7034499 | 74 | 76 | 83 | 84 | 81 | 82 |
| 7034500 | 75 | 78 | 84 | 87 | 85 | 85 |
| 7034501 | 73 | 79 | 83 | 86 | 81 | 83 |
| 7034502 | 68 | 69 | 78 | 80 | 77 | 82 |
| 7034503 | 70 | 74 | 78 | 83 | 77 | 75 |
| Blank | 79 | 84 | 96 | 101 | 96 | 98 |
| MS | 80 | 85 | 88 | 93 | 87 | 83 |
| MSD | 80 | 84 | 89 | 94 | 90 | 88 |
| OPR | 70 | 72 | 83 | 89 | 83 | 82 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7034499 | 88 | 75 | 74 | 77 | 79 | 82 |
| 7034500 | 90 | 78 | 78 | 79 | 82 | 81 |
| 7034501 | 96 | 77 | 75 | 79 | 82 | 82 |
| 7034502 | 85 | 74 | 73 | 70 | 77 | 77 |
| 7034503 | 98 | 71 | 67 | 76 | 79 | 81 |
| Blank | 121 | 87 | 81 | 90 | 94 | 93 |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385520
Reported: 05/09/13 at 09:39 AM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| MS | 102 | 80 | 77 | 85 | 86 | 86 |
| MSD | 103 | 83 | 80 | 84 | 88 | 92 |
| OPR | 105 | 72 | 68 | 75 | 82 | 83 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
|---|---|---|---|---|---|---|
| 7034499 | 79 | 75 | 76 | 70 | 77 | |
| 7034500 | 80 | 78 | 79 | 71 | 80 | |
| 7034501 | 80 | 80 | 82 | 72 | 80 | |
| 7034502 | 76 | 75 | 74 | 65 | 70 | |
| 7034503 | 78 | 78 | 77 | 65 | 76 | |
| Blank | 92 | 95 | 93 | 78 | 88 | |
| MS | 84 | 86 | 82 | 79 | 88 | |
| MSD | 88 | 87 | 86 | 78 | 86 | |
| OPR | 83 | 81 | 79 | 66 | 75 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 13122002

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7034504 | 57 | 57 | 70 | 68 | 67 | 83 |
| Blank | 64 | 84 | 74 | 74 | 72 | 71 |
| OPR | 59 | 92 | 75 | 74 | 73 | 85 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7034504 | 75 | 75 | 78 | 56 | 74 | 71 |
| Blank | 71 | 62 | 56 | 85 | 78 | 77 |
| OPR | 74 | 76 | 78 | 90 | 78 | 77 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
|---|---|---|---|---|---|---|
| 7034504 | 71 | 81 | 88 | 60 | 68 | |
| Blank | 76 | 76 | 79 | 69 | 78 | |
| OPR | 76 | 80 | 86 | 68 | 95 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

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(2) The unspiked result was more than four times the spike added.

Acct#13013 Cp#1385520 Sample#7034498-504

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/24/2013
CarrierName: FedEx
AirbillNo: 7996 0718 1815

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130424-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-042413 | 4/24/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| SL-525-SA7-SB-6.5-7.5 | 4/24/13 09:10 | SO | None | 1 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-525-SA7-SB-6.5-7.5 | 4/24/13 09:10 | SO | None | 1 - 8 oz glass | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-525-SA7-SB-6.5-7.5 | 4/24/13 09:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-525-SA7-SB-6.5-7.5 | 4/24/13 09:10 | SO | None | 1 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| SL-529-SA7-SB-0.0-0.5 | 4/24/13 10:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-529-SA7-SB-0.0-0.5 | 4/24/13 10:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-528-SA7-SB-0.0-0.5 | 4/24/13 10:55 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-528-SA7-SB-0.0-0.5 | 4/24/13 10:55 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-527-SA7-SB-0.0-0.5 | 4/24/13 13:15 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-527-SA7-SB-0.0-0.5 | 4/24/13 13:15 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-527-SA7-SB-2.5-3.5 | 4/24/13 14:40 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-527-SA7-SB-2.5-3.5 | 4/24/13 14:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-527-SA7-SB-2.5-3.5 | 4/24/13 14:40 | SO | None | 1 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |

Special Instructions:

Sampler: Steven Mercer

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Cota | 4/24/13 | | | | | | | | | | |
| | | | | | | | | | Bruce Kunz | 4.25.13 | 930 |

acct#13013 Grp# 1385520 Sample# 7034498-504

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/24/2013
CarrierName: FedEx
AirbillNo: 7996 0718 1815

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130424-02
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB-042413 | 4/24/13 15:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-042413 | 4/24/13 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-042413 | 4/24/13 15:00 | WQ | None | 1 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| EB-042413 | 4/24/13 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| EB-042413 | 4/24/13 15:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| EB-042413 | 4/24/13 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| EB-042413 | 4/24/13 15:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| EB-042413 | 4/24/13 15:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| EB-042413 | 4/24/13 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | extra bottle |

Special Instructions:

Sampler: V. Cortez

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Cortez | 4/24/13 | | | | | | | | | | |

4.25.13 930

eurofins | Lancaster Laboratories

C# 1385520

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** COM

**Date of Receipt:** 4.25.13

**Time of Receipt:** 930

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | 2783 | 1.9 | TB | WI | X | B | |
| 2 | ↓ | 1.5 | ↓ | ↓ | ↓ | ↓ | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** [signature] 2299 **Date/Time:** 4.25.13 10:13

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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# Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 10, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/26/2013
Group Number: 1385735
SDG: PH039
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| SL-507-SA7-SB-0.0-0.5 Soil | 7036177 |
| TB-042413 Water | 7036178 |
| SL-519-SA7-SB-0.0-0.5 Soil | 7036179 |
| SL-519-SA7-SB-0.0-0.5MS Soil | 7036180 |
| SL-519-SA7-SB-0.0-0.5MSD Soil | 7036181 |
| SL-519-SA7-SB-0.0-0.5DUP Soil | 7036182 |
| SL-819-SA7-SB-0.0-0.5 Soil | 7036183 |
| SL-519-SA7-SB-2.0-3.0 Soil | 7036184 |
| SL-509-SA7-SB-0.0-0.5 Soil | 7036185 |
| SL-506-SA7-SB-0.0-0.5 Soil | 7036186 |
| SL-508-SA7-SB-0.0-0.5 Soil | 7036187 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-507-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036177**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:05 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL507 SDG#: PH039-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.1 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.3 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.8 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.94 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 8.5 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 14 | J | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.3 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 9.9 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.3 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.84 | J | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.84 | J | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.4 | J | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.97 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | J | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.3 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 9.1 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 23 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-507-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036177**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:05 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL507 SDG#: PH039-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,500 | | 40.3 | 7.76 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.03 | U | 4.03 | 0.504 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.72 | | 4.03 | 0.332 | 1 |
| 06946 | Barium | 7440-39-3 | 68.2 | | 1.01 | 0.0332 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.526 | J | 1.01 | 0.0675 | 1 |
| 07914 | Boron | 7440-42-8 | 10.5 | | 10.1 | 0.836 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.256 | J | 1.01 | 0.0332 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,810 | | 20.1 | 4.05 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.1 | | 3.02 | 0.0886 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.48 | | 1.01 | 0.0906 | 1 |
| 06953 | Copper | 7440-50-8 | 11.5 | | 2.01 | 0.181 | 1 |
| 01654 | Iron | 7439-89-6 | 19,700 | | 40.3 | 3.83 | 1 |
| 06955 | Lead | 7439-92-1 | 9.87 | | 3.02 | 0.473 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.4 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,470 | | 10.1 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 278 | | 1.01 | 0.0836 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.297 | J | 2.01 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.69 | | 2.01 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 382 | | 10.1 | 0.514 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,260 | | 101 | 13.6 | 1 |
| 01667 | Sodium | 7440-23-5 | 65.0 | J | 101 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 2.82 | J | 10.1 | 0.222 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,030 | | 1.01 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 32.7 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 54.3 | | 4.03 | 0.201 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.05 | J | 5.04 | 0.836 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.159 | J | 0.403 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0213 | J | 0.201 | 0.0201 | 2 |
| 06144 | Strontium | 7440-24-6 | 22.4 | | 0.403 | 0.0342 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.286 | | 0.201 | 0.0302 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0300 | | 0.0168 | 0.0101 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.01 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.4 C. | | | | | | |
| **Wet Chemistry** | | **EPA 160.3 modified** | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-507-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036177**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:05 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL507 SDG#: PH039-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.01 | U | 1.01 | 0.0275 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.177 | JBQ | 5.05 | 0.0438 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.144 | JBQ | 5.05 | 0.0536 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.488 | JQ | 5.05 | 0.0583 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.374 | JQ | 5.05 | 0.0492 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 12.9 | B | 5.05 | 0.0542 | 1 |
| 11031 | OCDD | 3268-87-9 | 123 | B | 10.1 | 0.0477 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.224 | JQ | 1.01 | 0.0501 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.304 | JB | 5.05 | 0.0337 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.288 | JBQ | 5.05 | 0.0331 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.248 | JBQ | 5.05 | 0.0419 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.169 | JBQ | 5.05 | 0.0390 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.05 | U | 5.05 | 0.0322 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.167 | JBQ | 5.05 | 0.0366 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.80 | JB | 5.05 | 0.0499 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.121 | JBQ | 5.05 | 0.0683 | 1 |
| 11031 | OCDF | 39001-02-0 | 4.63 | JB | 10.1 | 0.0572 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.195 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 77 | 25 - 164 |
| 13C12-12378-PeCDD | 51 | 25 - 181 |
| 13C12-123478-HxCDD | 51 | 32 - 141 |
| 13C12-123678-HxCDD | 51 | 28 - 130 |
| 13C12-123789-HxCDD | 55 | 28 - 130 |
| 13C12-1234678-HpCDD | 48 | 23 - 140 |
| 13C12-OCDD | 49 | 17 - 157 |
| 13C12-2378-TCDF | 60 | 24 - 169 |
| 13C12-12378-PeCDF | 53 | 24 - 185 |
| 13C12-23478-PeCDF | 51 | 21 - 178 |
| 13C12-123478-HxCDF | 51 | 26 - 152 |
| 13C12-123678-HxCDF | 53 | 26 - 123 |
| 13C12-234678-HxCDF | 54 | 28 - 136 |
| 13C12-123789-HxCDF | 67 | 29 - 147 |
| 13C12-1234678-HpCDF | 54 | 28 - 143 |
| 13C12-1234789-HpCDF | 44 | 26 - 138 |
| 13C12-OCDF | 40 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-507-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036177**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:05 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL507 SDG#: PH039-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-507-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036177**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:05 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL507 SDG#: PH039-01

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 14:38 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 01:58 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 05:34 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13123001 | 05/06/2013 23:08 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13123001 | 05/03/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:14 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:31 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:31 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:31 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:31 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-507-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036177**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 15:05 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL507 SDG#: PH039-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 09:43 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039402A | 04/26/2013 20:25 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401A | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-042413 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7036178**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/24/2013 08:00 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

STB24 SDG#: PH039-02TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13121A20A | 05/01/2013 12:09 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13121A20A | 05/01/2013 12:09 | Catherine J Schwarz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-519-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036179**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 0.39 | J | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.52 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 4.5 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 5.0 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 13 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 5.5 | J | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.8 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 9.1 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 9.0 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 21 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 9.1 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 3.9 | | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.5 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.88 | J | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 3.1 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 7.9 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 7.0 | J | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 2.5 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 14 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 41 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 95 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 3.0 | J | 5.1 | 2.0 | 1 |

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036179**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,700 | | 40.6 | 7.82 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.63 | | 4.06 | 0.507 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.45 | | 4.06 | 0.335 | 1 |
| 06946 | Barium | 7440-39-3 | 104 | | 1.01 | 0.0335 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.463 | J | 1.01 | 0.0680 | 1 |
| 07914 | Boron | 7440-42-8 | 15.6 | | 10.1 | 0.842 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.19 | | 1.01 | 0.0335 | 1 |
| 01650 | Calcium | 7440-70-2 | 7,940 | | 20.3 | 4.08 | 1 |
| 06951 | Chromium | 7440-47-3 | 15.4 | | 3.04 | 0.0893 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.61 | | 1.01 | 0.0913 | 1 |
| 06953 | Copper | 7440-50-8 | 12.3 | | 2.03 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 17,900 | | 40.6 | 3.85 | 1 |
| 06955 | Lead | 7439-92-1 | 23.8 | | 3.04 | 0.477 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.2 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,490 | | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 355 | | 1.01 | 0.0842 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.79 | | 2.03 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.90 | | 2.03 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 679 | | 10.1 | 0.517 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,090 | | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 88.9 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 10.9 | | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 977 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 29.3 | | 1.01 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 71.0 | | 4.06 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.49 | J | 5.07 | 0.842 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.189 | J | 0.406 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0351 | J | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 37.5 | | 0.406 | 0.0345 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.230 | | 0.203 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0581 | | 0.0167 | 0.0100 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.32 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036179**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0651 | JQ | 1.02 | 0.0276 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.205 | JBQ | 5.10 | 0.0451 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.276 | JBQ | 5.10 | 0.0546 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.02 | J | 5.10 | 0.0589 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.691 | J | 5.10 | 0.0528 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 25.2 | B | 5.10 | 0.0641 | 1 |
| 11031 | OCDD | 3268-87-9 | 270 | B | 10.2 | 0.0500 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.365 | JQ | 1.02 | 0.0671 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.711 | JB | 5.10 | 0.0442 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.495 | JBQ | 5.10 | 0.0427 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.486 | JB | 5.10 | 0.0371 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.299 | JBQ | 5.10 | 0.0345 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.114 | JBQ | 5.10 | 0.0310 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.303 | JB | 5.10 | 0.0353 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.91 | JB | 5.10 | 0.0437 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.344 | JB | 5.10 | 0.0554 | 1 |
| 11031 | OCDF | 39001-02-0 | 7.75 | JB | 10.2 | 0.0513 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.639 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 56 | 25 - 181 |
| 13C12-123478-HxCDD | 57 | 32 - 141 |
| 13C12-123678-HxCDD | 55 | 28 - 130 |
| 13C12-123789-HxCDD | 58 | 28 - 130 |
| 13C12-1234678-HpCDD | 54 | 23 - 140 |
| 13C12-OCDD | 52 | 17 - 157 |
| 13C12-2378-TCDF | 62 | 24 - 169 |
| 13C12-12378-PeCDF | 58 | 24 - 185 |
| 13C12-23478-PeCDF | 56 | 21 - 178 |
| 13C12-123478-HxCDF | 57 | 26 - 152 |
| 13C12-123678-HxCDF | 59 | 26 - 123 |
| 13C12-234678-HxCDF | 59 | 28 - 136 |
| 13C12-123789-HxCDF | 75 | 29 - 147 |
| 13C12-1234678-HpCDF | 57 | 28 - 143 |
| 13C12-1234789-HpCDF | 50 | 26 - 138 |
| 13C12-OCDF | 46 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036179**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036179**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03BKG

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 10:28 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 02:17 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 06:16 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13123001 | 05/07/2013 00:05 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13123001 | 05/03/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:36 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:07 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 10:50 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 10:50 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 10:50 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 10:50 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036179**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 09:45 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039402A | 04/26/2013 20:25 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 3 | 13127162401A | 05/07/2013 08:10 | William C Schwebel | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036180**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 32 | | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 30 | | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 33 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 59 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 54 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 69 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 48 | | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 28 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 51 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 35 | | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 34 | | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 65 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 28 | | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 36 | | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 31 | | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 47 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 79 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 35 | | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 32 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 35 | | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 32 | | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 37 | | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 45 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 75 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 160 | | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 38 | | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 150 | | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.0 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 25 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 89 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 120 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | | 5.1 | 2.0 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036180**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,800 | 40.6 | 7.82 | 1 |
| 06944 | Antimony | 7440-36-0 | 33.6 | 4.06 | 0.507 | 1 |
| 06935 | Arsenic | 7440-38-2 | 20.0 | 4.06 | 0.335 | 1 |
| 06946 | Barium | 7440-39-3 | 308 | 1.01 | 0.0335 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.83 | 1.01 | 0.0680 | 1 |
| 07914 | Boron | 7440-42-8 | 221 | 10.1 | 0.842 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.45 | 1.01 | 0.0335 | 1 |
| 01650 | Calcium | 7440-70-2 | 9,050 | 20.3 | 4.08 | 1 |
| 06951 | Chromium | 7440-47-3 | 37.7 | 3.04 | 0.0893 | 1 |
| 06952 | Cobalt | 7440-48-4 | 55.8 | 1.01 | 0.0913 | 1 |
| 06953 | Copper | 7440-50-8 | 41.6 | 2.03 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 18,900 | 40.6 | 3.85 | 1 |
| 06955 | Lead | 7439-92-1 | 31.4 | 3.04 | 0.477 | 1 |
| 01656 | Lithium | 7439-93-2 | 129 | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,020 | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 374 | 1.01 | 0.0842 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 203 | 2.03 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 62.3 | 2.03 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 651 | 10.1 | 0.517 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,400 | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,140 | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 394 | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,300 | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 85.4 | 1.01 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 125 | 4.06 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 102 | 5.07 | 0.842 | 1 |
| | | **SW-846 6020A** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.43 | 0.406 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 11.3 | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 40.7 | 0.406 | 0.0345 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.672 | 0.203 | 0.0304 | 2 |
| | | **SW-846 7471B** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.242 | 0.0168 | 0.0101 | 1 |
| **Wet Chemistry** | | **EPA 160.3 modified** | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 2.4 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036180**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 17.8 | | 1.02 | 0.0450 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 93.7 | B | 5.10 | 0.0593 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 102 | B | 5.10 | 0.0629 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 97.2 | | 5.10 | 0.0701 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 100 | | 5.10 | 0.0623 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 110 | B | 5.10 | 0.0960 | 1 |
| 11031 | OCDD | 3268-87-9 | 331 | B | 10.2 | 0.0542 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 19.3 | | 1.02 | 0.0639 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 99.8 | B | 5.10 | 0.0477 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 100 | B | 5.10 | 0.0450 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 103 | B | 5.10 | 0.0778 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 101 | B | 5.10 | 0.0730 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 100 | B | 5.10 | 0.0578 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 101 | B | 5.10 | 0.0687 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 101 | B | 5.10 | 0.0788 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 99.2 | B | 5.10 | 0.0978 | 1 |
| 11031 | OCDF | 39001-02-0 | 203 | B | 10.2 | 0.0716 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 81 | 25 - 164 |
| 13C12-12378-PeCDD | 53 | 25 - 181 |
| 13C12-123478-HxCDD | 55 | 32 - 141 |
| 13C12-123678-HxCDD | 54 | 28 - 130 |
| 13C12-123789-HxCDD | 58 | 28 - 130 |
| 13C12-1234678-HpCDD | 52 | 23 - 140 |
| 13C12-OCDD | 53 | 17 - 157 |
| 13C12-2378-TCDF | 62 | 24 - 169 |
| 13C12-12378-PeCDF | 54 | 24 - 185 |
| 13C12-23478-PeCDF | 54 | 21 - 178 |
| 13C12-123478-HxCDF | 55 | 26 - 152 |
| 13C12-123678-HxCDF | 56 | 26 - 123 |
| 13C12-234678-HxCDF | 58 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 54 | 28 - 143 |
| 13C12-1234789-HpCDF | 50 | 26 - 138 |
| 13C12-OCDF | 47 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036180**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03MS

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 10:59 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 02:35 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 06:36 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13123001 | 05/07/2013 01:01 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13123001 | 05/03/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:21 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 10:58 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 10:58 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 10:58 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 10:58 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036180**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 09:56 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 3 | 13127162401A | 05/07/2013 08:10 | William C Schwebel | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036181**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 31 | | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 30 | | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 30 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 44 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 35 | | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 20 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 39 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 36 | | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 33 | | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 37 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 23 | | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 35 | | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 30 | | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 42 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 38 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 23 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 35 | | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 32 | | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 40 | | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 34 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 170 | | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 64 | | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 150 | | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |

Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.8 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 23 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 83 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 130 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.6 | | 5.1 | 2.0 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036181**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,000 | 40.6 | 7.82 | 1 |
| 06944 | Antimony | 7440-36-0 | 33.7 | 4.06 | 0.507 | 1 |
| 06935 | Arsenic | 7440-38-2 | 20.0 | 4.06 | 0.335 | 1 |
| 06946 | Barium | 7440-39-3 | 302 | 1.01 | 0.0335 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.81 | 1.01 | 0.0680 | 1 |
| 07914 | Boron | 7440-42-8 | 220 | 10.1 | 0.842 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.46 | 1.01 | 0.0335 | 1 |
| 01650 | Calcium | 7440-70-2 | 7,720 | 20.3 | 4.08 | 1 |
| 06951 | Chromium | 7440-47-3 | 39.4 | 3.04 | 0.0893 | 1 |
| 06952 | Cobalt | 7440-48-4 | 55.8 | 1.01 | 0.0913 | 1 |
| 06953 | Copper | 7440-50-8 | 41.1 | 2.03 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 19,400 | 40.6 | 3.85 | 1 |
| 06955 | Lead | 7439-92-1 | 30.5 | 3.04 | 0.477 | 1 |
| 01656 | Lithium | 7439-93-2 | 128 | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,060 | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 375 | 1.01 | 0.0842 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 202 | 2.03 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 62.5 | 2.03 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 630 | 10.1 | 0.517 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,460 | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,130 | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 393 | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,340 | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 85.8 | 1.01 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 123 | 4.06 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 102 | 5.07 | 0.842 | 1 |
| | | **SW-846 6020A** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.38 | 0.406 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 11.5 | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 44.7 | 0.406 | 0.0345 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.674 | 0.203 | 0.0304 | 2 |
| | | **SW-846 7471B** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.221 | 0.0162 | 0.0097 | 1 |
| **Wet Chemistry** | | **EPA 160.3 modified** | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 2.4 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-519-SA7-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036181**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 18.0 | | 1.01 | 0.0408 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 94.6 | B | 5.07 | 0.0501 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 102 | B | 5.07 | 0.0478 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 97.7 | | 5.07 | 0.0497 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 98.6 | | 5.07 | 0.0494 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 116 | B | 5.07 | 0.0552 | 1 |
| 11031 | OCDD | 3268-87-9 | 395 | B | 10.1 | 0.0439 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 19.1 | | 1.01 | 0.0613 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 98.2 | B | 5.07 | 0.0378 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 99.2 | B | 5.07 | 0.0333 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 102 | B | 5.07 | 0.0598 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 97.7 | B | 5.07 | 0.0546 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 100 | B | 5.07 | 0.0547 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 101 | B | 5.07 | 0.0545 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 102 | B | 5.07 | 0.0638 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 97.9 | B | 5.07 | 0.0820 | 1 |
| 11031 | OCDF | 39001-02-0 | 204 | B | 10.1 | 0.0452 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 78 | 25 - 164 |
| 13C12-12378-PeCDD | 65 | 25 - 181 |
| 13C12-123478-HxCDD | 69 | 32 - 141 |
| 13C12-123678-HxCDD | 70 | 28 - 130 |
| 13C12-123789-HxCDD | 68 | 28 - 130 |
| 13C12-1234678-HpCDD | 65 | 23 - 140 |
| 13C12-OCDD | 62 | 17 - 157 |
| 13C12-2378-TCDF | 65 | 24 - 169 |
| 13C12-12378-PeCDF | 64 | 24 - 185 |
| 13C12-23478-PeCDF | 67 | 21 - 178 |
| 13C12-123478-HxCDF | 72 | 26 - 152 |
| 13C12-123678-HxCDF | 74 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 78 | 29 - 147 |
| 13C12-1234678-HpCDF | 71 | 28 - 143 |
| 13C12-1234789-HpCDF | 62 | 26 - 138 |
| 13C12-OCDF | 59 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036181**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03MSD

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 11:30 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 02:54 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 06:57 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13123001 | 05/07/2013 01:58 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13123001 | 05/03/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 11:25 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:00 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:00 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:00 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:00 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036181**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 09:58 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 3 | 13127162401A | 05/07/2013 08:10 | William C Schwebel | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036182**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,100 | | 40.6 | 7.82 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.06 | U | 4.06 | 0.507 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.08 | | 4.06 | 0.335 | 1 |
| 06946 | Barium | 7440-39-3 | 90.7 | | 1.01 | 0.0335 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.431 | J | 1.01 | 0.0680 | 1 |
| 07914 | Boron | 7440-42-8 | 13.1 | | 10.1 | 0.842 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.280 | J | 1.01 | 0.0335 | 1 |
| 01650 | Calcium | 7440-70-2 | 6,120 | | 20.3 | 4.08 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.9 | | 3.04 | 0.0893 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.96 | | 1.01 | 0.0913 | 1 |
| 06953 | Copper | 7440-50-8 | 11.9 | | 2.03 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 17,600 | | 40.6 | 3.85 | 1 |
| 06955 | Lead | 7439-92-1 | 13.7 | | 3.04 | 0.477 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.6 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,270 | | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 297 | | 1.01 | 0.0842 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.356 | J | 2.03 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.96 | | 2.03 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 474 | | 10.1 | 0.517 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,040 | | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 79.3 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.75 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 992 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 28.4 | | 1.01 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 64.2 | | 4.06 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.40 | J | 5.07 | 0.842 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.226 | J | 0.406 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0493 | J | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 36.9 | | 0.406 | 0.0345 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.251 | | 0.203 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0566 | | 0.0165 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.34 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 2.4 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036182**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:45 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL519 SDG#: PH039-03DUP

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:52 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 10:55 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 10:55 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 10:55 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 10:55 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 09:54 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039402A | 04/26/2013 20:25 | Clayton C Litchmore | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 3 | 13127162401A | 05/07/2013 08:10 | William C Schwebel | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 3 | 13127162401A | 05/07/2013 08:10 | William C Schwebel | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-819-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036183**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:50 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL819 SDG#: PH039-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.59 | J | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 2.8 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 2.7 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 5.9 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.4 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.4 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 5.0 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 14 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 5.8 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 3.5 | | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.4 | J | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.1 | J | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.1 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 3.3 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 5.0 | | 1.7 | 0.70 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 6.1 | J | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 14 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 56 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 79 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-819-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036183**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:50 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL819 SDG#: PH039-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,000 | | 41.4 | 7.98 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.542 | J | 4.14 | 0.517 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.09 | J | 4.14 | 0.341 | 1 |
| 06946 | Barium | 7440-39-3 | 107 | | 1.03 | 0.0341 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.473 | J | 1.03 | 0.0693 | 1 |
| 07914 | Boron | 7440-42-8 | 13.7 | | 10.3 | 0.859 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.380 | J | 1.03 | 0.0341 | 1 |
| 01650 | Calcium | 7440-70-2 | 6,150 | | 20.7 | 4.16 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.0 | | 3.10 | 0.0910 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.40 | | 1.03 | 0.0931 | 1 |
| 06953 | Copper | 7440-50-8 | 12.0 | | 2.07 | 0.186 | 1 |
| 01654 | Iron | 7439-89-6 | 18,500 | | 41.4 | 3.93 | 1 |
| 06955 | Lead | 7439-92-1 | 15.1 | | 3.10 | 0.486 | 1 |
| 01656 | Lithium | 7439-93-2 | 19.6 | | 4.1 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,550 | | 10.3 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 328 | | 1.03 | 0.0859 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.337 | J | 2.07 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.1 | | 2.07 | 0.114 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 515 | | 10.3 | 0.528 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,320 | | 103 | 14.0 | 1 |
| 01667 | Sodium | 7440-23-5 | 84.8 | J | 103 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.68 | J | 10.3 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,040 | | 1.03 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 30.2 | | 1.03 | 0.114 | 1 |
| 06972 | Zinc | 7440-66-6 | 69.5 | | 4.14 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.54 | J | 5.17 | 0.859 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.139 | J | 0.414 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0326 | J | 0.207 | 0.0207 | 2 |
| 06144 | Strontium | 7440-24-6 | 36.6 | | 0.414 | 0.0352 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.259 | | 0.207 | 0.0310 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0492 | | 0.0163 | 0.0098 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.59 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-819-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036183**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:50 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL819 SDG#: PH039-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0291 | JQ | 1.02 | 0.0290 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.210 | JBQ | 5.08 | 0.0444 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.317 | JB | 5.08 | 0.0540 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.728 | J | 5.08 | 0.0562 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.654 | J | 5.08 | 0.0537 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 17.1 | B | 5.08 | 0.0579 | 1 |
| 11031 | OCDD | 3268-87-9 | 174 | B | 10.2 | 0.0461 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.184 | JQ | 1.02 | 0.0703 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.577 | JBQ | 5.08 | 0.0385 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.484 | JBQ | 5.08 | 0.0363 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.435 | JB | 5.08 | 0.0413 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.307 | JBQ | 5.08 | 0.0383 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.108 | JBQ | 5.08 | 0.0383 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.284 | JB | 5.08 | 0.0403 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 3.38 | JB | 5.08 | 0.0395 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.298 | JBQ | 5.08 | 0.0648 | 1 |
| 11031 | OCDF | 39001-02-0 | 13.7 | B | 10.2 | 0.0491 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.503 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 79 | 25 - 164 |
| 13C12-12378-PeCDD | 60 | 25 - 181 |
| 13C12-123478-HxCDD | 62 | 32 - 141 |
| 13C12-123678-HxCDD | 61 | 28 - 130 |
| 13C12-123789-HxCDD | 62 | 28 - 130 |
| 13C12-1234678-HpCDD | 58 | 23 - 140 |
| 13C12-OCDD | 55 | 17 - 157 |
| 13C12-2378-TCDF | 62 | 24 - 169 |
| 13C12-12378-PeCDF | 61 | 24 - 185 |
| 13C12-23478-PeCDF | 61 | 21 - 178 |
| 13C12-123478-HxCDF | 63 | 26 - 152 |
| 13C12-123678-HxCDF | 66 | 26 - 123 |
| 13C12-234678-HxCDF | 63 | 28 - 136 |
| 13C12-123789-HxCDF | 74 | 29 - 147 |
| 13C12-1234678-HpCDF | 70 | 28 - 143 |
| 13C12-1234789-HpCDF | 50 | 26 - 138 |
| 13C12-OCDF | 46 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-819-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036183**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:50 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL819 SDG#: PH039-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-819-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036183**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:50 by SM

Submitted: 04/26/2013 09:15
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL819 SDG#: PH039-04

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 15:09 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 03:12 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 08:20 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13123001 | 05/07/2013 02:55 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13123001 | 05/03/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:18 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:33 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:33 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:33 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:33 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-819-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036183**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 08:50 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL819 SDG#: PH039-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 10:00 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039402A | 04/26/2013 20:25 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401A | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036184**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 09:50 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S-519 SDG#: PH039-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.68 | J | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 5.9 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 5.4 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 9.4 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 4.1 | J | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 3.9 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 7.9 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 10 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 9.4 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 2.3 | | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.0 | | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.96 | J | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.95 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.9 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 9.1 | | 1.7 | 0.69 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.4 | | 1.2 | 0.2 | 29.98 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 9.2 | | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036184**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 09:50 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S-519 SDG#: PH039-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 40 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 51 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,700 | | 40.6 | 7.82 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.737 | J | 4.06 | 0.507 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.96 | J | 4.06 | 0.335 | 1 |
| 06946 | Barium | 7440-39-3 | 83.7 | | 1.01 | 0.0335 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.506 | J | 1.01 | 0.0680 | 1 |
| 07914 | Boron | 7440-42-8 | 10.6 | | 10.1 | 0.842 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.239 | J | 1.01 | 0.0335 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,800 | | 20.3 | 4.08 | 1 |
| 06951 | Chromium | 7440-47-3 | 22.2 | | 3.04 | 0.0893 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.56 | | 1.01 | 0.0913 | 1 |
| 06953 | Copper | 7440-50-8 | 11.0 | | 2.03 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 20,300 | | 40.6 | 3.86 | 1 |
| 06955 | Lead | 7439-92-1 | 7.87 | | 3.04 | 0.477 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.7 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,810 | | 10.1 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 333 | | 1.01 | 0.0842 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.406 | J | 2.03 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.69 | | 2.03 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 408 | | 10.1 | 0.518 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,850 | | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 95.0 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.54 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,060 | | 1.01 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 33.0 | | 1.01 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 58.0 | | 4.06 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.27 | J | 5.07 | 0.842 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.154 | J | 0.406 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0224 | J | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 23.1 | | 0.406 | 0.0345 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.315 | | 0.203 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0254 | | 0.0165 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.59 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.5 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036184**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 09:50 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S-519 SDG#: PH039-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.4 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036184**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 09:50 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S-519 SDG#: PH039-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.01 | U | 1.01 | 0.0216 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0778 | JBQ | 5.06 | 0.0226 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.119 | JQ | 5.06 | 0.0241 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.209 | JB | 5.06 | 0.0248 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.183 | JB | 5.06 | 0.0253 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 4.07 | JB | 5.06 | 0.0229 | 1 |
| 11031 | OCDD | 3268-87-9 | 35.1 | B | 10.1 | 0.0213 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.142 | J | 1.01 | 0.0309 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.250 | JBQ | 5.06 | 0.0156 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.160 | JBQ | 5.06 | 0.0159 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.112 | JB | 5.06 | 0.0195 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.118 | JBQ | 5.06 | 0.0175 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0583 | JBQ | 5.06 | 0.0198 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.103 | JBQ | 5.06 | 0.0176 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.565 | JB | 5.06 | 0.0154 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0915 | JBQ | 5.06 | 0.0222 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.54 | JB | 10.1 | 0.0270 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.122 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 76 | 25 - 164 |
| 13C12-12378-PeCDD | 74 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 68 | 24 - 169 |
| 13C12-12378-PeCDF | 77 | 24 - 185 |
| 13C12-23478-PeCDF | 73 | 21 - 178 |
| 13C12-123478-HxCDF | 82 | 26 - 152 |
| 13C12-123678-HxCDF | 87 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 84 | 29 - 147 |
| 13C12-1234678-HpCDF | 96 | 28 - 143 |
| 13C12-1234789-HpCDF | 72 | 26 - 138 |
| 13C12-OCDF | 69 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036184**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 09:50 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S-519 SDG#: PH039-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036184**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 09:50 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S-519 SDG#: PH039-05

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 15:40 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13120A16A | 04/30/2013 17:19 | Laura M Krieger | 29.98 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201311630893 | 04/26/2013 15:34 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 03:31 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 08:41 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13128001 | 05/09/2013 18:28 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 2 | 13128001 | 05/08/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:22 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:35 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036184**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 09:50 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S-519 SDG#: PH039-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:35 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:35 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:35 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 10:02 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039402A | 04/26/2013 20:25 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401B | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036185**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 10:40 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL509 SDG#: PH039-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 0.46 | J | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.60 | J | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 2.5 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 2.9 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 6.3 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 4.5 | J | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.3 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.0 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 17 | J | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 4.7 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.1 | J | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 610 | | 190 | 62 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 5.4 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.1 | J | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.5 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.5 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 4.2 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 57 | | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 100 | | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 52 | | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 140 | | 52 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 10 | 5 |

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036185**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 10:40 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL509 SDG#: PH039-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,800 | | 40.6 | 7.82 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.692 | J | 4.06 | 0.507 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.38 | | 4.06 | 0.335 | 1 |
| 06946 | Barium | 7440-39-3 | 73.0 | | 1.01 | 0.0335 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.486 | J | 1.01 | 0.0680 | 1 |
| 07914 | Boron | 7440-42-8 | 11.7 | | 10.1 | 0.842 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.330 | J | 1.01 | 0.0335 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,410 | | 20.3 | 4.08 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.2 | | 3.04 | 0.0893 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.83 | | 1.01 | 0.0913 | 1 |
| 06953 | Copper | 7440-50-8 | 16.3 | | 2.03 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 21,700 | | 40.6 | 3.86 | 1 |
| 06955 | Lead | 7439-92-1 | 17.0 | | 3.04 | 0.477 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.3 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,920 | | 10.1 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 297 | | 1.01 | 0.0842 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.337 | J | 2.03 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.2 | | 2.03 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 422 | | 10.1 | 0.518 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,940 | | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 77.7 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 6.56 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,000 | | 1.01 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.2 | | 1.01 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 90.6 | | 4.06 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.53 | J | 5.07 | 0.842 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.209 | J | 0.406 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0409 | J | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 23.5 | | 0.406 | 0.0345 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.269 | | 0.203 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0900 | | 0.0164 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.76 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.5 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036185**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 10:40 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL509 SDG#: PH039-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0597 | JQ | 1.02 | 0.0279 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.08 | U | 5.08 | 0.0779 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.80 | JB | 5.08 | 0.0536 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 5.60 | | 5.08 | 0.0566 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 3.43 | J | 5.08 | 0.0560 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 154 | B | 5.08 | 0.111 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,090 | B | 10.2 | 0.0771 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.880 | J | 1.02 | 0.0941 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 2.32 | JB | 5.08 | 0.0506 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 1.04 | JB | 5.08 | 0.0442 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 2.67 | JB | 5.08 | 0.0567 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.26 | JB | 5.08 | 0.0530 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.08 | U | 5.08 | 0.0528 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 1.34 | JB | 5.08 | 0.0556 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 30.7 | B | 5.08 | 0.0464 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 2.03 | JB | 5.08 | 0.0687 | 1 |
| 11031 | OCDF | 39001-02-0 | 87.8 | B | 10.2 | 0.0534 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 4.31 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 77 | 25 - 164 |
| 13C12-12378-PeCDD | 56 | 25 - 181 |
| 13C12-123478-HxCDD | 62 | 32 - 141 |
| 13C12-123678-HxCDD | 61 | 28 - 130 |
| 13C12-123789-HxCDD | 60 | 28 - 130 |
| 13C12-1234678-HpCDD | 55 | 23 - 140 |
| 13C12-OCDD | 53 | 17 - 157 |
| 13C12-2378-TCDF | 61 | 24 - 169 |
| 13C12-12378-PeCDF | 57 | 24 - 185 |
| 13C12-23478-PeCDF | 59 | 21 - 178 |
| 13C12-123478-HxCDF | 63 | 26 - 152 |
| 13C12-123678-HxCDF | 65 | 26 - 123 |
| 13C12-234678-HxCDF | 62 | 28 - 136 |
| 13C12-123789-HxCDF | 74 | 29 - 147 |
| 13C12-1234678-HpCDF | 65 | 28 - 143 |
| 13C12-1234789-HpCDF | 50 | 26 - 138 |
| 13C12-OCDF | 46 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-509-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036185**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 10:40 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL509 SDG#: PH039-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-509-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036185**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 10:40 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL509 SDG#: PH039-06

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 16:11 | Joseph M Gambler | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/02/2013 07:16 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 03:49 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 10:03 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13123001 | 05/07/2013 04:48 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13123001 | 05/03/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:33 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:42 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:42 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:42 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-509-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036185**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 10:40 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL509 SDG#: PH039-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:42 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 10:04 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039402A | 04/26/2013 20:25 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401B | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-506-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036186**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 11:10 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL506 SDG#: PH039-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.41 | J | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.71 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.82 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.0 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 8.4 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 17 | J | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 7.8 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.0 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.81 | J | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.2 | J | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | J | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.8 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 20 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 40 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-506-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036186**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 11:10 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL506 SDG#: PH039-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,000 | | 40.3 | 7.77 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.916 | J | 4.03 | 0.504 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.92 | J | 4.03 | 0.333 | 1 |
| 06946 | Barium | 7440-39-3 | 105 | | 1.01 | 0.0333 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.573 | J | 1.01 | 0.0675 | 1 |
| 07914 | Boron | 7440-42-8 | 12.0 | | 10.1 | 0.837 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.302 | J | 1.01 | 0.0333 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,680 | | 20.2 | 4.05 | 1 |
| 06951 | Chromium | 7440-47-3 | 26.1 | | 3.02 | 0.0887 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.43 | | 1.01 | 0.0907 | 1 |
| 06953 | Copper | 7440-50-8 | 16.2 | | 2.02 | 0.181 | 1 |
| 01654 | Iron | 7439-89-6 | 26,000 | | 40.3 | 3.83 | 1 |
| 06955 | Lead | 7439-92-1 | 8.97 | | 3.02 | 0.474 | 1 |
| 01656 | Lithium | 7439-93-2 | 31.8 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,080 | | 10.1 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 371 | | 1.01 | 0.0837 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.477 | J | 2.02 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.6 | | 2.02 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 504 | | 10.1 | 0.514 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,030 | | 101 | 13.6 | 1 |
| 01667 | Sodium | 7440-23-5 | 80.3 | J | 101 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 2.86 | J | 10.1 | 0.222 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,360 | | 1.01 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 50.0 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 61.3 | | 4.03 | 0.202 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.98 | J | 5.04 | 0.837 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.187 | J | 0.403 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0605 | J | 0.202 | 0.0202 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.7 | | 0.403 | 0.0343 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.329 | | 0.202 | 0.0302 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0175 | | 0.0170 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 6.23 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.7 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-506-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036186**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 11:10 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL506 SDG#: PH039-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0231 | JQ | 1.00 | 0.0194 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0965 | JBQ | 5.01 | 0.0282 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.130 | JBQ | 5.01 | 0.0316 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.257 | J | 5.01 | 0.0329 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.290 | JQ | 5.01 | 0.0317 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 5.55 | B | 5.01 | 0.0362 | 1 |
| 11031 | OCDD | 3268-87-9 | 59.9 | B | 10.0 | 0.0243 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.154 | J | 1.00 | 0.0353 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.217 | JB | 5.01 | 0.0231 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.253 | JBQ | 5.01 | 0.0226 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.209 | JBQ | 5.01 | 0.0248 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.171 | JB | 5.01 | 0.0231 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.110 | JB | 5.01 | 0.0251 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.107 | JBQ | 5.01 | 0.0239 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.952 | JB | 5.01 | 0.0210 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.118 | JBQ | 5.01 | 0.0297 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.96 | JB | 10.0 | 0.0253 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.159 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 90 | 25 - 164 |
| 13C12-12378-PeCDD | 84 | 25 - 181 |
| 13C12-123478-HxCDD | 89 | 32 - 141 |
| 13C12-123678-HxCDD | 88 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 84 | 23 - 140 |
| 13C12-OCDD | 81 | 17 - 157 |
| 13C12-2378-TCDF | 83 | 24 - 169 |
| 13C12-12378-PeCDF | 85 | 24 - 185 |
| 13C12-23478-PeCDF | 83 | 21 - 178 |
| 13C12-123478-HxCDF | 88 | 26 - 152 |
| 13C12-123678-HxCDF | 92 | 26 - 123 |
| 13C12-234678-HxCDF | 89 | 28 - 136 |
| 13C12-123789-HxCDF | 94 | 29 - 147 |
| 13C12-1234678-HpCDF | 98 | 28 - 143 |
| 13C12-1234789-HpCDF | 81 | 26 - 138 |
| 13C12-OCDF | 75 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-506-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036186**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 11:10 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL506 SDG#: PH039-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-506-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036186**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 11:10 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL506 SDG#: PH039-07

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 16:43 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 04:08 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 05:55 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13123001 | 05/07/2013 05:44 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13123001 | 05/03/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:37 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:45 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:45 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:45 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:45 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-506-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036186**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 11:10 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL506 SDG#: PH039-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 10:06 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039402A | 04/26/2013 20:25 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401B | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-508-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7036187**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 13:20 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL508 SDG#: PH039-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.0 | J | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.64 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 5.1 | | 1.7 | 0.67 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 6.4 | | 1.7 | 0.67 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 12 | | 1.7 | 0.67 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 7.4 | J | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 3.6 | | 1.7 | 0.67 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 5.7 | | 1.7 | 0.67 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 7.6 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.3 | J | 1.7 | 0.67 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 8.9 | J | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 9.3 | | 1.7 | 0.67 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 3.1 | | 1.7 | 0.67 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.75 | J | 1.7 | 0.67 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.4 | J | 1.7 | 0.67 | 1 |
| 12969 | Naphthalene | 91-20-3 | 6.0 | | 1.7 | 0.67 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.1 | | 1.7 | 0.67 | 1 |
| 12969 | Pyrene | 129-00-0 | 7.8 | | 1.7 | 0.67 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 9.9 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 9.9 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 49 | | 33 | 9.9 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 110 | | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 25 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 42 | | 10 | 4.0 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-508-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036187**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 13:20 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL508 SDG#: PH039-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,800 | | 39.3 | 7.57 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.04 | J | 3.93 | 0.491 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.76 | | 3.93 | 0.324 | 1 |
| 06946 | Barium | 7440-39-3 | 61.4 | | 0.982 | 0.0324 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.429 | J | 0.982 | 0.0658 | 1 |
| 07914 | Boron | 7440-42-8 | 11.8 | | 9.82 | 0.815 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.260 | J | 0.982 | 0.0324 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,870 | | 19.6 | 3.95 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.5 | | 2.95 | 0.0864 | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.41 | | 0.982 | 0.0884 | 1 |
| 06953 | Copper | 7440-50-8 | 20.8 | | 1.96 | 0.177 | 1 |
| 01654 | Iron | 7439-89-6 | 27,200 | | 78.5 | 7.46 | 2 |
| 06955 | Lead | 7439-92-1 | 20.2 | | 2.95 | 0.461 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.7 | | 3.9 | 0.54 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,360 | | 9.82 | 1.70 | 1 |
| 06958 | Manganese | 7439-96-5 | 288 | | 0.982 | 0.0815 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.656 | J | 1.96 | 0.167 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.5 | | 1.96 | 0.108 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 448 | | 9.82 | 0.501 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,230 | | 98.2 | 13.3 | 1 |
| 01667 | Sodium | 7440-23-5 | 69.7 | J | 98.2 | 16.4 | 1 |
| 06969 | Tin | 7440-31-5 | 3.24 | J | 9.82 | 0.216 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,010 | | 0.982 | 0.167 | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.9 | | 0.982 | 0.108 | 1 |
| 06972 | Zinc | 7440-66-6 | 70.8 | | 3.93 | 0.196 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.34 | J | 4.91 | 0.815 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.109 | J | 0.393 | 0.0982 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0678 | J | 0.196 | 0.0196 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.2 | | 0.393 | 0.0334 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.294 | | 0.196 | 0.0295 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.414 | | 0.0163 | 0.0098 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.98 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.4 C. | | | | | | |
| **Wet Chemistry** | | **EPA 160.3 modified** | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.1 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-508-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036187**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 13:20 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL508 SDG#: PH039-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0607 | J | 0.973 | 0.0213 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.265 | JBQ | 4.87 | 0.0728 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.257 | JB | 4.87 | 0.0479 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.772 | J | 4.87 | 0.0503 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.505 | JQ | 4.87 | 0.0452 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 22.6 | B | 4.87 | 0.0468 | 1 |
| 11031 | OCDD | 3268-87-9 | 200 | B | 9.73 | 0.0346 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.628 | J | 0.973 | 0.113 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 2.61 | JB | 4.87 | 0.0556 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.773 | JB | 4.87 | 0.0537 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 1.64 | JB | 4.87 | 0.0520 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.595 | JB | 4.87 | 0.0507 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.190 | JBQ | 4.87 | 0.0471 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.481 | JB | 4.87 | 0.0503 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 5.26 | B | 4.87 | 0.0292 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.386 | JBQ | 4.87 | 0.0423 | 1 |
| 11031 | OCDF | 39001-02-0 | 12.6 | B | 9.73 | 0.0317 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.15 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 84 | 25 - 164 |
| 13C12-12378-PeCDD | 63 | 25 - 181 |
| 13C12-123478-HxCDD | 66 | 32 - 141 |
| 13C12-123678-HxCDD | 65 | 28 - 130 |
| 13C12-123789-HxCDD | 68 | 28 - 130 |
| 13C12-1234678-HpCDD | 64 | 23 - 140 |
| 13C12-OCDD | 66 | 17 - 157 |
| 13C12-2378-TCDF | 68 | 24 - 169 |
| 13C12-12378-PeCDF | 66 | 24 - 185 |
| 13C12-23478-PeCDF | 65 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 69 | 26 - 123 |
| 13C12-234678-HxCDF | 67 | 28 - 136 |
| 13C12-123789-HxCDF | 80 | 29 - 147 |
| 13C12-1234678-HpCDF | 75 | 28 - 143 |
| 13C12-1234789-HpCDF | 59 | 26 - 138 |
| 13C12-OCDF | 57 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-508-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036187**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 13:20 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL508 SDG#: PH039-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-508-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036187**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 13:20 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL508 SDG#: PH039-08*

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 17:14 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 04:26 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 09:01 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13123001 | 05/07/2013 17:13 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13123001 | 05/03/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 17:59 | Katlin N Cataldi | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:41 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:47 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:47 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:47 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:47 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-508-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7036187**
**LLI Group # 1385735**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 13:20 by SM

Submitted: 04/26/2013 09:15
Reported: 05/10/2013 10:53

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL508 SDG#: PH039-08*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 10:08 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13116039402A | 04/26/2013 20:25 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401B | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385735
Reported: 05/10/13 at 10:53 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13119SLC026 | Sample number(s): 7036177,7036179-7036181,7036183-7036187 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 115 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 100 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 86 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 92 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 90 | | 71-120 | | |
| Batch number: 13120A16A | Sample number(s): 7036184 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 96 | 91 | 67-119 | 6 | 30 |
| Batch number: 13121A20A | Sample number(s): 7036178 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 98 | 103 | 75-135 | 5 | 30 |
| Batch number: 131200017A | Sample number(s): 7036177,7036179-7036181,7036183-7036187 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 49 | 73 | 36-106 | 40* | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 104 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385735
Reported: 05/10/13 at 10:53 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 99 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131200001A | Sample number(s): 7036177,7036179-7036181,7036183-7036187 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 93 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 99 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 97 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 63* | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 80 | | 49-107 | | |
| Batch number: 131220637001 | Sample number(s): 7036177,7036179-7036187 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 101 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 104 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 104 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 99 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Calcium | 20.0 | U | 20.0 | 4.02 | mg/kg | 103 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 102 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 106 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 109 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 101 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 99 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 105 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 1.44 | J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 100 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.47 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 102 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 101 | | 80-120 | | |
| Batch number: 131220637001A | Sample number(s): 7036177,7036179-7036187 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 109 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0340 | mg/kg | 110 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 105 | | 80-120 | | |
| Batch number: 131220637001B | Sample number(s): 7036177,7036179-7036187 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 107 | | 80-120 | | |
| Batch number: 131220638001 | Sample number(s): 7036177,7036179-7036187 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 108 | | 85-120 | | |
| Batch number: 13116039402A | Sample number(s): 7036177,7036179,7036182-7036187 | | | | | | | | | |
| 15a pH by 9045C | | | | | | 99 | | 95-105 | | |
| Batch number: 13121162401A | Sample number(s): 7036177,7036183 | | | | | | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385735
Reported: 05/10/13 at 10:53 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |
| Batch number: 13121162401B | Sample number(s): 7036184-7036187 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |
| Batch number: 13127162401A | Sample number(s): 7036179-7036182 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13123001 | Sample number(s): 7036177,7036179-7036181,7036183,7036185-7036187 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0355 | ng/kg | 89 | | 67-158 | | |
| 12378-PeCDD | 0.0477 J | 5.00 | 0.0338 | ng/kg | 92 | | 70-142 | | |
| 123478-HxCDD | 0.0263 J | 5.00 | 0.0237 | ng/kg | 100 | | 70-164 | | |
| 123678-HxCDD | 5.00 U | 5.00 | 0.0245 | ng/kg | 97 | | 76-134 | | |
| 123789-HxCDD | 5.00 U | 5.00 | 0.0241 | ng/kg | 97 | | 64-162 | | |
| 1234678-HpCDD | 0.0789 J | 5.00 | 0.0258 | ng/kg | 95 | | 70-140 | | |
| OCDD | 0.143 J | 10.0 | 0.0248 | ng/kg | 94 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0282 | ng/kg | 92 | | 75-158 | | |
| 12378-PeCDF | 0.0390 J | 5.00 | 0.0181 | ng/kg | 96 | | 80-134 | | |
| 23478-PeCDF | 0.0517 J | 5.00 | 0.0177 | ng/kg | 98 | | 68-160 | | |
| 123478-HxCDF | 0.0360 J | 5.00 | 0.0127 | ng/kg | 98 | | 72-134 | | |
| 123678-HxCDF | 0.0277 J | 5.00 | 0.0118 | ng/kg | 96 | | 84-130 | | |
| 123789-HxCDF | 0.0157 J | 5.00 | 0.0129 | ng/kg | 101 | | 78-130 | | |
| 234678-HxCDF | 0.0328 J | 5.00 | 0.0115 | ng/kg | 98 | | 70-156 | | |
| 1234678-HpCDF | 0.0301 J | 5.00 | 0.0110 | ng/kg | 97 | | 82-122 | | |
| 1234789-HpCDF | 0.0373 J | 5.00 | 0.0157 | ng/kg | 96 | | 78-138 | | |
| OCDF | 0.125 J | 10.0 | 0.0440 | ng/kg | 99 | | 63-170 | | |
| Batch number: 13128001 | Sample number(s): 7036184 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0176 | ng/kg | 89 | | 67-158 | | |
| 12378-PeCDD | 0.0260 J | 5.00 | 0.0180 | ng/kg | 95 | | 70-142 | | |
| 123478-HxCDD | 5.00 U | 5.00 | 0.0138 | ng/kg | 102 | | 70-164 | | |
| 123678-HxCDD | 0.0224 J | 5.00 | 0.0143 | ng/kg | 100 | | 76-134 | | |
| 123789-HxCDD | 0.0332 J | 5.00 | 0.0140 | ng/kg | 100 | | 64-162 | | |
| 1234678-HpCDD | 0.0475 J | 5.00 | 0.0167 | ng/kg | 99 | | 70-140 | | |
| OCDD | 0.242 J | 10.0 | 0.0151 | ng/kg | 99 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0162 | ng/kg | 98 | | 75-158 | | |
| 12378-PeCDF | 0.0349 J | 5.00 | 0.00938 | ng/kg | 99 | | 80-134 | | |
| 23478-PeCDF | 0.0209 J | 5.00 | 0.00967 | ng/kg | 101 | | 68-160 | | |
| 123478-HxCDF | 0.0342 J | 5.00 | 0.00936 | ng/kg | 102 | | 72-134 | | |
| 123678-HxCDF | 0.0236 J | 5.00 | 0.00808 | ng/kg | 100 | | 84-130 | | |
| 123789-HxCDF | 0.0403 J | 5.00 | 0.00946 | ng/kg | 102 | | 78-130 | | |
| 234678-HxCDF | 0.0367 J | 5.00 | 0.00856 | ng/kg | 102 | | 70-156 | | |
| 1234678-HpCDF | 0.0382 J | 5.00 | 0.00608 | ng/kg | 100 | | 82-122 | | |
| 1234789-HpCDF | 0.0528 J | 5.00 | 0.0108 | ng/kg | 101 | | 78-138 | | |
| OCDF | 0.136 J | 10.0 | 0.0266 | ng/kg | 101 | | 63-170 | | |
| Batch number: 13123001 | Sample number(s): 7036177,7036179-7036181,7036183,7036185-7036187 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00836 | | | ng/kg | | | | | |
| Batch number: 13128001 | Sample number(s): 7036184 | | | | | | | | |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385735
Reported: 05/10/13 at 10:53 AM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| TEQ WHO 2005 - EDLx0.0 | 0.00642 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13119SLC026 | Sample number(s): 7036177,7036179-7036181,7036183-7036187 UNSPK: 7036179 | | | | | | | | |
| Acenaphthene | 95 | 91 | 48-127 | 4 | 30 | | | | |
| Acenaphthylene | 88 | 86 | 49-121 | 2 | 30 | | | | |
| Anthracene | 94 | 87 | 52-126 | 8 | 30 | | | | |
| Benzo(a)anthracene | 159* | 85 | 32-135 | 55* | 30 | | | | |
| Benzo(a)pyrene | 143* | 85 | 36-138 | 45* | 30 | | | | |
| Benzo(b)fluoranthene | 163* | 91 | 26-142 | 43* | 30 | | | | |
| Benzo(e)pyrene | 123 | 86 | 70-130 | 31* | 30 | | | | |
| Benzo(g,h,i)perylene | 74 | 50 | 33-141 | 35* | 30 | | | | |
| Benzo(k)fluoranthene | 121 | 88 | 47-129 | 25 | 30 | | | | |
| Butylbenzylphthalate | 103 | 106 | 59-153 | 3 | 30 | | | | |
| Di-n-butylphthalate | 101 | 97 | 62-154 | 4 | 30 | | | | |
| Chrysene | 163* | 81 | 29-148 | 55* | 30 | | | | |
| Dibenz(a,h)anthracene | 78 | 65 | 34-125 | 17 | 30 | | | | |
| Diethylphthalate | 106 | 103 | 76-127 | 3 | 30 | | | | |
| Dimethylphthalate | 91 | 89 | 62-136 | 3 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 76 | 63 | 39-167 | 10 | 30 | | | | |
| Fluoranthene | 205* | 85 | 47-135 | 70* | 30 | | | | |
| Fluorene | 90 | 89 | 50-129 | 1 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 87 | 61 | 17-136 | 32* | 30 | | | | |
| 1-Methylnaphthalene | 98 | 98 | 50-131 | 0 | 30 | | | | |
| 2-Methylnaphthalene | 98 | 98 | 28-144 | 0 | 30 | | | | |
| Naphthalene | 97 | 96 | 31-148 | 0 | 30 | | | | |
| N-Nitrosodimethylamine | 93 | 93 | 48-113 | 0 | 30 | | | | |
| Di-n-octylphthalate | 108 | 116 | 52-162 | 8 | 30 | | | | |
| Phenanthrene | 124 | 92 | 29-142 | 28 | 30 | | | | |
| Pyrene | 195* | 76 | 26-143 | 75* | 30 | | | | |
| Batch number: 131200017A | Sample number(s): 7036177,7036179-7036181,7036183-7036187 UNSPK: 7036179 | | | | | | | | |
| PCB-1016 | 94 | 99 | 16-146 | 5 | 50 | | | | |
| PCB-1260 | 86 | 91 | 40-134 | 5 | 50 | | | | |
| Batch number: 131200001A | Sample number(s): 7036177,7036179-7036181,7036183-7036187 UNSPK: 7036179 | | | | | | | | |
| EFH (C12-C14) | 147* | 137* | 49-123 | 4 | 20 | | | | |
| EFH (C15-C20) | 418 (2) | 352 (2) | 49-123 | 7 | 20 | | | | |
| EFH (C21-C30) | 1125 (2) | 986 (2) | 49-123 | 7 | 20 | | | | |
| EFH (C30-C40) | 406 (2) | 755 (2) | 49-123 | 14 | 20 | | | | |
| EFH (C8-C11) | 140* | 151* | 49-123 | 4 | 20 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385735
Reported: 05/10/13 at 10:53 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 131220637001 | Sample number(s): 7036177,7036179-7036187 UNSPK: 7036179 BKG: 7036179 | | | | | | | | |
| Aluminum | 1523 (2) | 1646 (2) | 75-125 | 2 | 20 | 11,400 | 10,900 | 5 | 20 |
| Antimony | 57* | 57* | 75-125 | 0 | 20 | 4.52 | 3.96 U | 200* (1) | 20 |
| Arsenic | 102 | 102 | 75-125 | 0 | 20 | 4.34 | 3.98 | 9 (1) | 20 |
| Barium | 101 | 98 | 75-125 | 2 | 20 | 101 | 88.6 | 13 | 20 |
| Beryllium | 106 | 106 | 75-125 | 0 | 20 | 0.451 J | 0.421 J | 7 (1) | 20 |
| Boron | 101 | 101 | 75-125 | 1 | 20 | 15.3 | 12.8 | 18 (1) | 20 |
| Cadmium | 84 | 84 | 75-125 | 0 | 20 | 1.16 | 0.273 J | 124* (1) | 20 |
| Calcium | 275 (2) | -53 (2) | 75-125 | 16 | 20 | 7,750 | 5,970 | 26* | 20 |
| Chromium | 110 | 118 | 75-125 | 4 | 20 | 15.0 | 16.5 | 9 | 20 |
| Cobalt | 95 | 95 | 75-125 | 0 | 20 | 7.43 | 3.86 | 63* (1) | 20 |
| Copper | 115 | 113 | 75-125 | 1 | 20 | 12.1 | 11.6 | 4 | 20 |
| Iron | 1009 (2) | 1510 (2) | 75-125 | 3 | 20 | 17,500 | 17,100 | 2 | 20 |
| Lead | 50* | 44* | 75-125 | 3 | 20 | 23.2 | 13.4 | 54* (1) | 20 |
| Lithium | 107 | 106 | 75-125 | 1 | 20 | 19.7 | 20.1 | 2 (1) | 20 |
| Magnesium | 264 (2) | 282 (2) | 75-125 | 1 | 20 | 4,380 | 4,170 | 5 | 20 |
| Manganese | 37 (2) | 41 (2) | 75-125 | 0 | 20 | 346 | 290 | 18 | 20 |
| Molybdenum | 99 | 98 | 75-125 | 0 | 20 | 2.73 | 0.348 J | 155* (1) | 20 |
| Nickel | 105 | 106 | 75-125 | 0 | 20 | 8.69 | 9.72 | 11 (1) | 20 |
| Phosphorus | -28 (2) | -49 (2) | 75-125 | 3 | 20 | 663 | 462 | 36* | 20 |
| Potassium | 129* | 135* | 75-125 | 1 | 20 | 3,020 | 2,970 | 2 | 20 |
| Sodium | 104 | 102 | 75-125 | 1 | 20 | 86.7 J | 77.4 J | 11 (1) | 20 |
| Tin | 94 | 94 | 75-125 | 0 | 20 | 10.6 | 2.69 J | 119* (1) | 20 |
| Titanium | 315 (2) | 362 (2) | 75-125 | 4 | 20 | 953 | 968 | 2 | 20 |
| Vanadium | 111 | 111 | 75-125 | 0 | 20 | 28.6 | 27.7 | 3 | 20 |
| Zinc | 107 | 103 | 75-125 | 2 | 20 | 69.3 | 62.6 | 10 | 20 |
| Zirconium | 98 | 98 | 75-125 | 0 | 20 | 2.43 J | 2.34 J | 4 (1) | 20 |
| Batch number: 131220637001A | Sample number(s): 7036177,7036179-7036187 UNSPK: 7036179 BKG: 7036179 | | | | | | | | |
| Silver | 111 | 113 | 75-125 | 2 | 20 | 0.0343 J | 0.0481 J | 33* (1) | 20 |
| Strontium | 39 (2) | 88 (2) | 75-125 | 9 | 20 | 36.6 | 36.0 | 2 | 20 |
| Thallium | 109 | 109 | 75-125 | 0 | 20 | 0.225 | 0.245 | 9 (1) | 20 |
| Batch number: 131220637001B | Sample number(s): 7036177,7036179-7036187 UNSPK: 7036179 BKG: 7036179 | | | | | | | | |
| Selenium | 111 | 108 | 75-125 | 2 | 20 | 0.185 J | 0.220 J | 17 (1) | 20 |
| Batch number: 131220638001 | Sample number(s): 7036177,7036179-7036187 UNSPK: 7036179 BKG: 7036179 | | | | | | | | |
| 3a Mercury 7471A | 109 | 101 | 65-135 | 9 | 20 | 0.0567 | 0.0552 | 3 (1) | 20 |
| Batch number: 13116039402A | Sample number(s): 7036177,7036179,7036182-7036187 BKG: 7036179 | | | | | | | | |
| 15a pH by 9045C | | | | | | 7.32 | 7.34 | 0 | 3 |
| Batch number: 13121162401A | Sample number(s): 7036177,7036183 BKG: P036179 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.6 | 6.1 | 28* | 20 |
| Batch number: 13121162401B | Sample number(s): 7036184-7036187 BKG: 7036184 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.4 | 3.4 | 1 | 20 |
| Batch number: 13127162401A | Sample number(s): 7036179-7036182 BKG: 7036179 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 2.4 | 2.6 | 6 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385735
Reported: 05/10/13 at 10:53 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 14a Moisture Content by 160.3 | | | | | | 2.4 | 2.6 | 6 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 2.4 | 2.6 | 6 | 20 |
| Batch number: 13123001 | Sample number(s): 7036177,7036179-7036181,7036183,7036185-7036187 UNSPK: 7036179 | | | | | | | | |
| 2378-TCDD | 87 | 89 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDD | 92 | 93 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDD | 100 | 101 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDD | 94 | 95 | 40-135 | 0 | 20 | | | | |
| 123789-HxCDD | 97 | 97 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDD | 83 | 90 | 40-135 | 6 | 20 | | | | |
| OCDD | 30* | 61 | 40-135 | 17 | 20 | | | | |
| 2378-TCDF | 93 | 93 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDF | 97 | 96 | 40-135 | 2 | 20 | | | | |
| 23478-PeCDF | 98 | 97 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 100 | 101 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDF | 98 | 96 | 40-135 | 3 | 20 | | | | |
| 123789-HxCDF | 98 | 99 | 40-135 | 0 | 20 | | | | |
| 234678-HxCDF | 98 | 99 | 40-135 | 0 | 20 | | | | |
| 1234678-HpCDF | 96 | 98 | 40-135 | 1 | 20 | | | | |
| 1234789-HpCDF | 97 | 96 | 40-135 | 1 | 20 | | | | |
| OCDF | 96 | 97 | 40-135 | 1 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13119SLC026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7036177 | 90 | 100 | 99 |
| 7036179 | 91 | 98 | 96 |
| 7036180 | 88 | 97 | 94 |
| 7036181 | 86 | 97 | 96 |
| 7036183 | 87 | 95 | 88 |
| 7036184 | 89 | 103 | 96 |
| 7036185 | 92 | 105 | 98 |
| 7036186 | 89 | 94 | 94 |
| 7036187 | 89 | 96 | 95 |
| Blank | 89 | 102 | 98 |
| LCS | 90 | 102 | 99 |
| MS | 88 | 97 | 94 |
| MSD | 86 | 97 | 96 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 11a TPH by EPA 8015B GRO

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385735
Reported: 05/10/13 at 10:53 AM

## Surrogate Quality Control

Batch number: 13120A16A

| | Trifluorotoluene-F |
|---|---|
| 7036184 | 82 |
| Blank | 86 |
| LCS | 88 |
| LCSD | 83 |
| Limits: | 61-122 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13121A20A

| | Trifluorotoluene-F |
|---|---|
| 7036178 | 88 |
| Blank | 88 |
| LCS | 113 |
| LCSD | 113 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131200017A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7036177 | 126* | 109 |
| 7036179 | 116 | 98 |
| 7036180 | 124* | 112 |
| 7036181 | 123* | 112 |
| 7036183 | 118 | 106 |
| 7036184 | 118 | 96 |
| 7036185 | 117 | 105 |
| 7036186 | 108 | 90 |
| 7036187 | 124* | 107 |
| Blank | 129* | 112 |
| LCS | 132* | 116 |
| LCSD | 138* | 116 |
| MS | 124* | 112 |
| MSD | 123* | 112 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131200001A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7036177 | 102 | 106 |
| 7036179 | 89 | 77 |
| 7036180 | 102 | 85 |
| 7036181 | 95 | 82 |
| 7036183 | 98 | 89 |
| 7036184 | 94 | 96 |
| 7036185 | 81 | 88 |
| 7036186 | 89 | 89 |
| 7036187 | 93 | 98 |
| Blank | 99 | 104 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385735
Reported: 05/10/13 at 10:53 AM

## Surrogate Quality Control

| | | |
|---|---|---|
| LCS | 93 | 97 |
| MS | 102 | 85 |
| MSD | 95 | 82 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13123001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7036177 | 77 | 51 | 51 | 53 | 54 | 67 |
| 7036179 | 80 | 56 | 57 | 59 | 59 | 75 |
| 7036180 | 81 | 54 | 55 | 56 | 58 | 77 |
| 7036181 | 78 | 67 | 72 | 74 | 71 | 78 |
| 7036183 | 79 | 61 | 63 | 66 | 63 | 74 |
| 7036185 | 77 | 59 | 63 | 65 | 62 | 74 |
| 7036186 | 90 | 83 | 88 | 92 | 89 | 94 |
| 7036187 | 84 | 65 | 67 | 69 | 67 | 80 |
| Blank | 79 | 80 | 92 | 95 | 91 | 92 |
| MS | 81 | 54 | 55 | 56 | 58 | 77 |
| MSD | 78 | 67 | 72 | 74 | 71 | 78 |
| OPR | 83 | 47 | 45 | 47 | 52 | 73 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7036177 | 54 | 44 | 40 | 51 | 51 | 51 |
| 7036179 | 57 | 50 | 46 | 56 | 57 | 55 |
| 7036180 | 54 | 50 | 47 | 53 | 55 | 54 |
| 7036181 | 71 | 62 | 59 | 65 | 69 | 70 |
| 7036183 | 70 | 50 | 46 | 60 | 62 | 61 |
| 7036185 | 65 | 50 | 46 | 56 | 62 | 61 |
| 7036186 | 98 | 81 | 75 | 84 | 89 | 88 |
| 7036187 | 75 | 59 | 57 | 63 | 66 | 65 |
| Blank | 106 | 84 | 79 | 83 | 90 | 92 |
| MS | 54 | 50 | 47 | 53 | 55 | 54 |
| MSD | 71 | 62 | 59 | 65 | 69 | 70 |
| OPR | 50 | 45 | 42 | 48 | 45 | 46 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7036177 | 55 | 48 | 49 | 60 | 53 |
| 7036179 | 58 | 54 | 52 | 62 | 58 |
| 7036180 | 58 | 52 | 53 | 62 | 54 |
| 7036181 | 68 | 65 | 62 | 65 | 64 |
| 7036183 | 62 | 58 | 55 | 62 | 61 |
| 7036185 | 60 | 55 | 53 | 61 | 57 |
| 7036186 | 87 | 84 | 81 | 83 | 85 |
| 7036187 | 68 | 64 | 66 | 68 | 66 |
| Blank | 89 | 90 | 87 | 72 | 82 |
| MS | 58 | 52 | 53 | 62 | 54 |
| MSD | 68 | 65 | 62 | 65 | 64 |
| OPR | 56 | 48 | 52 | 61 | 52 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1385735
Reported: 05/10/13 at 10:53 AM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |
| Analysis Name: 23a Dioxin/Furan by EPA 1613B | | | | | | |
| Batch number: 13128001 | | | | | | |
| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
| 7036184 | 76 | 73 | 82 | 87 | 81 | 84 |
| Blank | 82 | 76 | 86 | 94 | 84 | 85 |
| OPR | 85 | 82 | 91 | 97 | 90 | 91 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |
| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
| 7036184 | 96 | 72 | 69 | 74 | 80 | 84 |
| Blank | 107 | 70 | 63 | 79 | 86 | 86 |
| OPR | 107 | 74 | 64 | 85 | 91 | 90 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |
| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
| 7036184 | 78 | 77 | 77 | 68 | 77 | |
| Blank | 83 | 82 | 78 | 71 | 81 | |
| OPR | 88 | 86 | 83 | 75 | 85 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct#13013 Cup#1385735 Sample#7036177-87

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/25/2013
CarrierName: FedEx
AirbillNo: 7996 1755 0303

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130425-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-507-SA7-SB-0.0-0.5 | 4/24/13 15:05 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-507-SA7-SB-0.0-0.5 | 4/24/13 15:05 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| TB-042413 | 4/24/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-519-SA7-SB-0.0-0.5MS | 4/25/13 08:45 | SO | None | 6 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-519-SA7-SB-0.0-0.5MS | 4/25/13 08:45 | SO | None | 1 - 8 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-819-SA7-SB-0.0-0.5 | 4/25/13 08:50 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-819-SA7-SB-0.0-0.5 | 4/25/13 08:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-519-SA7-SB-2.0-3.0 | 4/25/13 09:50 | SO | None | 1 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-519-SA7-SB-2.0-3.0 | 4/25/13 09:50 | SO | None | 1 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-519-SA7-SB-2.0-3.0 | 4/25/13 09:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-519-SA7-SB-2.0-3.0 | 4/25/13 09:50 | SO | None | 1 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-509-SA7-SB-0.0-0.5 | 4/25/13 10:40 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-509-SA7-SB-0.0-0.5 | 4/25/13 10:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-506-SA7-SB-0.0-0.5 | 4/25/13 11:10 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-506-SA7-SB-0.0-0.5 | 4/25/13 11:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-508-SA7-SB-0.0-0.5 | 4/25/13 13:20 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-508-SA7-SB-0.0-0.5 | 4/25/13 13:20 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

acct#13013 Cap#1385735 sample#7036177-87

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/25/2013
CarrierName: FedEx
AirbillNo: 7996 1755 0303

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130425-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Steve Mercer

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Cota | 4/25/13 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 4/26/13 | 0915 |

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GH 1385735

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** CDM

**Date of Receipt:** 4/26/13

**Time of Receipt:** 0915

**Source Code:** 50

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | 2783 | 3.2 | TB | WI | Y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** [signature] 964 **Date/Time:** 4/26/13

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 09, 2013

Project: Phase 3 Subarea 7

Submittal Date: 04/27/2013
Group Number: 1386003
SDG: PH040
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| SL-543A-SA7-SB-0.0-0.5 Soil | 7037614 |
| SL-543B-SA7-SB-0.0-0.5 Soil | 7037615 |
| SL-543C-SA7-SB-0.0-0.5 Soil | 7037616 |
| SL-543D-SA7-SB-0.0-0.5 Soil | 7037617 |
| TB-042613 Water | 7037618 |
| SL-562-SA7-SB-0.0-0.5 Soil | 7037619 |
| SL-562-SA7-SB-2.0-3.0 Soil | 7037620 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: SL-543A-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7037614**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 14:25

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S543A SDG#: PH040-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.1 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 04:45 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401B | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-543B-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7037615**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 14:40

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S543B SDG#: PH040-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 06:17 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401B | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-543C-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7037616**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 14:50

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S543C SDG#: PH040-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.5 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 06:35 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401B | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-543D-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7037617**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/25/2013 15:00

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S543D SDG#: PH040-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.8 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 06:53 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401B | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-042613 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7037618**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/26/2013 08:00

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

543TB SDG#: PH040-05TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13121A20A | 05/01/2013 12:31 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13121A20A | 05/01/2013 12:31 | Catherine J Schwarz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-562-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7037619**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/26/2013 08:25

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL562 SDG#: PH040-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.5 | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.5 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 12 | J | 17 | 6.9 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 23 | | 17 | 6.9 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 180 | U | 180 | 35 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 9.8 | J | 17 | 6.9 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 7.9 | J | 17 | 6.9 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 190 | U | 190 | 62 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 190 | U | 190 | 62 | 10 |
| 12969 | Chrysene | 218-01-9 | 16 | J | 17 | 3.5 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 190 | U | 190 | 62 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 190 | U | 190 | 62 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 190 | U | 190 | 62 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 22 | | 17 | 6.9 | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 7.8 | J | 17 | 6.9 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.9 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Naphthalene | 91-20-3 | 17 | U | 17 | 6.9 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 190 | U | 190 | 62 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 12 | J | 17 | 6.9 | 10 |
| 12969 | Pyrene | 129-00-0 | 19 | | 17 | 6.9 | 10 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 48 | | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 130 | | 52 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 10 | 5 |

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-562-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7037619**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/26/2013 08:25

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL562 SDG#: PH040-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,600 | | 40.7 | 7.84 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.665 | J | 4.07 | 0.509 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.38 | | 4.07 | 0.336 | 1 |
| 06946 | Barium | 7440-39-3 | 78.0 | | 1.02 | 0.0336 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.491 | J | 1.02 | 0.0681 | 1 |
| 07914 | Boron | 7440-42-8 | 10.9 | | 10.2 | 0.844 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.270 | J | 1.02 | 0.0336 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,400 | | 20.3 | 4.09 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.5 | | 3.05 | 0.0895 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.54 | | 1.02 | 0.0915 | 1 |
| 06953 | Copper | 7440-50-8 | 12.5 | | 2.03 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 20,300 | | 40.7 | 3.86 | 1 |
| 06955 | Lead | 7439-92-1 | 10.5 | | 3.05 | 0.478 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.1 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,410 | | 10.2 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 280 | | 1.02 | 0.0844 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.278 | J | 2.03 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.24 | | 2.03 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 427 | | 10.2 | 0.519 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,300 | | 102 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 71.9 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.82 | J | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,100 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 33.1 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 91.2 | | 4.07 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.87 | J | 5.09 | 0.844 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.143 | J | 0.407 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0337 | J | 0.203 | 0.0203 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.3 | | 0.407 | 0.0346 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.283 | | 0.203 | 0.0305 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0118 | J | 0.0163 | 0.0098 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 7.34 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.6 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-562-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7037619**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/26/2013 08:25

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL562 SDG#: PH040-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.140 | JQ | 1.02 | 0.0255 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.740 | JB | 5.09 | 0.0621 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.56 | JB | 5.09 | 0.0804 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 4.50 | J | 5.09 | 0.0822 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 2.84 | J | 5.09 | 0.0719 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 121 | B | 5.09 | 0.154 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,540 | B | 10.2 | 0.0804 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.192 | JQ | 1.02 | 0.0409 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.557 | JB | 5.09 | 0.0364 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.677 | JB | 5.09 | 0.0374 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.813 | JB | 5.09 | 0.0513 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.584 | JB | 5.09 | 0.0482 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.09 | U | 5.09 | 0.0352 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.560 | JB | 5.09 | 0.0426 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 10.4 | B | 5.09 | 0.0473 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.570 | JB | 5.09 | 0.0555 | 1 |
| 11031 | OCDF | 39001-02-0 | 15.1 | B | 10.2 | 0.0478 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 3.84 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 52 | 25 - 181 |
| 13C12-123478-HxCDD | 52 | 32 - 141 |
| 13C12-123678-HxCDD | 53 | 28 - 130 |
| 13C12-123789-HxCDD | 59 | 28 - 130 |
| 13C12-1234678-HpCDD | 50 | 23 - 140 |
| 13C12-OCDD | 51 | 17 - 157 |
| 13C12-2378-TCDF | 66 | 24 - 169 |
| 13C12-12378-PeCDF | 56 | 24 - 185 |
| 13C12-23478-PeCDF | 53 | 21 - 178 |
| 13C12-123478-HxCDF | 51 | 26 - 152 |
| 13C12-123678-HxCDF | 52 | 26 - 123 |
| 13C12-234678-HxCDF | 57 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 50 | 28 - 143 |
| 13C12-1234789-HpCDF | 50 | 26 - 138 |
| 13C12-OCDF | 46 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-562-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7037619**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/26/2013 08:25

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL562 SDG#: PH040-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-562-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7037619**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/26/2013 08:25

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL562 SDG#: PH040-06

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 17:45 | Joseph M Gambler | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/03/2013 07:12 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 10:45 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13123001 | 05/07/2013 10:35 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13123001 | 05/03/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:44 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:50 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:50 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:50 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:50 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-562-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7037619**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/26/2013 08:25

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL562 SDG#: PH040-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 10:10 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13117039401A | 04/27/2013 18:39 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401B | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-562-SA7-SB-2.0-3.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7037620
**LLI Group #** 1386003
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 04/26/2013 09:20

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5622 SDG#: PH040-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 7.9 | J | 17 | 6.9 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 28 | | 17 | 6.9 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 39 | | 17 | 6.9 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 100 | J | 180 | 34 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 40 | | 17 | 6.9 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 46 | | 17 | 6.9 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 190 | U | 190 | 62 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 190 | U | 190 | 62 | 10 |
| 12969 | Chrysene | 218-01-9 | 39 | | 17 | 3.4 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | J | 17 | 6.9 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 190 | U | 190 | 62 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 190 | U | 190 | 62 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 150 | J | 190 | 62 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 15 | J | 17 | 6.9 | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 15 | J | 17 | 6.9 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.9 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Naphthalene | 91-20-3 | 17 | U | 17 | 6.9 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 190 | U | 190 | 62 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Pyrene | 129-00-0 | 13 | J | 17 | 6.9 | 10 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.2 | U | 1.2 | 0.2 | 29.07 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 26 | U | 26 | 10 | 5 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-562-SA7-SB-2.0-3.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7037620
**LLI Group #** 1386003
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 04/26/2013 09:20

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5622 SDG#: PH040-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 82 | | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 220 | | 51 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 10 | 5 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,100 | | 41.2 | 7.94 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.557 | J | 4.12 | 0.515 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.22 | | 4.12 | 0.340 | 1 |
| 06946 | Barium | 7440-39-3 | 85.4 | | 1.03 | 0.0340 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.487 | J | 1.03 | 0.0690 | 1 |
| 07914 | Boron | 7440-42-8 | 9.62 | J | 10.3 | 0.855 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.399 | J | 1.03 | 0.0340 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,250 | | 20.6 | 4.14 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.6 | | 3.09 | 0.0906 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.50 | | 1.03 | 0.0927 | 1 |
| 06953 | Copper | 7440-50-8 | 11.6 | | 2.06 | 0.185 | 1 |
| 01654 | Iron | 7439-89-6 | 20,500 | | 41.2 | 3.91 | 1 |
| 06955 | Lead | 7439-92-1 | 15.8 | | 3.09 | 0.484 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.1 | | 4.1 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,340 | | 10.3 | 1.78 | 1 |
| 06958 | Manganese | 7439-96-5 | 284 | | 1.03 | 0.0855 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.334 | J | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.8 | | 2.06 | 0.113 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 370 | | 10.3 | 0.525 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,150 | | 103 | 13.9 | 1 |
| 01667 | Sodium | 7440-23-5 | 73.0 | J | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 2.92 | J | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,100 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 35.4 | | 1.03 | 0.113 | 1 |
| 06972 | Zinc | 7440-66-6 | 129 | | 4.12 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.56 | J | 5.15 | 0.855 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.145 | J | 0.412 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0694 | J | 0.206 | 0.0206 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.5 | | 0.412 | 0.0350 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.238 | | 0.206 | 0.0309 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0163 | U | 0.0163 | 0.0098 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045C | n.a. | 8.12 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.8 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-562-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7037620**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/26/2013 09:20

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5622 SDG#: PH040-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.9 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-562-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7037620**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/26/2013 09:20

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5622 SDG#: PH040-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.116 | J | 1.00 | 0.0266 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.735 | JB | 5.01 | 0.0657 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.54 | JB | 5.01 | 0.0601 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 7.59 | | 5.01 | 0.0620 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 3.27 | J | 5.01 | 0.0580 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 215 | B | 5.01 | 0.0993 | 1 |
| 11031 | OCDD | 3268-87-9 | 2,660 | B | 10.0 | 0.105 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.830 | J | 1.00 | 0.0983 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.995 | JB | 5.01 | 0.0669 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 1.79 | JB | 5.01 | 0.0634 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 1.77 | JB | 5.01 | 0.0604 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.49 | JB | 5.01 | 0.0594 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.745 | JB | 5.01 | 0.0617 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 1.52 | JB | 5.01 | 0.0604 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 27.1 | B | 5.01 | 0.0571 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 1.64 | JB | 5.01 | 0.0705 | 1 |
| 11031 | OCDF | 39001-02-0 | 47.0 | B | 10.0 | 0.0817 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 6.54 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 84 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 71 | 32 - 141 |
| 13C12-123678-HxCDD | 69 | 28 - 130 |
| 13C12-123789-HxCDD | 69 | 28 - 130 |
| 13C12-1234678-HpCDD | 62 | 23 - 140 |
| 13C12-OCDD | 56 | 17 - 157 |
| 13C12-2378-TCDF | 70 | 24 - 169 |
| 13C12-12378-PeCDF | 68 | 24 - 185 |
| 13C12-23478-PeCDF | 71 | 21 - 178 |
| 13C12-123478-HxCDF | 74 | 26 - 152 |
| 13C12-123678-HxCDF | 73 | 26 - 123 |
| 13C12-234678-HxCDF | 73 | 28 - 136 |
| 13C12-123789-HxCDF | 79 | 29 - 147 |
| 13C12-1234678-HpCDF | 66 | 28 - 143 |
| 13C12-1234789-HpCDF | 59 | 26 - 138 |
| 13C12-OCDF | 56 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-562-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7037620**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/26/2013 09:20

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5622 SDG#: PH040-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-562-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7037620**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/26/2013 09:20

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5622 SDG#: PH040-07*

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13119SLC026 | 05/01/2013 18:16 | Joseph M Gambler | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13119SLC026 | 04/29/2013 14:00 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13120A16A | 04/30/2013 17:57 | Laura M Krieger | 29.07 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201311730906 | 04/27/2013 18:10 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131200017A | 05/05/2013 16:53 | Jessica L Miller | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131200017A | 05/01/2013 09:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131200001A | 05/02/2013 11:26 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131200001A | 04/30/2013 18:10 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13123001 | 05/07/2013 11:32 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13123001 | 05/03/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131220637001 | 05/03/2013 12:48 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131220637001B | 05/06/2013 11:52 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-562-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7037620**
**LLI Group # 1386003**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 04/26/2013 09:20

Submitted: 04/27/2013 09:30
Reported: 05/09/2013 09:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S5622 SDG#: PH040-07*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06142 | Silver | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:52 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:52 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131220637001A | 05/06/2013 11:52 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131220638001 | 05/03/2013 10:12 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131220637001 | 05/02/2013 23:16 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131220638001 | 05/03/2013 02:45 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045C | SW-846 9045D modified | 1 | 13117003941A | 04/27/2013 18:39 | Clayton C Litchmore | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13121162401B | 05/01/2013 22:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1386003
Reported: 05/09/13 at 09:03 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13119SLC026 | Sample number(s): 7037619-7037620 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 115 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 100 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 86 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 92 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 90 | | 71-120 | | |
| Batch number: 13120A16A | Sample number(s): 7037620 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 96 | 91 | 67-119 | 6 | 30 |
| Batch number: 13121A20A | Sample number(s): 7037618 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 98 | 103 | 75-135 | 5 | 30 |
| Batch number: 131200017A | Sample number(s): 7037614-7037617,7037619-7037620 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 49 | 73 | 36-106 | 40* | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 104 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1386003
Reported: 05/09/13 at 09:03 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 99 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131200001A | Sample number(s): 7037619-7037620 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 93 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 99 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 97 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 63* | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 80 | | 49-107 | | |
| Batch number: 131220637001 | Sample number(s): 7037619-7037620 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 101 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 104 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 104 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 99 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Calcium | 20.0 | U | 20.0 | 4.02 | mg/kg | 103 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 102 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 106 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 109 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 101 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 99 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 105 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 1.44 | J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 100 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.47 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 102 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 101 | | 80-120 | | |
| Batch number: 131220637001A | Sample number(s): 7037619-7037620 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 109 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0340 | mg/kg | 110 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 105 | | 80-120 | | |
| Batch number: 131220637001B | Sample number(s): 7037619-7037620 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 107 | | 80-120 | | |
| Batch number: 131220638001 | Sample number(s): 7037619-7037620 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 108 | | 85-120 | | |
| Batch number: 13117039401A | Sample number(s): 7037619 | | | | | | | | | |
| 15a pH by 9045C | | | | | | 99 | | 95-105 | | |
| Batch number: 13121162401B | Sample number(s): 7037614-7037617,7037619-7037620 | | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1386003
Reported: 05/09/13 at 09:03 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13123001 | Sample number(s): 7037619-7037620 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0355 | ng/kg | 89 | | 67-158 | | |
| 12378-PeCDD | 0.0477 J | 5.00 | 0.0338 | ng/kg | 92 | | 70-142 | | |
| 123478-HxCDD | 0.0263 J | 5.00 | 0.0237 | ng/kg | 100 | | 70-164 | | |
| 123678-HxCDD | 5.00 U | 5.00 | 0.0245 | ng/kg | 97 | | 76-134 | | |
| 123789-HxCDD | 5.00 U | 5.00 | 0.0241 | ng/kg | 97 | | 64-162 | | |
| 1234678-HpCDD | 0.0789 J | 5.00 | 0.0258 | ng/kg | 95 | | 70-140 | | |
| OCDD | 0.143 J | 10.0 | 0.0248 | ng/kg | 94 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0282 | ng/kg | 92 | | 75-158 | | |
| 12378-PeCDF | 0.0390 J | 5.00 | 0.0181 | ng/kg | 96 | | 80-134 | | |
| 23478-PeCDF | 0.0517 J | 5.00 | 0.0177 | ng/kg | 98 | | 68-160 | | |
| 123478-HxCDF | 0.0360 J | 5.00 | 0.0127 | ng/kg | 98 | | 72-134 | | |
| 123678-HxCDF | 0.0277 J | 5.00 | 0.0118 | ng/kg | 96 | | 84-130 | | |
| 123789-HxCDF | 0.0157 J | 5.00 | 0.0129 | ng/kg | 101 | | 78-130 | | |
| 234678-HxCDF | 0.0328 J | 5.00 | 0.0115 | ng/kg | 98 | | 70-156 | | |
| 1234678-HpCDF | 0.0301 J | 5.00 | 0.0110 | ng/kg | 97 | | 82-122 | | |
| 1234789-HpCDF | 0.0373 J | 5.00 | 0.0157 | ng/kg | 96 | | 78-138 | | |
| OCDF | 0.125 J | 10.0 | 0.0440 | ng/kg | 99 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00836 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13119SLC026 | Sample number(s): 7037619-7037620 UNSPK: P036179 | | | | | | | | |
| Acenaphthene | 95 | 91 | 48-127 | 4 | 30 | | | | |
| Acenaphthylene | 88 | 86 | 49-121 | 2 | 30 | | | | |
| Anthracene | 94 | 87 | 52-126 | 8 | 30 | | | | |
| Benzo(a)anthracene | 159* | 85 | 32-135 | 55* | 30 | | | | |
| Benzo(a)pyrene | 143* | 85 | 36-138 | 45* | 30 | | | | |
| Benzo(b)fluoranthene | 163* | 91 | 26-142 | 43* | 30 | | | | |
| Benzo(e)pyrene | 123 | 86 | 70-130 | 31* | 30 | | | | |
| Benzo(g,h,i)perylene | 74 | 50 | 33-141 | 35* | 30 | | | | |
| Benzo(k)fluoranthene | 121 | 88 | 47-129 | 25 | 30 | | | | |
| Butylbenzylphthalate | 103 | 106 | 59-153 | 3 | 30 | | | | |
| Di-n-butylphthalate | 101 | 97 | 62-154 | 4 | 30 | | | | |
| Chrysene | 163* | 81 | 29-148 | 55* | 30 | | | | |
| Dibenz(a,h)anthracene | 78 | 65 | 34-125 | 17 | 30 | | | | |
| Diethylphthalate | 106 | 103 | 76-127 | 3 | 30 | | | | |
| Dimethylphthalate | 91 | 89 | 62-136 | 3 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1386003
Reported: 05/09/13 at 09:03 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 76 | 63 | 39-167 | 10 | 30 | | | | |
| Fluoranthene | 205* | 85 | 47-135 | 70* | 30 | | | | |
| Fluorene | 90 | 89 | 50-129 | 1 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 87 | 61 | 17-136 | 32* | 30 | | | | |
| 1-Methylnaphthalene | 98 | 98 | 50-131 | 0 | 30 | | | | |
| 2-Methylnaphthalene | 98 | 98 | 28-144 | 0 | 30 | | | | |
| Naphthalene | 97 | 96 | 31-148 | 0 | 30 | | | | |
| N-Nitrosodimethylamine | 93 | 93 | 48-113 | 0 | 30 | | | | |
| Di-n-octylphthalate | 108 | 116 | 52-162 | 8 | 30 | | | | |
| Phenanthrene | 124 | 92 | 29-142 | 28 | 30 | | | | |
| Pyrene | 195* | 76 | 26-143 | 75* | 30 | | | | |
| Batch number: 131200017A | Sample number(s): 7037614-7037617,7037619-7037620 UNSPK: P036179 | | | | | | | | |
| PCB-1016 | 94 | 99 | 16-146 | 5 | 50 | | | | |
| PCB-1260 | 86 | 91 | 40-134 | 5 | 50 | | | | |
| Batch number: 131200001A | Sample number(s): 7037619-7037620 UNSPK: P036179 | | | | | | | | |
| EFH (C12-C14) | 147* | 137* | 49-123 | 4 | 20 | | | | |
| EFH (C15-C20) | 418 (2) | 352 (2) | 49-123 | 7 | 20 | | | | |
| EFH (C21-C30) | 1125 (2) | 986 (2) | 49-123 | 7 | 20 | | | | |
| EFH (C30-C40) | 406 (2) | 755 (2) | 49-123 | 14 | 20 | | | | |
| EFH (C8-C11) | 140* | 151* | 49-123 | 4 | 20 | | | | |
| Batch number: 131220637001 | Sample number(s): 7037619-7037620 UNSPK: P036179 BKG: P036179 | | | | | | | | |
| Aluminum | 1523 (2) | 1646 (2) | 75-125 | 2 | 20 | 11,400 | 10,900 | 5 | 20 |
| Antimony | 57* | 57* | 75-125 | 0 | 20 | 4.52 | 3.96 U | 200* (1) | 20 |
| Arsenic | 102 | 102 | 75-125 | 0 | 20 | 4.34 | 3.98 | 9 (1) | 20 |
| Barium | 101 | 98 | 75-125 | 2 | 20 | 101 | 88.6 | 13 | 20 |
| Beryllium | 106 | 106 | 75-125 | 0 | 20 | 0.451 J | 0.421 J | 7 (1) | 20 |
| Boron | 101 | 101 | 75-125 | 1 | 20 | 15.3 | 12.8 | 18 (1) | 20 |
| Cadmium | 84 | 84 | 75-125 | 0 | 20 | 1.16 | 0.273 J | 124* (1) | 20 |
| Calcium | 275 (2) | -53 (2) | 75-125 | 16 | 20 | 7,750 | 5,970 | 26* | 20 |
| Chromium | 110 | 118 | 75-125 | 4 | 20 | 15.0 | 16.5 | 9 | 20 |
| Cobalt | 95 | 95 | 75-125 | 0 | 20 | 7.43 | 3.86 | 63* (1) | 20 |
| Copper | 115 | 113 | 75-125 | 1 | 20 | 12.1 | 11.6 | 4 | 20 |
| Iron | 1009 (2) | 1510 (2) | 75-125 | 3 | 20 | 17,500 | 17,100 | 2 | 20 |
| Lead | 50* | 44* | 75-125 | 3 | 20 | 23.2 | 13.4 | 54* (1) | 20 |
| Lithium | 107 | 106 | 75-125 | 1 | 20 | 19.7 | 20.1 | 2 (1) | 20 |
| Magnesium | 264 (2) | 282 (2) | 75-125 | 1 | 20 | 4,380 | 4,170 | 5 | 20 |
| Manganese | 37 (2) | 41 (2) | 75-125 | 0 | 20 | 346 | 290 | 18 | 20 |
| Molybdenum | 99 | 98 | 75-125 | 0 | 20 | 2.73 | 0.348 J | 155* (1) | 20 |
| Nickel | 105 | 106 | 75-125 | 0 | 20 | 8.69 | 9.72 | 11 (1) | 20 |
| Phosphorus | -28 (2) | -49 (2) | 75-125 | 3 | 20 | 663 | 462 | 36* | 20 |
| Potassium | 129* | 135* | 75-125 | 1 | 20 | 3,020 | 2,970 | 2 | 20 |
| Sodium | 104 | 102 | 75-125 | 1 | 20 | 86.7 J | 77.4 J | 11 (1) | 20 |
| Tin | 94 | 94 | 75-125 | 0 | 20 | 10.6 | 2.69 J | 119* (1) | 20 |
| Titanium | 315 (2) | 362 (2) | 75-125 | 4 | 20 | 953 | 968 | 2 | 20 |
| Vanadium | 111 | 111 | 75-125 | 0 | 20 | 28.6 | 27.7 | 3 | 20 |
| Zinc | 107 | 103 | 75-125 | 2 | 20 | 69.3 | 62.6 | 10 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1386003
Reported: 05/09/13 at 09:03 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | | DUP Conc | | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Zirconium | 98 | 98 | 75-125 | 0 | 20 | 2.43 | J | 2.34 | J | 4 (1) | 20 |
| Batch number: 131220637001A | Sample number(s): 7037619-7037620 UNSPK: P036179 BKG: P036179 | | | | | | | | | | |
| Silver | 111 | 113 | 75-125 | 2 | 20 | 0.0343 | J | 0.0481 | J | 33* (1) | 20 |
| Strontium | 39 (2) | 88 (2) | 75-125 | 9 | 20 | 36.6 | | 36.0 | | 2 | 20 |
| Thallium | 109 | 109 | 75-125 | 0 | 20 | 0.225 | | 0.245 | | 9 (1) | 20 |
| Batch number: 131220637001B | Sample number(s): 7037619-7037620 UNSPK: P036179 BKG: P036179 | | | | | | | | | | |
| Selenium | 111 | 108 | 75-125 | 2 | 20 | 0.185 | J | 0.220 | J | 17 (1) | 20 |
| Batch number: 131220638001 | Sample number(s): 7037619-7037620 UNSPK: P036179 BKG: P036179 | | | | | | | | | | |
| 3a Mercury 7471A | 109 | 101 | 65-135 | 9 | 20 | 0.0567 | | 0.0552 | | 3 (1) | 20 |
| Batch number: 13117039401A | Sample number(s): 7037619 BKG: 7037619 | | | | | | | | | | |
| 15a pH by 9045C | | | | | | 7.34 | | 7.58 | | 3 | 3 |
| Batch number: 13121162401B | Sample number(s): 7037614-7037617,7037619-7037620 BKG: P036184 | | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.4 | | 3.4 | | 1 | 20 |
| Batch number: 13123001 | Sample number(s): 7037619-7037620 UNSPK: P036179 | | | | | | | | | | |
| 2378-TCDD | 87 | 89 | 40-135 | 1 | 20 | | | | | | |
| 12378-PeCDD | 92 | 93 | 40-135 | 1 | 20 | | | | | | |
| 123478-HxCDD | 100 | 101 | 40-135 | 0 | 20 | | | | | | |
| 123678-HxCDD | 94 | 95 | 40-135 | 0 | 20 | | | | | | |
| 123789-HxCDD | 97 | 97 | 40-135 | 1 | 20 | | | | | | |
| 1234678-HpCDD | 83 | 90 | 40-135 | 6 | 20 | | | | | | |
| OCDD | 30* | 61 | 40-135 | 17 | 20 | | | | | | |
| 2378-TCDF | 93 | 93 | 40-135 | 1 | 20 | | | | | | |
| 12378-PeCDF | 97 | 96 | 40-135 | 2 | 20 | | | | | | |
| 23478-PeCDF | 98 | 97 | 40-135 | 1 | 20 | | | | | | |
| 123478-HxCDF | 100 | 101 | 40-135 | 0 | 20 | | | | | | |
| 123678-HxCDF | 98 | 96 | 40-135 | 3 | 20 | | | | | | |
| 123789-HxCDF | 98 | 99 | 40-135 | 0 | 20 | | | | | | |
| 234678-HxCDF | 98 | 99 | 40-135 | 0 | 20 | | | | | | |
| 1234678-HpCDF | 96 | 98 | 40-135 | 1 | 20 | | | | | | |
| 1234789-HpCDF | 97 | 96 | 40-135 | 1 | 20 | | | | | | |
| OCDF | 96 | 97 | 40-135 | 1 | 20 | | | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13119SLC026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7037619 | 86 | 99 | 92 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1386003
Reported: 05/09/13 at 09:03 AM

## Surrogate Quality Control

| | | | |
|---|---|---|---|
| 7037620 | 88 | 110 | 94 |
| Blank | 89 | 102 | 98 |
| LCS | 90 | 102 | 99 |
| MS | 88 | 97 | 94 |
| MSD | 86 | 97 | 96 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13120A16A

| | Trifluorotoluene-F |
|---|---|
| 7037620 | 81 |
| Blank | 86 |
| LCS | 88 |
| LCSD | 83 |
| Limits: | 61-122 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13121A20A

| | Trifluorotoluene-F |
|---|---|
| 7037618 | 87 |
| Blank | 88 |
| LCS | 113 |
| LCSD | 113 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131200017A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7037614 | 122* | 103 |
| 7037615 | 114 | 104 |
| 7037616 | 104 | 97 |
| 7037617 | 111 | 105 |
| 7037619 | 107 | 98 |
| 7037620 | 80 | 61 |
| Blank | 129* | 112 |
| LCS | 132* | 116 |
| LCSD | 138* | 116 |
| MS | 124* | 112 |
| MSD | 123* | 112 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131200001A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7037619 | 87 | 93 |
| 7037620 | 87 | 87 |
| Blank | 99 | 104 |
| LCS | 93 | 97 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1386003
Reported: 05/09/13 at 09:03 AM

## Surrogate Quality Control

| | | |
|---|---|---|
| MS | 102 | 85 |
| MSD | 95 | 82 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13123001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7037619 | 80 | 53 | 51 | 52 | 57 | 77 |
| 7037620 | 84 | 71 | 74 | 73 | 73 | 79 |
| Blank | 79 | 80 | 92 | 95 | 91 | 92 |
| MS | 81 | 54 | 55 | 56 | 58 | 77 |
| MSD | 78 | 67 | 72 | 74 | 71 | 78 |
| OPR | 83 | 47 | 45 | 47 | 52 | 73 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7037619 | 50 | 50 | 46 | 52 | 52 | 53 |
| 7037620 | 66 | 59 | 56 | 70 | 71 | 69 |
| Blank | 106 | 84 | 79 | 83 | 90 | 92 |
| MS | 54 | 50 | 47 | 53 | 55 | 54 |
| MSD | 71 | 62 | 59 | 65 | 69 | 70 |
| OPR | 50 | 45 | 42 | 48 | 45 | 46 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7037619 | 59 | 50 | 51 | 66 | 56 |
| 7037620 | 69 | 62 | 56 | 70 | 68 |
| Blank | 89 | 90 | 87 | 72 | 82 |
| MS | 58 | 52 | 53 | 62 | 54 |
| MSD | 68 | 65 | 62 | 65 | 64 |
| OPR | 56 | 48 | 52 | 61 | 52 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Cap# 1386003 Sample# 7037614-20

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 4/26/2013
CarrierName: FedEx
AirbillNo: 7996 2149 4004

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130426-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7470 (Water) | Mercury 7471 (Soil) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-543A-SA7-SB-0.0-0.5 | 4/25/13 14:25 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| SL-543B-SA7-SB-0.0-0.5 | 4/25/13 14:40 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| SL-543C-SA7-SB-0.0-0.5 | 4/25/13 14:50 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| SL-543D-SA7-SB-0.0-0.5 | 4/25/13 15:00 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| TB-042613 | 4/26/13 08:00 | WQ | HCl | 4 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| SL-562-SA7-SB-0.0-0.5 | 4/26/13 08:25 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | |
| SL-562-SA7-SB-0.0-0.5 | 4/26/13 08:25 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SL-562-SA7-SB-2.0-3.0 | 4/26/13 09:20 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | |
| SL-562-SA7-SB-2.0-3.0 | 4/26/13 09:20 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SL-562-SA7-SB-2.0-3.0 | 4/26/13 09:20 | SO | None | 1 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |

Special Instructions:

Sampler:

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V. Cayton | 4/26/13 | | | | | | | | | | |
| | | | | | | | | | Pat Gu | 4/27/13 | 0930 |

eurofins | Lancaster Laboratories

C# 13860003

# Environmental Sample Administration
# Receipt Documentation Log

**Client/Project:** CDM Smith

**Date of Receipt:** 4/27/13

**Time of Receipt:** 0930

**Source Code:** SO

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT121 | 1.9 | TB | WI | y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** Pat Gu 3472 **Date/Time:** 4/27/13 1030

Issued by Dept. 6042 Management

2174.06

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

# ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 14, 2013

Project: Phase 3 Subarea 7

Submittal Date: 06/04/2013
Group Number: 1394291
SDG: PH045
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| EB1-060313 Water | 7079473 |
| EB2-060313 Water | 7079474 |
| SL-526-SA7-SB-9.0-10.0 Soil | 7079475 |
| SL-532-SA7-SB-3.0-4.0 Soil | 7079476 |
| SL-533-SA7-SB-2.5-3.5 Soil | 7079477 |
| TB-060313 Water | 7079478 |
| SL-525-SA7-SB-4.0-5.0 Soil | 7079479 |
| SL-525-SA7-SB-9.5-10.5 Soil | 7079480 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Natalie R. Luciano
Senior Specialist

(717) 556-7258

**Sample Description: EB1-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079473**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:00 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB1 SDG#: PH045-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | |
| 12971 | Acenaphthene | 83-32-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.16 | J | 1.1 | 0.053 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.11 | J | 1.1 | 0.053 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.16 | J | 1.1 | 0.053 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.053 | U | 0.053 | 0.032 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.053 | U | 0.053 | 0.032 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.053 | U | 0.053 | 0.011 | 1 |

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10589 | Aldrin | 309-00-2 | 0.0083 | U | 0.0083 | 0.0017 | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0083 | U | 0.0083 | 0.0025 | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0083 | U | 0.0083 | 0.0028 | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0083 | U | 0.0083 | 0.0017 | 1 |
| 10589 | Chlordane | 57-74-9 | 0.41 | U | 0.41 | 0.13 | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.017 | U | 0.017 | 0.0041 | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.017 | U | 0.017 | 0.0041 | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.017 | U | 0.017 | 0.0043 | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0083 | U | 0.0083 | 0.0028 | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.017 | U | 0.017 | 0.0044 | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0083 | U | 0.0083 | 0.0036 | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.017 | U | 0.017 | 0.012 | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.017 | U | 0.017 | 0.0048 | 1 |
| 10589 | Endrin | 72-20-8 | 0.017 | U | 0.017 | 0.0067 | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.083 | U | 0.083 | 0.017 | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.017 | U | 0.017 | 0.0041 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079473**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:00 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB1 SDG#: PH045-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10589 | Heptachlor | 76-44-8 | 0.0083 | U | 0.0083 | 0.0017 | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0083 | U | 0.0083 | 0.0019 | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.083 | U | 0.083 | 0.025 | 1 |
| 10589 | Mirex | 2385-85-5 | 0.21 | U | 0.21 | 0.070 | 1 |
| 10589 | Toxaphene | 8001-35-2 | 2.5 | U | 2.5 | 0.83 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10591 | Aroclor 5432 | 63496-31-1 | 0.41 | U | 0.41 | 0.083 | 1 |
| 10591 | Aroclor 5442 | 12642-23-8 | 0.41 | U | 0.41 | 0.083 | 1 |
| 10591 | Aroclor 5460 | 11126-42-4 | 0.41 | U | 0.41 | 0.091 | 1 |
| 10591 | PCB-1016 | 12674-11-2 | 0.41 | U | 0.41 | 0.083 | 1 |
| 10591 | PCB-1221 | 11104-28-2 | 0.41 | U | 0.41 | 0.083 | 1 |
| 10591 | PCB-1232 | 11141-16-5 | 0.41 | U | 0.41 | 0.17 | 1 |
| 10591 | PCB-1242 | 53469-21-9 | 0.41 | U | 0.41 | 0.083 | 1 |
| 10591 | PCB-1248 | 12672-29-6 | 0.41 | U | 0.41 | 0.083 | 1 |
| 10591 | PCB-1254 | 11097-69-1 | 0.41 | U | 0.41 | 0.083 | 1 |
| 10591 | PCB-1260 | 11096-82-5 | 0.41 | U | 0.41 | 0.12 | 1 |
| 10591 | PCB-1262 | 37324-23-5 | 0.41 | U | 0.41 | 0.17 | 1 |
| 10591 | PCB-1268 | 11100-14-4 | 0.41 | U | 0.41 | 0.13 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.49 | U | 0.49 | 0.098 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0743 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0035 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 | U | 0.100 | 0.0083 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00036 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 | U | 0.400 | 0.0640 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0011 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 | U | 0.0100 | 0.00066 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 | U | 0.0200 | 0.0021 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 | U | 0.400 | 0.0333 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 | U | 0.0300 | 0.0051 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 | U | 0.0400 | 0.0060 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 | U | 0.200 | 0.0606 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 | U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 | U | 0.0200 | 0.0029 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079473**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:00 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB1 SDG#: PH045-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0011 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0052 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.145 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0022 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0092 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00010 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00022 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000070 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b. pH (9040B and 9040C) | n.a. | 5.2 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079473**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:00 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB1 SDG#: PH045-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 2.04 | U | 2.04 | 0.166 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 0.160 | JBQ | 10.2 | 0.118 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 10.2 | U | 10.2 | 0.0953 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 0.112 | JBQ | 10.2 | 0.0984 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 0.142 | JB | 10.2 | 0.0980 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.318 | JB | 10.2 | 0.0961 | 1 |
| 10915 | OCDD | 3268-87-9 | 0.856 | JBQ | 20.4 | 0.0988 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 0.112 | J | 2.04 | 0.0880 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.438 | JB | 10.2 | 0.0688 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.201 | JBQ | 10.2 | 0.0621 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.262 | JBQ | 10.2 | 0.0620 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.119 | JB | 10.2 | 0.0615 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.205 | JBQ | 10.2 | 0.0596 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.178 | JB | 10.2 | 0.0594 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.285 | JB | 10.2 | 0.0394 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.192 | JBQ | 10.2 | 0.0467 | 1 |
| 10915 | OCDF | 39001-02-0 | 0.449 | JBQ | 20.4 | 0.124 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0744 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 58 | 25 - 164 |
| 13C12-12378-PeCDD | 73 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 82 | 28 - 130 |
| 13C12-123789-HxCDD | 79 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 73 | 24 - 185 |
| 13C12-23478-PeCDF | 74 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 80 | 26 - 123 |
| 13C12-234678-HxCDF | 80 | 28 - 136 |
| 13C12-123789-HxCDF | 88 | 29 - 147 |
| 13C12-1234678-HpCDF | 80 | 28 - 143 |
| 13C12-1234789-HpCDF | 77 | 26 - 138 |
| 13C12-OCDF | 73 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079473**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:00 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB1 SDG#: PH045-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079473**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:00 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB1 SDG#: PH045-01EB

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13156WAL026 | 06/10/2013 18:50 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13156WAL026 | 06/06/2013 13:30 | David S Schrum | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13162A20A | 06/11/2013 12:49 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13162A20A | 06/11/2013 12:49 | Catherine J Schwarz | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 131570010A | 06/08/2013 01:05 | Jamie L Brillhart | 1 |
| 10591 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 131570011A | 06/10/2013 05:14 | Monica M Souders | 1 |
| 11121 | PCB Waters Update IV Ext | SW-846 3510C | 1 | 131570011A | 06/06/2013 19:30 | Seth A Farrier | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 131570010A | 06/06/2013 19:30 | Seth A Farrier | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131570013A | 06/07/2013 18:37 | Heather E Williams | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 131570013A | 06/06/2013 22:00 | Elaine F Stoltzfus | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13155003 | 06/07/2013 09:12 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13155003 | 06/05/2013 13:00 | Deborah M Zimmerman | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079473**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:00 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB1 SDG#: PH045-01EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07069 | Tin | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:08 | John P Hook | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 131560639001B | 06/11/2013 04:42 | Choon Y Tian | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 131560639001A | 06/11/2013 04:42 | Choon Y Tian | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 131560639001A | 06/11/2013 04:42 | Choon Y Tian | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 131560639001A | 06/11/2013 04:42 | Choon Y Tian | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 2 | 131575713007 | 06/10/2013 09:09 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 131560635001 | 06/06/2013 07:17 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 131560639001 | 06/06/2013 07:15 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 2 | 131575713007 | 06/07/2013 17:10 | Nelli S Markaryan | 1 |
| 12152 | 28b. pH (9040B and 9040C) | SW-846 9040C | 1 | 13155121521A | 06/04/2013 21:10 | Luz M Groff | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079474**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:30 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB-2- SDG#: PH045-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.052 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.12 | J | 1.0 | 0.052 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.12 | J | 1.0 | 0.052 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.052 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.12 | J | 1.0 | 0.052 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.052 | U | 0.052 | 0.031 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.052 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.052 | U | 0.052 | 0.031 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.052 | U | 0.052 | 0.010 | 1 |

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/l | | ug/l | ug/l | |
| 10589 | Aldrin | 309-00-2 | 0.0082 | U | 0.0082 | 0.0016 | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0082 | U | 0.0082 | 0.0025 | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0082 | U | 0.0082 | 0.0028 | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0082 | U | 0.0082 | 0.0016 | 1 |
| 10589 | Chlordane | 57-74-9 | 0.41 | U | 0.41 | 0.13 | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.016 | U | 0.016 | 0.0041 | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.016 | U | 0.016 | 0.0041 | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.016 | U | 0.016 | 0.0043 | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0082 | U | 0.0082 | 0.0028 | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.016 | U | 0.016 | 0.0044 | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0082 | U | 0.0082 | 0.0035 | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.016 | U | 0.016 | 0.012 | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.016 | U | 0.016 | 0.0048 | 1 |
| 10589 | Endrin | 72-20-8 | 0.016 | U | 0.016 | 0.0067 | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.082 | U | 0.082 | 0.016 | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.016 | U | 0.016 | 0.0041 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079474**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:30 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB-2- SDG#: PH045-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10589 | Heptachlor | 76-44-8 | 0.0082 | U | 0.0082 | 0.0016 | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0082 | U | 0.0082 | 0.0019 | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.082 | U | 0.082 | 0.025 | 1 |
| 10589 | Mirex | 2385-85-5 | 0.21 | U | 0.21 | 0.070 | 1 |
| 10589 | Toxaphene | 8001-35-2 | 2.5 | U | 2.5 | 0.82 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10591 | Aroclor 5432 | 63496-31-1 | 0.41 | U | 0.41 | 0.082 | 1 |
| 10591 | Aroclor 5442 | 12642-23-8 | 0.41 | U | 0.41 | 0.082 | 1 |
| 10591 | Aroclor 5460 | 11126-42-4 | 0.41 | U | 0.41 | 0.091 | 1 |
| 10591 | PCB-1016 | 12674-11-2 | 0.41 | U | 0.41 | 0.082 | 1 |
| 10591 | PCB-1221 | 11104-28-2 | 0.41 | U | 0.41 | 0.082 | 1 |
| 10591 | PCB-1232 | 11141-16-5 | 0.41 | U | 0.41 | 0.16 | 1 |
| 10591 | PCB-1242 | 53469-21-9 | 0.41 | U | 0.41 | 0.082 | 1 |
| 10591 | PCB-1248 | 12672-29-6 | 0.41 | U | 0.41 | 0.082 | 1 |
| 10591 | PCB-1254 | 11097-69-1 | 0.41 | U | 0.41 | 0.082 | 1 |
| 10591 | PCB-1260 | 11096-82-5 | 0.41 | U | 0.41 | 0.12 | 1 |
| 10591 | PCB-1262 | 37324-23-5 | 0.41 | U | 0.41 | 0.16 | 1 |
| 10591 | PCB-1268 | 11100-14-4 | 0.41 | U | 0.41 | 0.13 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.50 | U | 0.50 | 0.10 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0743 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0035 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 | U | 0.100 | 0.0083 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00036 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 | U | 0.400 | 0.0640 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0011 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 | U | 0.0100 | 0.00066 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 | U | 0.0200 | 0.0021 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 | U | 0.400 | 0.0333 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 | U | 0.0300 | 0.0051 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 | U | 0.0400 | 0.0060 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 | U | 0.200 | 0.0606 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 | U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 | U | 0.0200 | 0.0029 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079474**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:30 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB-2- SDG#: PH045-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0011 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0052 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.145 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0022 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0092 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00010 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00022 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000070 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b. pH (9040B and 9040C) | n.a. | 5.0 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079474**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:30 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB-2- SDG#: PH045-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 2.02 | U | 2.02 | 0.134 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 10.1 | U | 10.1 | 0.115 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 10.1 | U | 10.1 | 0.103 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 10.1 | U | 10.1 | 0.105 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 0.162 | JBQ | 10.1 | 0.105 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.372 | JBQ | 10.1 | 0.106 | 1 |
| 10915 | OCDD | 3268-87-9 | 0.871 | JB | 20.2 | 0.0919 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 2.02 | U | 2.02 | 0.0864 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.405 | JBQ | 10.1 | 0.0693 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.250 | JBQ | 10.1 | 0.0669 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.300 | JBQ | 10.1 | 0.0631 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.137 | JB | 10.1 | 0.0590 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.129 | JBQ | 10.1 | 0.0607 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.195 | JBQ | 10.1 | 0.0585 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.275 | JBQ | 10.1 | 0.0407 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.202 | JB | 10.1 | 0.0468 | 1 |
| 10915 | OCDF | 39001-02-0 | 0.688 | JB | 20.2 | 0.119 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0162 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 68 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 82 | 23 - 140 |
| 13C12-OCDD | 80 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 74 | 24 - 185 |
| 13C12-23478-PeCDF | 76 | 21 - 178 |
| 13C12-123478-HxCDF | 84 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 84 | 28 - 136 |
| 13C12-123789-HxCDF | 93 | 29 - 147 |
| 13C12-1234678-HpCDF | 85 | 28 - 143 |
| 13C12-1234789-HpCDF | 82 | 26 - 138 |
| 13C12-OCDF | 78 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079474**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:30 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB-2- SDG#: PH045-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079474**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:30 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB-2- SDG#: PH045-02EB

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13156WAL026 | 06/10/2013 19:17 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13156WAL026 | 06/06/2013 13:30 | David S Schrum | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13162A20A | 06/11/2013 13:11 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13162A20A | 06/11/2013 13:11 | Catherine J Schwarz | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 131570010A | 06/08/2013 01:17 | Jamie L Brillhart | 1 |
| 10591 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 131570011A | 06/10/2013 05:33 | Monica M Souders | 1 |
| 11121 | PCB Waters Update IV Ext | SW-846 3510C | 1 | 131570011A | 06/06/2013 19:30 | Seth A Farrier | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 131570010A | 06/06/2013 19:30 | Seth A Farrier | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131570013A | 06/07/2013 18:58 | Heather E Williams | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 131570013A | 06/06/2013 22:00 | Elaine F Stoltzfus | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13155003 | 06/07/2013 10:08 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13155003 | 06/05/2013 13:00 | Deborah M Zimmerman | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079474**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:30 by PH

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB-2- SDG#: PH045-02EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07069 | Tin | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 131560635001 | 06/06/2013 19:12 | John P Hook | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 131560639001B | 06/11/2013 04:44 | Choon Y Tian | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 131560639001A | 06/11/2013 04:44 | Choon Y Tian | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 131560639001A | 06/11/2013 04:44 | Choon Y Tian | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 131560639001A | 06/11/2013 04:44 | Choon Y Tian | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 2 | 131575713007 | 06/10/2013 09:11 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 131560635001 | 06/06/2013 07:17 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 131560639001 | 06/06/2013 07:15 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 2 | 131575713007 | 06/07/2013 17:10 | Nelli S Markaryan | 1 |
| 12152 | 28b. pH (9040B and 9040C) | SW-846 9040C | 1 | 13155121521A | 06/04/2013 21:10 | Luz M Groff | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079475**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 11:35 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

526-- SDG#: PH045-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.46 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-526-SA7-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7079475
**LLI Group #** 1394291
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 06/03/2013 11:35 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

526-- SDG#: PH045-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 18,400 | | 42.5 | 8.19 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.959 | J | 4.25 | 0.531 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.72 | | 4.25 | 0.351 | 1 |
| 06946 | Barium | 7440-39-3 | 41.6 | | 1.06 | 0.0351 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.789 | J | 1.06 | 0.0712 | 1 |
| 07914 | Boron | 7440-42-8 | 7.42 | J | 10.6 | 0.882 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.402 | J | 1.06 | 0.0351 | 1 |
| 01650 | Calcium | 7440-70-2 | 1,720 | | 21.2 | 4.27 | 1 |
| 06951 | Chromium | 7440-47-3 | 15.0 | | 3.19 | 0.0935 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.07 | | 1.06 | 0.0956 | 1 |
| 06953 | Copper | 7440-50-8 | 5.12 | | 2.12 | 0.191 | 1 |
| 01654 | Iron | 7439-89-6 | 20,600 | | 42.5 | 4.04 | 1 |
| 06955 | Lead | 7439-92-1 | 5.96 | | 3.19 | 0.499 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.4 | | 4.2 | 0.58 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,220 | | 10.6 | 1.84 | 1 |
| 06958 | Manganese | 7439-96-5 | 180 | | 1.06 | 0.0882 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 1.15 | J | 2.12 | 0.181 | 1 |
| 06961 | Nickel | 7440-02-0 | 5.91 | | 2.12 | 0.117 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 234 | | 10.6 | 0.542 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,330 | | 106 | 14.3 | 1 |
| 01667 | Sodium | 7440-23-5 | 106 | | 106 | 17.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.95 | J | 10.6 | 0.234 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,010 | | 1.06 | 0.181 | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.6 | | 1.06 | 0.117 | 1 |
| 06972 | Zinc | 7440-66-6 | 34.8 | | 4.25 | 0.212 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.93 | J | 5.31 | 0.882 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.112 | J | 0.425 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0362 | J | 0.212 | 0.0212 | 2 |
| 06144 | Strontium | 7440-24-6 | 11.9 | | 0.425 | 0.0361 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.176 | J | 0.212 | 0.0319 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0176 | U | 0.0176 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.98 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 23.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.7 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079475**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 11:35 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

526-- SDG#: PH045-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079475**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 11:35 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

526-- SDG#: PH045-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0454 | JQ | 1.08 | 0.0255 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.174 | JB | 5.38 | 0.0352 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0742 | JQ | 5.38 | 0.0215 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0844 | JB | 5.38 | 0.0235 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0441 | JBQ | 5.38 | 0.0239 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.52 | JB | 5.38 | 0.0889 | 1 |
| 11031 | OCDD | 3268-87-9 | 279 | B | 10.8 | 0.0570 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0708 | JQ | 1.08 | 0.0293 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.218 | JBQ | 5.38 | 0.0172 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.163 | JBQ | 5.38 | 0.0161 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.117 | JB | 5.38 | 0.0201 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.114 | JB | 5.38 | 0.0189 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0525 | JBQ | 5.38 | 0.0233 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0671 | JB | 5.38 | 0.0201 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0935 | JBQ | 5.38 | 0.0143 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0301 | JBQ | 5.38 | 0.0222 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.293 | JBQ | 10.8 | 0.0341 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.311 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 69 | 25 - 164 |
| 13C12-12378-PeCDD | 92 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 79 | 28 - 130 |
| 13C12-1234678-HpCDD | 80 | 23 - 140 |
| 13C12-OCDD | 87 | 17 - 157 |
| 13C12-2378-TCDF | 73 | 24 - 169 |
| 13C12-12378-PeCDF | 98 | 24 - 185 |
| 13C12-23478-PeCDF | 94 | 21 - 178 |
| 13C12-123478-HxCDF | 74 | 26 - 152 |
| 13C12-123678-HxCDF | 79 | 26 - 123 |
| 13C12-234678-HxCDF | 74 | 28 - 136 |
| 13C12-123789-HxCDF | 73 | 29 - 147 |
| 13C12-1234678-HpCDF | 88 | 28 - 143 |
| 13C12-1234789-HpCDF | 67 | 26 - 138 |
| 13C12-OCDF | 68 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079475**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 11:35 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

526-- SDG#: PH045-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079475**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 11:35 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

526-- SDG#: PH045-03

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13157SLB026 | 06/10/2013 23:42 | Chad A Moline | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13157SLB026 | 06/06/2013 18:00 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13160A16A | 06/09/2013 16:40 | Laura M Krieger | 25.46 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201315531309 | 06/04/2013 21:24 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201315531309 | 06/04/2013 21:25 | Lois E Hiltz | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131580010A | 06/10/2013 08:19 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131580010A | 06/08/2013 01:30 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131580013A | 06/10/2013 21:53 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131580013A | 06/09/2013 08:00 | Joseph S Feister | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13161007 | 06/12/2013 06:31 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13161007 | 06/10/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-SA7-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079475**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 11:35 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

526-- SDG#: PH045-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:21 | John P Hook | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131600637001B | 06/11/2013 18:18 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:18 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:18 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:18 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638001 | 06/11/2013 18:46 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637001 | 06/10/2013 23:43 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638001 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13155039401A | 06/04/2013 21:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401A | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-532-SA7-SB-3.0-4.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7079476
**LLI Group #** 1394291
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 06/03/2013 10:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

532-- SDG#: PH045-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.58 | J | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 7.5 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.75 | J | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.0 | J | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 26.6 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-532-SA7-SB-3.0-4.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7079476
**LLI Group #** 1394291
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 06/03/2013 10:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

532-- SDG#: PH045-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 6.5 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 15 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,400 | | 41.7 | 8.04 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.822 | J | 4.17 | 0.521 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.40 | | 4.17 | 0.344 | 1 |
| 06946 | Barium | 7440-39-3 | 130 | | 1.04 | 0.0344 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.802 | J | 1.04 | 0.0699 | 1 |
| 07914 | Boron | 7440-42-8 | 7.47 | J | 10.4 | 0.865 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.667 | J | 1.04 | 0.0344 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,150 | | 20.9 | 4.19 | 1 |
| 06951 | Chromium | 7440-47-3 | 38.8 | | 3.13 | 0.0918 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.49 | | 1.04 | 0.0938 | 1 |
| 06953 | Copper | 7440-50-8 | 8.78 | | 2.09 | 0.188 | 1 |
| 01654 | Iron | 7439-89-6 | 29,600 | | 83.4 | 7.92 | 2 |
| 06955 | Lead | 7439-92-1 | 6.11 | | 3.13 | 0.490 | 1 |
| 01656 | Lithium | 7439-93-2 | 37.3 | | 4.2 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 8,940 | | 10.4 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 426 | | 1.04 | 0.0865 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.514 | J | 2.09 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 22.7 | | 2.09 | 0.115 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 524 | | 10.4 | 0.532 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,310 | | 104 | 14.1 | 1 |
| 01667 | Sodium | 7440-23-5 | 118 | | 104 | 17.4 | 1 |
| 06969 | Tin | 7440-31-5 | 3.48 | J | 10.4 | 0.229 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,740 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 54.3 | | 1.04 | 0.115 | 1 |
| 06972 | Zinc | 7440-66-6 | 78.4 | | 4.17 | 0.209 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.05 | J | 5.21 | 0.865 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.151 | J | 0.417 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.209 | U | 0.209 | 0.0209 | 2 |
| 06144 | Strontium | 7440-24-6 | 15.2 | | 0.417 | 0.0355 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.352 | | 0.209 | 0.0313 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0206 | | 0.0171 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.06 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.1 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-532-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079476**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 10:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

532-- SDG#: PH045-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-532-SA7-SB-3.0-4.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7079476**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 10:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

532-- SDG#: PH045-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0439 | JQ | 1.03 | 0.0405 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.167 | JB | 5.17 | 0.0449 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0946 | JQ | 5.17 | 0.0340 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.139 | JB | 5.17 | 0.0375 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.119 | JBQ | 5.17 | 0.0398 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.98 | JB | 5.17 | 0.0457 | 1 |
| 11031 | OCDD | 3268-87-9 | 17.5 | B | 10.3 | 0.0351 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0561 | JQ | 1.03 | 0.0465 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.181 | JB | 5.17 | 0.0208 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.208 | JB | 5.17 | 0.0203 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0819 | JBQ | 5.17 | 0.0226 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.101 | JBQ | 5.17 | 0.0211 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.17 | U | 5.17 | 0.0259 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0621 | JBQ | 5.17 | 0.0214 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.304 | JB | 5.17 | 0.0185 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0590 | JBQ | 5.17 | 0.0307 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.619 | JB | 10.3 | 0.0373 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.277 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 71 | 25 - 164 |
| 13C12-12378-PeCDD | 92 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 82 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 92 | 17 - 157 |
| 13C12-2378-TCDF | 76 | 24 - 169 |
| 13C12-12378-PeCDF | 104 | 24 - 185 |
| 13C12-23478-PeCDF | 96 | 21 - 178 |
| 13C12-123478-HxCDF | 74 | 26 - 152 |
| 13C12-123678-HxCDF | 80 | 26 - 123 |
| 13C12-234678-HxCDF | 72 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 95 | 28 - 143 |
| 13C12-1234789-HpCDF | 69 | 26 - 138 |
| 13C12-OCDF | 69 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-532-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079476**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 10:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

532-- SDG#: PH045-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-532-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079476**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 10:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

532-- SDG#: PH045-04

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13157SLB026 | 06/11/2013 06:25 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13157SLB026 | 06/06/2013 18:00 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13160A16A | 06/09/2013 17:18 | Laura M Krieger | 26.6 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201315531309 | 06/04/2013 21:27 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201315531309 | 06/04/2013 21:27 | Lois E Hiltz | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131580010A | 06/10/2013 18:36 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131580010A | 06/08/2013 01:30 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131580013A | 06/10/2013 22:14 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131580013A | 06/09/2013 08:00 | Joseph S Feister | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13161007 | 06/12/2013 07:27 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13161007 | 06/10/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 18:23 | John P Hook | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-532-SA7-SB-3.0-4.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079476**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 10:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

532-- SDG#: PH045-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:25 | John P Hook | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131600637001B | 06/11/2013 18:20 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:20 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:20 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:20 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638001 | 06/11/2013 18:48 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637001 | 06/10/2013 23:43 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638001 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13155039401A | 06/04/2013 21:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401A | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-533-SA7-SB-2.5-3.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7079477**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 09:10 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

533-- SDG#: PH045-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.1 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 26.71 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-533-SA7-SB-2.5-3.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7079477
**LLI Group #** 1394291
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 06/03/2013 09:10 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

533-- SDG#: PH045-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 2.6 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 5.6 | J | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,900 | | 40.7 | 7.85 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.653 | J | 4.07 | 0.509 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.76 | | 4.07 | 0.336 | 1 |
| 06946 | Barium | 7440-39-3 | 53.2 | | 1.02 | 0.0336 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.543 | J | 1.02 | 0.0682 | 1 |
| 07914 | Boron | 7440-42-8 | 6.47 | J | 10.2 | 0.845 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.485 | J | 1.02 | 0.0336 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,650 | | 20.4 | 4.09 | 1 |
| 06951 | Chromium | 7440-47-3 | 26.7 | | 3.05 | 0.0896 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.99 | | 1.02 | 0.0916 | 1 |
| 06953 | Copper | 7440-50-8 | 8.68 | | 2.04 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 20,400 | | 40.7 | 3.87 | 1 |
| 06955 | Lead | 7439-92-1 | 4.87 | | 3.05 | 0.478 | 1 |
| 01656 | Lithium | 7439-93-2 | 17.6 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,670 | | 10.2 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 245 | | 1.02 | 0.0845 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.383 | J | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.0 | | 2.04 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 385 | | 10.2 | 0.519 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,070 | | 102 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 110 | | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.74 | J | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,270 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 41.8 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 56.5 | | 4.07 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.07 | J | 5.09 | 0.845 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.414 | | 0.407 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.204 | U | 0.204 | 0.0204 | 2 |
| 06144 | Strontium | 7440-24-6 | 11.7 | | 0.407 | 0.0346 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.249 | | 0.204 | 0.0305 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0168 | U | 0.0168 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.49 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.7 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-533-SA7-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079477**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 09:10 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

533-- SDG#: PH045-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-533-SA7-SB-2.5-3.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7079477**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 09:10 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

533-- SDG#: PH045-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 U | 1.03 | 0.0385 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0985 JBQ | 5.16 | 0.0341 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0529 J | 5.16 | 0.0210 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0593 JBQ | 5.16 | 0.0224 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0908 JBQ | 5.16 | 0.0221 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.256 JB | 5.16 | 0.0332 | 1 |
| 11031 | OCDD | 3268-87-9 | 1.40 JB | 10.3 | 0.0313 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.03 U | 1.03 | 0.0315 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0979 JB | 5.16 | 0.0165 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.101 JBQ | 5.16 | 0.0158 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 5.16 U | 5.16 | 0.0140 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0570 JBQ | 5.16 | 0.0131 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0271 JBQ | 5.16 | 0.0162 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0598 JBQ | 5.16 | 0.0140 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0702 JB | 5.16 | 0.0126 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0505 JBQ | 5.16 | 0.0212 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.162 JB | 10.3 | 0.0387 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0120 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 68 | 25 - 164 |
| 13C12-12378-PeCDD | 98 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 89 | 17 - 157 |
| 13C12-2378-TCDF | 72 | 24 - 169 |
| 13C12-12378-PeCDF | 104 | 24 - 185 |
| 13C12-23478-PeCDF | 101 | 21 - 178 |
| 13C12-123478-HxCDF | 76 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 74 | 29 - 147 |
| 13C12-1234678-HpCDF | 96 | 28 - 143 |
| 13C12-1234789-HpCDF | 70 | 26 - 138 |
| 13C12-OCDF | 68 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-533-SA7-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079477**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 09:10 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

533-- SDG#: PH045-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-533-SA7-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079477**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 09:10 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

533-- SDG#: PH045-05

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13157SLB026 | 06/11/2013 06:59 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13157SLB026 | 06/06/2013 18:00 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13160A16A | 06/09/2013 17:56 | Laura M Krieger | 26.71 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201315531309 | 06/04/2013 21:28 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201315531309 | 06/04/2013 21:29 | Lois E Hiltz | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131580010A | 06/10/2013 08:56 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131580010A | 06/08/2013 01:30 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131580013A | 06/10/2013 22:34 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131580013A | 06/09/2013 08:00 | Joseph S Feister | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13161007 | 06/12/2013 08:24 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13161007 | 06/10/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-533-SA7-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079477**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 09:10 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

533-- SDG#: PH045-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:38 | John P Hook | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131600637001B | 06/11/2013 18:27 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:27 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:27 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:27 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638001 | 06/11/2013 18:50 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637001 | 06/10/2013 23:43 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638001 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13155039401A | 06/04/2013 21:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401A | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-060313 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7079478**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 08:00

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB63- SDG#: PH045-06TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13162A20A | 06/11/2013 13:33 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13162A20A | 06/11/2013 13:33 | Catherine J Schwarz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079479**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 13:30 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52540 SDG#: PH045-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.43 | J | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.3 | J | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 26.77 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 9.5 | J | 18 | 4.1 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-525-SA7-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7079479
**LLI Group #** 1394291
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 06/03/2013 13:30 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52540 SDG#: PH045-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 7.8 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,600 | | 40.5 | 7.81 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.736 | J | 4.05 | 0.506 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.51 | | 4.05 | 0.334 | 1 |
| 06946 | Barium | 7440-39-3 | 44.9 | | 1.01 | 0.0334 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.740 | J | 1.01 | 0.0678 | 1 |
| 07914 | Boron | 7440-42-8 | 6.22 | J | 10.1 | 0.840 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.381 | J | 1.01 | 0.0334 | 1 |
| 01650 | Calcium | 7440-70-2 | 1,830 | | 20.2 | 4.07 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.5 | | 3.04 | 0.0891 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.94 | | 1.01 | 0.0911 | 1 |
| 06953 | Copper | 7440-50-8 | 4.08 | | 2.02 | 0.182 | 1 |
| 01654 | Iron | 7439-89-6 | 16,900 | | 40.5 | 3.85 | 1 |
| 06955 | Lead | 7439-92-1 | 5.46 | | 3.04 | 0.476 | 1 |
| 01656 | Lithium | 7439-93-2 | 19.1 | | 4.0 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,690 | | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 224 | | 1.01 | 0.0840 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.886 | J | 2.02 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 6.52 | | 2.02 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 121 | | 10.1 | 0.516 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,140 | | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 101 | | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.86 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,030 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 30.6 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 34.9 | | 4.05 | 0.202 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.13 | J | 5.06 | 0.840 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.103 | J | 0.405 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.202 | U | 0.202 | 0.0202 | 2 |
| 06144 | Strontium | 7440-24-6 | 14.4 | | 0.405 | 0.0344 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.176 | J | 0.202 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0166 | J | 0.0170 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.4 C. | n.a. | 7.14 | | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.1 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079479**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 13:30 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52540 SDG#: PH045-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-525-SA7-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7079479**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 13:30 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52540 SDG#: PH045-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.0303 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.11 | U | 5.11 | 0.0457 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0574 | JQ | 5.11 | 0.0297 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.133 | JBQ | 5.11 | 0.0312 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0915 | JBQ | 5.11 | 0.0296 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.75 | JB | 5.11 | 0.0429 | 1 |
| 11031 | OCDD | 3268-87-9 | 17.0 | B | 10.2 | 0.0349 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 | U | 1.02 | 0.0467 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.747 | JB | 5.11 | 0.0244 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0910 | JBQ | 5.11 | 0.0233 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0438 | JB | 5.11 | 0.0265 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0492 | JBQ | 5.11 | 0.0244 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0414 | JB | 5.11 | 0.0347 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0827 | JBQ | 5.11 | 0.0273 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.572 | JB | 5.11 | 0.0211 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0515 | JBQ | 5.11 | 0.0379 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.912 | JB | 10.2 | 0.0448 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0596 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 92 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 79 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 85 | 17 - 157 |
| 13C12-2378-TCDF | 75 | 24 - 169 |
| 13C12-12378-PeCDF | 102 | 24 - 185 |
| 13C12-23478-PeCDF | 96 | 21 - 178 |
| 13C12-123478-HxCDF | 73 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 73 | 28 - 136 |
| 13C12-123789-HxCDF | 66 | 29 - 147 |
| 13C12-1234678-HpCDF | 92 | 28 - 143 |
| 13C12-1234789-HpCDF | 64 | 26 - 138 |
| 13C12-OCDF | 65 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079479**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 13:30 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52540 SDG#: PH045-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079479**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 13:30 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52540 SDG#: PH045-07

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13157SLB026 | 06/11/2013 07:32 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13157SLB026 | 06/06/2013 18:00 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13160A16A | 06/09/2013 18:35 | Laura M Krieger | 26.77 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201315531309 | 06/04/2013 21:30 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201315531309 | 06/04/2013 21:31 | Lois E Hiltz | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131580010A | 06/10/2013 09:15 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131580010A | 06/08/2013 01:30 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131580013A | 06/10/2013 22:55 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131580013A | 06/09/2013 08:00 | Joseph S Feister | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13161007 | 06/12/2013 09:21 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13161007 | 06/10/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079479**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 13:30 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52540 SDG#: PH045-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:42 | John P Hook | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131600637001B | 06/11/2013 18:30 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:30 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:30 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:30 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638001 | 06/11/2013 18:52 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637001 | 06/10/2013 23:43 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638001 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13155039401A | 06/04/2013 21:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401A | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-9.5-10.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079480**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 14:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52595 SDG#: PH045-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.0 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 23.23 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-9.5-10.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079480**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 14:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52595 SDG#: PH045-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 5.8 | J | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 19,500 | | 40.3 | 7.77 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.721 | J | 4.03 | 0.504 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.03 | | 4.03 | 0.333 | 1 |
| 06946 | Barium | 7440-39-3 | 44.8 | | 1.01 | 0.0333 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.630 | J | 1.01 | 0.0675 | 1 |
| 07914 | Boron | 7440-42-8 | 6.43 | J | 10.1 | 0.837 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.349 | J | 1.01 | 0.0333 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,080 | | 20.2 | 4.05 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.3 | | 3.02 | 0.0887 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.04 | | 1.01 | 0.0907 | 1 |
| 06953 | Copper | 7440-50-8 | 4.70 | | 2.02 | 0.181 | 1 |
| 01654 | Iron | 7439-89-6 | 17,700 | | 40.3 | 3.83 | 1 |
| 06955 | Lead | 7439-92-1 | 4.67 | | 3.02 | 0.474 | 1 |
| 01656 | Lithium | 7439-93-2 | 18.5 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,490 | | 10.1 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 259 | | 1.01 | 0.0837 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.860 | J | 2.02 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 6.73 | | 2.02 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 191 | | 10.1 | 0.514 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,300 | | 101 | 13.6 | 1 |
| 01667 | Sodium | 7440-23-5 | 111 | | 101 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 2.98 | J | 10.1 | 0.222 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,210 | | 1.01 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 31.0 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 36.8 | | 4.03 | 0.202 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.20 | J | 5.04 | 0.837 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.403 | U | 0.403 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0319 | J | 0.202 | 0.0202 | 2 |
| 06144 | Strontium | 7440-24-6 | 12.7 | | 0.403 | 0.0343 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.185 | J | 0.202 | 0.0302 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0110 | J | 0.0169 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.5 C. | n.a. | 7.11 | | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.7 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-9.5-10.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079480**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 14:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52595 SDG#: PH045-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-9.5-10.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079480**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 14:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52595 SDG#: PH045-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0334 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.13 | U | 5.13 | 0.0341 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.13 | U | 5.13 | 0.0226 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0414 | JB | 5.13 | 0.0251 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 5.13 | U | 5.13 | 0.0235 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.237 | JB | 5.13 | 0.0284 | 1 |
| 11031 | OCDD | 3268-87-9 | 2.30 | JB | 10.3 | 0.0343 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.03 | U | 1.03 | 0.0282 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0821 | JBQ | 5.13 | 0.0173 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0190 | JBQ | 5.13 | 0.0178 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0282 | JBQ | 5.13 | 0.0123 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0149 | JB | 5.13 | 0.0115 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.13 | U | 5.13 | 0.0164 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 5.13 | U | 5.13 | 0.0128 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0917 | JBQ | 5.13 | 0.0108 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0228 | JBQ | 5.13 | 0.0212 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.115 | JB | 10.3 | 0.0361 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00872 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 96 | 25 - 181 |
| 13C12-123478-HxCDD | 88 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 87 | 23 - 140 |
| 13C12-OCDD | 93 | 17 - 157 |
| 13C12-2378-TCDF | 77 | 24 - 169 |
| 13C12-12378-PeCDF | 107 | 24 - 185 |
| 13C12-23478-PeCDF | 99 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 89 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 71 | 29 - 147 |
| 13C12-1234678-HpCDF | 106 | 28 - 143 |
| 13C12-1234789-HpCDF | 68 | 26 - 138 |
| 13C12-OCDF | 63 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-9.5-10.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079480**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 14:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52595 SDG#: PH045-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-9.5-10.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079480**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 14:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52595 SDG#: PH045-08*

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13157SLB026 | 06/11/2013 08:06 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13157SLB026 | 06/06/2013 18:00 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13160A16A | 06/09/2013 19:13 | Laura M Krieger | 23.23 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201315531309 | 06/04/2013 21:32 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201315531309 | 06/04/2013 21:33 | Lois E Hiltz | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131580010A | 06/10/2013 09:33 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131580010A | 06/08/2013 01:30 | Karen L Beyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131580013A | 06/10/2013 23:16 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131580013A | 06/09/2013 08:00 | Joseph S Feister | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13161007 | 06/12/2013 10:17 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13161007 | 06/10/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-SA7-SB-9.5-10.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7079480**
**LLI Group # 1394291**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 14:00 by VC

Submitted: 06/04/2013 09:30
Reported: 06/14/2013 13:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52595 SDG#: PH045-08*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:46 | John P Hook | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131600637001B | 06/11/2013 18:32 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:32 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:32 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:32 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638001 | 06/11/2013 18:54 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637001 | 06/10/2013 23:43 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638001 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13155039401A | 06/04/2013 21:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401A | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394291
Reported: 06/14/13 at 01:47 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13156WAL026 | Sample number(s): 7079473-7079474 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 93 | 90 | 65-124 | 3 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 93 | 91 | 72-113 | 2 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 95 | 93 | 70-117 | 3 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 95 | 75-115 | 4 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 91 | 72-120 | 6 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 106 | 101 | 74-130 | 5 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 92 | 89 | 70-130 | 3 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 97 | 63-121 | 2 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 96 | 74-118 | 4 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 62 | 57 | 40-138 | 8 | 30 |
| Di-n-butylphthalate | 0.069 | J | 1.0 | 0.050 | ug/l | 90 | 87 | 70-145 | 3 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 95 | 93 | 75-112 | 3 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 95 | 66-122 | 3 | 30 |
| Diethylphthalate | 0.092 | J | 1.0 | 0.050 | ug/l | 88 | 86 | 74-129 | 2 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 60 | 55 | 40-119 | 8 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.88 | J | 1.0 | 0.050 | ug/l | 89 | 119 | 70-143 | 30 | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 95 | 92 | 73-116 | 3 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 94 | 91 | 74-115 | 3 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 95 | 93 | 66-122 | 3 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 102 | 71-120 | 2 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 105 | 74-119 | 2 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 92 | 91 | 67-118 | 2 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 77 | 70 | 36-120 | 9 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 80 | 73 | 57-145 | 9 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 90 | 88 | 72-109 | 2 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 95 | 71-116 | 3 | 30 |
| Batch number: 13157SLB026 | Sample number(s): 7079475-7079477,7079479-7079480 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 95 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 98 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 99 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 112 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 98 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 102 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 70-130 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394291
Reported: 06/14/13 at 01:47 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 102 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 86 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 110 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 71-120 | | |
| Batch number: 13160A16A | Sample number(s): 7079475-7079477,7079479-7079480 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 91 | | 67-119 | | |
| Batch number: 13162A20A | Sample number(s): 7079473-7079474,7079478 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 107 | 108 | 75-135 | 1 | 30 |
| Batch number: 131570010A | Sample number(s): 7079473-7079474 | | | | | | | | | |
| Aldrin | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 76 | 80 | 55-126 | 4 | 30 |
| Alpha BHC | 0.0080 | U | 0.0080 | 0.0024 | ug/l | 91 | 90 | 63-132 | 1 | 30 |
| Beta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 85 | 86 | 63-132 | 1 | 30 |
| Gamma BHC - Lindane | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 91 | 94 | 68-128 | 3 | 30 |
| Chlordane | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| p,p-DDD | 0.016 | U | 0.016 | 0.0040 | ug/l | 87 | 88 | 62-143 | 1 | 30 |
| p,p-DDE | 0.016 | U | 0.016 | 0.0040 | ug/l | 87 | 88 | 56-137 | 1 | 30 |
| p,p-DDT | 0.016 | U | 0.016 | 0.0042 | ug/l | 100 | 85 | 45-134 | 17 | 30 |
| Delta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 88 | 91 | 63-131 | 3 | 30 |
| Dieldrin | 0.016 | U | 0.016 | 0.0042 | ug/l | 91 | 92 | 65-135 | 2 | 30 |
| Endosulfan I | 0.0080 | U | 0.0080 | 0.0034 | ug/l | 84 | 85 | 48-124 | 1 | 30 |
| Endosulfan II | 0.016 | U | 0.016 | 0.012 | ug/l | 83 | 84 | 53-123 | 1 | 30 |
| Endosulfan Sulfate | 0.016 | U | 0.016 | 0.0046 | ug/l | 83 | 86 | 60-129 | 3 | 30 |
| Endrin | 0.016 | U | 0.016 | 0.0065 | ug/l | 92 | 92 | 43-139 | 0 | 30 |
| Endrin Aldehyde | 0.080 | U | 0.080 | 0.016 | ug/l | 85 | 89 | 55-123 | 4 | 20 |
| Endrin Ketone | 0.016 | U | 0.016 | 0.0040 | ug/l | 81 | 82 | 51-138 | 1 | 30 |
| Heptachlor | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 86 | 86 | 57-126 | 0 | 30 |
| Heptachlor Epoxide | 0.0080 | U | 0.0080 | 0.0018 | ug/l | 88 | 90 | 65-128 | 2 | 30 |
| Methoxychlor | 0.080 | U | 0.080 | 0.024 | ug/l | 113 | 81 | 46-134 | 32* | 30 |
| Mirex | 0.20 | U | 0.20 | 0.068 | ug/l | | | | | |
| Toxaphene | 2.4 | U | 2.4 | 0.80 | ug/l | | | | | |
| Batch number: 131570011A | Sample number(s): 7079473-7079474 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 98 | 83 | 69-120 | 17 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 100 | 80 | 69-128 | 22 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 131580010A | Sample number(s): 7079475-7079477,7079479-7079480 | | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394291
Reported: 06/14/13 at 01:47 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 75 | 78 | 36-106 | 4 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 96 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 96 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131570013A | Sample number(s): 7079473-7079474 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 90 | 90 | 70-130 | 0 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 111 | 100 | 70-130 | 10 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 101 | 100 | 70-130 | 1 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 97 | 88 | 70-130 | 10 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 68* | 65* | 70-130 | 4 | 30 |
| Batch number: 131580013A | Sample number(s): 7079475-7079477,7079479-7079480 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 97 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 103 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 101 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 93 | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 76 | | 49-107 | | |
| Batch number: 131560635001 | Sample number(s): 7079473-7079474 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0743 | mg/l | 101 | 100 | 90-112 | 1 | 20 |
| Antimony | 0.0037 | J | 0.0400 | 0.0035 | mg/l | 101 | 103 | 88-111 | 2 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 98 | 97 | 90-113 | 1 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 101 | 101 | 90-110 | 0 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 98 | 99 | 88-110 | 1 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0083 | mg/l | 96 | 97 | 89-110 | 0 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00036 | mg/l | 100 | 100 | 90-112 | 1 | 20 |
| Calcium | 0.0711 | J | 0.400 | 0.0640 | mg/l | 102 | 102 | 90-110 | 0 | 20 |
| Chromium | 0.0300 | U | 0.0300 | 0.0011 | mg/l | 99 | 100 | 90-110 | 1 | 20 |
| Cobalt | 0.0100 | U | 0.0100 | 0.00066 | mg/l | 101 | 102 | 90-110 | 1 | 20 |
| Copper | 0.0200 | U | 0.0200 | 0.0021 | mg/l | 96 | 97 | 90-112 | 2 | 20 |
| Iron | 0.400 | U | 0.400 | 0.0333 | mg/l | 97 | 98 | 90-112 | 0 | 20 |
| Lead | 0.0300 | U | 0.0300 | 0.0051 | mg/l | 104 | 105 | 88-110 | 1 | 20 |
| Lithium | 0.0400 | U | 0.0400 | 0.0060 | mg/l | 101 | 101 | 90-110 | 0 | 20 |
| Magnesium | 0.200 | U | 0.200 | 0.0606 | mg/l | 99 | 100 | 90-110 | 1 | 20 |
| Manganese | 0.0100 | U | 0.0100 | 0.00083 | mg/l | 100 | 100 | 90-110 | 0 | 20 |
| Molybdenum | 0.0200 | U | 0.0200 | 0.0029 | mg/l | 101 | 102 | 90-110 | 1 | 20 |
| Nickel | 0.0200 | U | 0.0200 | 0.0011 | mg/l | 102 | 103 | 90-111 | 1 | 20 |
| Phosphorus | 0.200 | U | 0.200 | 0.0052 | mg/l | 99 | 100 | 90-110 | 1 | 20 |
| Potassium | 1.00 | U | 1.00 | 0.145 | mg/l | 99 | 99 | 85-115 | 0 | 20 |
| Sodium | 2.00 | U | 2.00 | 0.167 | mg/l | 98 | 98 | 87-114 | 1 | 20 |
| Tin | 0.0400 | U | 0.0400 | 0.0022 | mg/l | 98 | 99 | 90-110 | 1 | 20 |
| Titanium | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 101 | 102 | 90-113 | 1 | 20 |
| Vanadium | 0.0100 | U | 0.0100 | 0.0013 | mg/l | 101 | 101 | 90-110 | 0 | 20 |
| Zinc | 0.0400 | U | 0.0400 | 0.0020 | mg/l | 100 | 101 | 90-110 | 1 | 20 |
| Zirconium | 0.100 | U | 0.100 | 0.0092 | mg/l | 100 | 101 | 90-110 | 0 | 20 |
| Batch number: 131560639001A | Sample number(s): 7079473-7079474 | | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394291
Reported: 06/14/13 at 01:47 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Silver | 0.0010 | U | 0.0010 | 0.00010 | mg/l | 101 | 99 | 90-115 | 1 | 20 |
| Strontium | 0.0020 | U | 0.0020 | 0.00022 | mg/l | 101 | 99 | 80-120 | 2 | 20 |
| Thallium | 0.0010 | U | 0.0010 | 0.00015 | mg/l | 101 | 102 | 80-120 | 1 | 20 |
| Batch number: 131560639001B | Sample number(s): 7079473-7079474 | | | | | | | | | |
| Selenium | 0.0040 | U | 0.0040 | 0.00050 | mg/l | 102 | 102 | 80-120 | 0 | 20 |
| Batch number: 131575713007 | Sample number(s): 7079473-7079474 | | | | | | | | | |
| 3b Mercury 7470A | 0.00020 | U | 0.00020 | 0.00007 0 | mg/l | 98 | 95 | 90-115 | 3 | 20 |
| Batch number: 131600637001 | Sample number(s): 7079475-7079477,7079479-7079480 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 100 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 104 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 103 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 99 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Calcium | 11.1 | J | 20.0 | 4.02 | mg/kg | 102 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 101 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 105 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 109 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 103 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 106 | | 80-120 | | |
| Phosphorus | 1.14 | J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 98 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.50 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 99 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 104 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 103 | | 80-120 | | |
| Batch number: 131600637001A | Sample number(s): 7079475-7079477,7079479-7079480 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 103 | | 80-120 | | |
| Strontium | 0.0780 | J | 0.400 | 0.0340 | mg/kg | 101 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 104 | | 80-120 | | |
| Batch number: 131600637001B | Sample number(s): 7079475-7079477,7079479-7079480 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 100 | | 80-120 | | |
| Batch number: 131600638001 | Sample number(s): 7079475-7079477,7079479-7079480 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 100 | | 85-120 | | |
| Batch number: 13155039401A | Sample number(s): 7079475-7079477,7079479-7079480 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 13155121521A | Sample number(s): 7079473-7079474 | | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394291
Reported: 06/14/13 at 01:47 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 28b. pH (9040B and 9040C) | | | | | 100 | 100 | 99-103 | 0 | 3 |
| Batch number: 13162162401A | Sample number(s): 7079475-7079477,7079479-7079480 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13155003 | Sample number(s): 7079473-7079474 | | | | | | | | |
| 2378-TCDD | 0.133 J | 2.00 | 0.127 | pg/l | 92 | | 60-150 | | |
| 12378-PeCDD | 0.271 J | 10.0 | 0.108 | pg/l | 95 | | 60-150 | | |
| 123478-HxCDD | 0.226 J | 10.0 | 0.0965 | pg/l | 101 | | 60-150 | | |
| 123678-HxCDD | 0.224 J | 10.0 | 0.102 | pg/l | 98 | | 60-150 | | |
| 123789-HxCDD | 0.103 J | 10.0 | 0.0986 | pg/l | 99 | | 60-150 | | |
| 1234678-HpCDD | 0.337 J | 10.0 | 0.110 | pg/l | 97 | | 60-150 | | |
| OCDD | 0.859 J | 20.0 | 0.0862 | pg/l | 98 | | 60-150 | | |
| 2378-TCDF | 2.00 U | 2.00 | 0.0983 | pg/l | 94 | | 60-150 | | |
| 12378-PeCDF | 0.516 J | 10.0 | 0.0791 | pg/l | 99 | | 60-150 | | |
| 23478-PeCDF | 0.268 J | 10.0 | 0.0743 | pg/l | 99 | | 60-150 | | |
| 123478-HxCDF | 0.339 J | 10.0 | 0.0697 | pg/l | 103 | | 60-150 | | |
| 123678-HxCDF | 0.205 J | 10.0 | 0.0686 | pg/l | 100 | | 60-150 | | |
| 123789-HxCDF | 0.297 J | 10.0 | 0.0716 | pg/l | 100 | | 60-150 | | |
| 234678-HxCDF | 0.203 J | 10.0 | 0.0669 | pg/l | 101 | | 60-150 | | |
| 1234678-HpCDF | 0.359 J | 10.0 | 0.0442 | pg/l | 102 | | 60-150 | | |
| 1234789-HpCDF | 0.195 J | 10.0 | 0.0533 | pg/l | 100 | | 60-150 | | |
| OCDF | 0.843 J | 20.0 | 0.132 | pg/l | 96 | | 60-150 | | |
| Batch number: 13161007 | Sample number(s): 7079475-7079477,7079479-7079480 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0354 | ng/kg | 103 | | 67-158 | | |
| 12378-PeCDD | 0.0895 J | 5.00 | 0.0390 | ng/kg | 104 | | 70-142 | | |
| 123478-HxCDD | 5.00 U | 5.00 | 0.0207 | ng/kg | 95 | | 70-164 | | |
| 123678-HxCDD | 0.0393 J | 5.00 | 0.0216 | ng/kg | 99 | | 76-134 | | |
| 123789-HxCDD | 0.0384 J | 5.00 | 0.0223 | ng/kg | 98 | | 64-162 | | |
| 1234678-HpCDD | 0.109 J | 5.00 | 0.0275 | ng/kg | 96 | | 70-140 | | |
| OCDD | 0.225 J | 10.0 | 0.0393 | ng/kg | 91 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0345 | ng/kg | 108 | | 75-158 | | |
| 12378-PeCDF | 0.0769 J | 5.00 | 0.0180 | ng/kg | 97 | | 80-134 | | |
| 23478-PeCDF | 0.0332 J | 5.00 | 0.0166 | ng/kg | 99 | | 68-160 | | |
| 123478-HxCDF | 0.0410 J | 5.00 | 0.0129 | ng/kg | 89 | | 72-134 | | |
| 123678-HxCDF | 0.0219 J | 5.00 | 0.0126 | ng/kg | 91 | | 84-130 | | |
| 123789-HxCDF | 0.0272 J | 5.00 | 0.0152 | ng/kg | 91 | | 78-130 | | |
| 234678-HxCDF | 0.0370 J | 5.00 | 0.0128 | ng/kg | 92 | | 70-156 | | |
| 1234678-HpCDF | 0.0530 J | 5.00 | 0.00969 | ng/kg | 90 | | 82-122 | | |
| 1234789-HpCDF | 0.0357 J | 5.00 | 0.0155 | ng/kg | 94 | | 78-138 | | |
| OCDF | 0.145 J | 10.0 | 0.0406 | ng/kg | 90 | | 63-170 | | |
| Batch number: 13155003 | Sample number(s): 7079473-7079474 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0300 | | | pg/l | | | | | |
| Batch number: 13161007 | Sample number(s): 7079475-7079477,7079479-7079480 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00737 | | | ng/kg | | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394291
Reported: 06/14/13 at 01:47 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13157SLB026 | Sample number(s): 7079475-7079477,7079479-7079480 UNSPK: P078552 | | | | | | | | |
| Acenaphthene | 86 | 91 | 48-127 | 6 | 30 | | | | |
| Acenaphthylene | 84 | 91 | 49-121 | 8 | 30 | | | | |
| Anthracene | 76 | 83 | 52-126 | 8 | 30 | | | | |
| Benzo(a)anthracene | 97 | 100 | 32-135 | 3 | 30 | | | | |
| Benzo(a)pyrene | 92 | 93 | 36-138 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 98 | 106 | 26-142 | 7 | 30 | | | | |
| Benzo(e)pyrene | 90 | 93 | 70-130 | 3 | 30 | | | | |
| Benzo(g,h,i)perylene | 77 | 79 | 33-141 | 3 | 30 | | | | |
| Benzo(k)fluoranthene | 93 | 94 | 47-129 | 2 | 30 | | | | |
| Butylbenzylphthalate | 84 | 84 | 59-153 | 1 | 30 | | | | |
| Di-n-butylphthalate | 91 | 83 | 62-154 | 9 | 30 | | | | |
| Chrysene | 93 | 97 | 29-148 | 5 | 30 | | | | |
| Dibenz(a,h)anthracene | 86 | 90 | 34-125 | 5 | 30 | | | | |
| Diethylphthalate | 94 | 102 | 76-127 | 8 | 30 | | | | |
| Dimethylphthalate | 98 | 103 | 62-136 | 4 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 90 | 94 | 39-167 | 5 | 30 | | | | |
| Fluoranthene | 93 | 97 | 47-135 | 5 | 30 | | | | |
| Fluorene | 91 | 98 | 50-129 | 7 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 83 | 85 | 17-136 | 3 | 30 | | | | |
| 1-Methylnaphthalene | 87 | 90 | 50-131 | 3 | 30 | | | | |
| 2-Methylnaphthalene | 84 | 86 | 28-144 | 2 | 30 | | | | |
| Naphthalene | 90 | 93 | 31-148 | 3 | 30 | | | | |
| N-Nitrosodimethylamine | 88 | 94 | 48-113 | 6 | 30 | | | | |
| Di-n-octylphthalate | 80 | 86 | 52-162 | 8 | 30 | | | | |
| Phenanthrene | 101 | 101 | 29-142 | 1 | 30 | | | | |
| Pyrene | 77 | 80 | 26-143 | 4 | 30 | | | | |
| Batch number: 13160A16A | Sample number(s): 7079475-7079477,7079479-7079480 UNSPK: P081064 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 103 | 101 | 39-118 | 7 | 30 | | | | |
| Batch number: 131580010A | Sample number(s): 7079475-7079477,7079479-7079480 UNSPK: P081058 | | | | | | | | |
| PCB-1016 | 81 | 92 | 16-146 | 12 | 50 | | | | |
| PCB-1260 | 68 | 85 | 40-134 | 21 | 50 | | | | |
| Batch number: 131580013A | Sample number(s): 7079475-7079477,7079479-7079480 UNSPK: P081058 | | | | | | | | |
| EFH (C12-C14) | 91 | 97 | 49-123 | 7 | 20 | | | | |
| EFH (C15-C20) | 394* | 444* | 49-123 | 12 | 20 | | | | |
| EFH (C21-C30) | 1639 (2) | 2238 (2) | 49-123 | 14 | 20 | | | | |
| EFH (C30-C40) | 2997 (2) | 5212 (2) | 49-123 | 31* | 20 | | | | |
| EFH (C8-C11) | 74 | 82 | 49-123 | 11 | 20 | | | | |
| Batch number: 131600637001 | Sample number(s): 7079475-7079477,7079479-7079480 UNSPK: P081058 BKG: P081058 | | | | | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394291
Reported: 06/14/13 at 01:47 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 1622 (2) | 1543 (2) | 75-125 | 1 | 20 | 8,890 | 9,900 | 11 | 20 |
| Antimony | 81 | 81 | 75-125 | 1 | 20 | 0.563 J | 4.00 U | 200* (1) | 20 |
| Arsenic | 106 | 106 | 75-125 | 0 | 20 | 4.10 | 4.62 | 12 (1) | 20 |
| Barium | 103 | 108 | 75-125 | 4 | 20 | 60.2 | 64.4 | 7 | 20 |
| Beryllium | 102 | 103 | 75-125 | 1 | 20 | 0.397 J | 0.443 J | 11 (1) | 20 |
| Boron | 96 | 98 | 75-125 | 2 | 20 | 6.05 J | 6.15 J | 2 (1) | 20 |
| Cadmium | 98 | 99 | 75-125 | 1 | 20 | 0.504 J | 0.525 J | 4 (1) | 20 |
| Calcium | 127 (2) | 111 (2) | 75-125 | 2 | 20 | 2,410 | 2,290 | 5 | 20 |
| Chromium | 109 | 104 | 75-125 | 3 | 20 | 11.4 | 13.0 | 14 (1) | 20 |
| Cobalt | 97 | 98 | 75-125 | 0 | 20 | 3.70 | 3.89 | 5 (1) | 20 |
| Copper | 99 | 104 | 75-125 | 4 | 20 | 5.27 | 5.51 | 4 (1) | 20 |
| Iron | 1612 (2) | 1351 (2) | 75-125 | 1 | 20 | 16,100 | 17,500 | 9 | 20 |
| Lead | 101 | 100 | 75-125 | 1 | 20 | 7.67 | 8.60 | 11 (1) | 20 |
| Lithium | 105 | 105 | 75-125 | 1 | 20 | 21.8 | 24.4 | 11 | 20 |
| Magnesium | 353 (2) | 374 (2) | 75-125 | 1 | 20 | 3,490 | 3,880 | 11 | 20 |
| Manganese | 125 (2) | 129 (2) | 75-125 | 1 | 20 | 239 | 256 | 7 | 20 |
| Molybdenum | 98 | 99 | 75-125 | 1 | 20 | 0.759 J | 0.385 J | 65* (1) | 20 |
| Nickel | 100 | 99 | 75-125 | 1 | 20 | 6.70 | 8.25 | 21* (1) | 20 |
| Phosphorus | 103 | 114 | 75-125 | 2 | 20 | 378 | 383 | 1 | 20 |
| Potassium | 150* | 149* | 75-125 | 0 | 20 | 2,930 | 3,180 | 8 | 20 |
| Sodium | 100 | 101 | 75-125 | 1 | 20 | 62.7 J | 68.0 J | 8 (1) | 20 |
| Tin | 93 | 92 | 75-125 | 0 | 20 | 2.66 J | 2.68 J | 1 (1) | 20 |
| Titanium | 441 (2) | 406 (2) | 75-125 | 3 | 20 | 928 | 1,040 | 11 | 20 |
| Vanadium | 104 | 105 | 75-125 | 1 | 20 | 24.6 | 28.0 | 13 | 20 |
| Zinc | 110 | 111 | 75-125 | 1 | 20 | 66.1 | 71.2 | 7 | 20 |
| Zirconium | 100 | 101 | 75-125 | 1 | 20 | 2.18 J | 2.97 J | 31* (1) | 20 |
| Batch number: 131600637001A | Sample number(s): 7079475-7079477,7079479-7079480 UNSPK: P081058 BKG: P081058 | | | | | | | | |
| Silver | 97 | 98 | 75-125 | 1 | 20 | 0.0317 J | 0.200 U | 200* (1) | 20 |
| Strontium | 94 | 94 | 75-125 | 0 | 20 | 8.54 | 8.26 | 3 | 20 |
| Thallium | 112 | 107 | 75-125 | 3 | 20 | 0.198 J | 0.229 | 15 (1) | 20 |
| Batch number: 131600637001B | Sample number(s): 7079475-7079477,7079479-7079480 UNSPK: P081058 BKG: P081058 | | | | | | | | |
| Selenium | 107 | 108 | 75-125 | 2 | 20 | 0.400 U | 0.400 U | 0 (1) | 20 |
| Batch number: 131600638001 | Sample number(s): 7079475-7079477,7079479-7079480 UNSPK: P078552 BKG: P078552 | | | | | | | | |
| 3a Mercury 7471A | 98 | 97 | 65-135 | 1 | 20 | 0.0117 J | 0.0108 J | 8 (1) | 20 |
| Batch number: 13155039401A | Sample number(s): 7079475-7079477,7079479-7079480 BKG: 7079475 | | | | | | | | |
| 15a pH by 9045D | | | | | | 6.98 | 6.97 | 0 | 3 |
| Batch number: 13162162401A | Sample number(s): 7079475-7079477,7079479-7079480 BKG: P081058 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 2.1 | 1.4 | 40* | 20 |
| Batch number: 13161007 | Sample number(s): 7079475-7079477,7079479-7079480 UNSPK: P078552 | | | | | | | | |
| 2378-TCDD | 102 | 107 | 40-135 | 7 | 20 | | | | |
| 12378-PeCDD | 105 | 99 | 40-135 | 3 | 20 | | | | |
| 123478-HxCDD | 95 | 96 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDD | 99 | 97 | 40-135 | 0 | 20 | | | | |
| 123789-HxCDD | 97 | 95 | 40-135 | 0 | 20 | | | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394291
Reported: 06/14/13 at 01:47 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 1234678-HpCDD | 101 | 95 | 40-135 | 4 | 20 | | | | |
| OCDD | 144* | 94 | 40-135 | 36* | 20 | | | | |
| 2378-TCDF | 107 | 106 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDF | 97 | 97 | 40-135 | 2 | 20 | | | | |
| 23478-PeCDF | 98 | 95 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 92 | 90 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDF | 91 | 92 | 40-135 | 3 | 20 | | | | |
| 123789-HxCDF | 90 | 89 | 40-135 | 1 | 20 | | | | |
| 234678-HxCDF | 93 | 92 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 90 | 90 | 40-135 | 1 | 20 | | | | |
| 1234789-HpCDF | 90 | 92 | 40-135 | 5 | 20 | | | | |
| OCDF | 92 | 88 | 40-135 | 2 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 13156WAL026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7079473 | 92 | 106 | 100 |
| 7079474 | 89 | 98 | 99 |
| Blank | 90 | 102 | 99 |
| LCS | 88 | 97 | 97 |
| LCSD | 85 | 92 | 95 |
| Limits: | 64-120 | 62-141 | 58-134 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13157SLB026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7079475 | 86 | 93 | 92 |
| 7079476 | 88 | 89 | 92 |
| 7079477 | 84 | 89 | 92 |
| 7079479 | 86 | 90 | 90 |
| 7079480 | 83 | 88 | 89 |
| Blank | 88 | 95 | 97 |
| LCS | 89 | 95 | 94 |
| MS | 78 | 85 | 90 |
| MSD | 91 | 88 | 95 |
| Limits: | 54-129 | 61-134 | 55-129 |

*- Outside of specification
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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394291
Reported: 06/14/13 at 01:47 PM

## Surrogate Quality Control

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13160A16A

| | Trifluorotoluene-F |
|---|---|
| 7079475 | 70 |
| 7079476 | 84 |
| 7079477 | 85 |
| 7079479 | 83 |
| 7079480 | 88 |
| Blank | 87 |
| LCS | 93 |
| MS | 80 |
| MSD | 91 |
| Limits: | 61-122 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13162A20A

| | Trifluorotoluene-F |
|---|---|
| 7079473 | 88 |
| 7079474 | 88 |
| 7079478 | 83 |
| Blank | 85 |
| LCS | 119 |
| LCSD | 120 |
| Limits: | 63-135 |

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 131570010A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7079473 | 86 | 78 |
| 7079474 | 86 | 89 |
| Blank | 81 | 85 |
| LCS | 85 | 82 |
| LCSD | 85 | 71 |
| Limits: | 60-140 | 20-120 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 131570011A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7079473 | 81 | 72 |
| 7079474 | 94 | 98 |
| Blank | 100 | 101 |
| LCS | 98 | 85 |
| LCSD | 84 | 54 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131580010A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394291
Reported: 06/14/13 at 01:47 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7079475 | 119 | 130* |
| 7079476 | 115 | 122* |
| 7079477 | 115 | 113 |
| 7079479 | 119 | 116 |
| 7079480 | 117 | 117 |
| Blank | 116 | 116 |
| LCS | 107 | 112 |
| LCSD | 115 | 119 |
| MS | 99 | 93 |
| MSD | 113 | 104 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 131570013A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7079473 | 89 | 84 |
| 7079474 | 87 | 83 |
| Blank | 77 | 69 |
| LCS | 93 | 93 |
| LCSD | 93 | 93 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131580013A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7079475 | 93 | 92 |
| 7079476 | 94 | 94 |
| 7079477 | 90 | 91 |
| 7079479 | 89 | 88 |
| 7079480 | 88 | 86 |
| Blank | 93 | 85 |
| LCS | 94 | 95 |
| MS | 88 | 66 |
| MSD | 94 | 82 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 13155003

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7079473 | 58 | 74 | 81 | 80 | 80 | 88 |
| 7079474 | 68 | 76 | 84 | 85 | 84 | 93 |
| Blank | 75 | 83 | 92 | 90 | 90 | 97 |
| OPR | 67 | 78 | 86 | 86 | 85 | 94 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7079473 | 80 | 77 | 73 | 73 | 80 | 82 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394291
Reported: 06/14/13 at 01:47 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7079474 | 85 | 82 | 78 | 76 | 85 | 86 |
| Blank | 90 | 85 | 80 | 83 | 92 | 90 |
| OPR | 86 | 83 | 78 | 79 | 87 | 87 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7079473 | 79 | 79 | 76 | 69 | 73 |
| 7079474 | 83 | 82 | 80 | 69 | 74 |
| Blank | 89 | 88 | 84 | 77 | 80 |
| OPR | 86 | 86 | 81 | 73 | 76 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13161007

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7079475 | 69 | 94 | 74 | 79 | 74 | 73 |
| 7079476 | 71 | 96 | 74 | 80 | 72 | 72 |
| 7079477 | 68 | 101 | 76 | 82 | 76 | 74 |
| 7079479 | 72 | 96 | 73 | 81 | 73 | 66 |
| 7079480 | 73 | 99 | 81 | 89 | 81 | 71 |
| Blank | 62 | 81 | 71 | 73 | 70 | 67 |
| MS | 84 | 108 | 81 | 84 | 79 | 78 |
| MSD | 78 | 100 | 77 | 79 | 75 | 74 |
| OPR | 96 | 122 | 100 | 105 | 99 | 98 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7079475 | 88 | 67 | 68 | 92 | 80 | 80 |
| 7079476 | 95 | 69 | 69 | 92 | 78 | 82 |
| 7079477 | 96 | 70 | 68 | 98 | 82 | 83 |
| 7079479 | 92 | 64 | 65 | 92 | 77 | 79 |
| 7079480 | 106 | 68 | 63 | 96 | 88 | 87 |
| Blank | 80 | 61 | 61 | 78 | 78 | 78 |
| MS | 88 | 74 | 75 | 101 | 84 | 83 |
| MSD | 90 | 67 | 70 | 99 | 81 | 81 |
| OPR | 118 | 93 | 95 | 118 | 107 | 107 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7079475 | 79 | 80 | 87 | 73 | 98 |
| 7079476 | 78 | 81 | 92 | 76 | 104 |
| 7079477 | 80 | 79 | 89 | 72 | 104 |
| 7079479 | 77 | 77 | 85 | 75 | 102 |
| 7079480 | 85 | 87 | 93 | 77 | 107 |
| Blank | 75 | 74 | 75 | 62 | 83 |
| MS | 82 | 83 | 89 | 85 | 112 |
| MSD | 79 | 80 | 89 | 81 | 106 |
| OPR | 105 | 107 | 117 | 98 | 129 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394291
Reported: 06/14/13 at 01:47 PM

### Surrogate Quality Control

| | | | | | |
|---|---|---|---|---|---|
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

A-13013
G-1394291

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/3/2013 S-7079473-80

CarrierName: FedEx

AirbillNo: 799910081427

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20130603-01

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB1-060313 | 6/3/13 15:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-060313 | 6/3/13 15:00 | WQ | None | 3 - 250 mL Amber | 10 day | | | | | | | X | | | X | | | | | | | X | | | | | | | | | | | | | | | |
| EB1-060313 | 6/3/13 15:00 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-060313 | 6/3/13 15:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB1-060313 | 6/3/13 15:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| EB1-060313 | 6/3/13 15:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Pam Hartman

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sheryl Mysel | 06/03/13 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 6/4/13 | 0930 |

COC Rev 2

COC: 20130603-01, Page 1 of 1

1 of 1

A-13013
G-1394291
S-7079473-80

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/3/2013
CarrierName: FedEx
AirbillNo: 799910081427

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130603-02
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB2-060313 | 6/3/13 15:30 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-060313 | 6/3/13 15:30 | WQ | None | 3 - 250 mL Amber | 10 day | | | | | | | X | | | X | | | | | | X | | | | | | | | | | | | | | | |
| EB2-060313 | 6/3/13 15:30 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| EB2-060313 | 6/3/13 15:30 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| EB2-060313 | 6/3/13 15:30 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| EB2-060313 | 6/3/13 15:30 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Pam Hartman

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~Stephanie Myers~~ | 06/03/13 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 6/4/13 | 0930 |

COC Rev 2

COC: 20130603-02, Page 1 of 1

A-130113
G-1394291
S-7079473-80

# SSFL Phase 3 Chain of Custody

**CDM Smith**
DateShipped: 6/3/2013
CarrierName: FedEx
AirbillNo: 799910081427

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130603-03
Cooler #: 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7470 (Water) | Mercury 7471 (Soil) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-526-SA7-SB-9.0-10.0 | 6/3/13 11:35 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-526-SA7-SB-9.0-10.0 | 6/3/13 11:35 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-532-SA7-SB-3.0-4.0 | 6/3/13 10:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-532-SA7-SB-3.0-4.0 | 6/3/13 10:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-533-SA7-SB-2.5-3.5 | 6/3/13 09:10 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-533-SA7-SB-2.5-3.5 | 6/3/13 09:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-526-SA7-SB-9.0-10.0 | 6/3/13 11:35 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-532-SA7-SB-3.0-4.0 | 6/3/13 10:00 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-533-SA7-SB-2.5-3.5 | 6/3/13 09:10 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| TB-060313 | 6/3/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-525-SA7-SB-4.0-5.0 | 6/3/13 13:30 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-525-SA7-SB-4.0-5.0 | 6/3/13 13:30 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-525-SA7-SB-9.5-10.5 | 6/3/13 14:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-525-SA7-SB-9.5-10.5 | 6/3/13 14:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** V. Cortez

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] Mypel | 06/03/13 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Cynthia | 6/4/13 | 0930 |

1 of 1

13-13/1394241/7-7-473-32

# SSFL Phase 3 Chain of Custody

**CDM Smith**

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 6/3/2013 | Contact Name: | Pam Hartman | COC No: | 20130603-03 |
| CarrierName: | FedEx | Contact Phone: | (818)466-8007 | Cooler #: | 3 |
| AirbillNo: | 799910081427 | | | Lab: | Lancaster |
| | | | | Lab Phone: | 717-556-7259 |
| | | | | Lab Address | 2425 New Holland Pike<br>Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | 5VOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-526-SA7-SB-9.0-10.0 | 6/3/13 11:35 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | | |
| SL-526-SA7-SB-9.0-10.0 | 6/3/13 11:35 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-532-SA7-SB-3.0-4.0 | 6/3/13 10:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | | |
| SL-532-SA7-SB-3.0-4.0 | 6/3/13 10:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-533-SA7-SB-2.5-3.5 | 6/3/13 09:10 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | | |
| SL-533-SA7-SB-2.5-3.5 | 6/3/13 09:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-526-SA7-SB-9.0-10.0 | 6/3/13 11:35 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| SL-532-SA7-SB-3.0-4.0 | 6/3/13 10:00 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| SL-533-SA7-SB-2.5-3.5 | 6/3/13 09:10 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| TB-060313 | 6/3/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| SL-525-SA7-SB-4.0-5.0 | 6/3/13 13:30 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | | |
| SL-525-SA7-SB-4.0-5.0 | 6/3/13 13:30 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-525-SA7-SB-9.5-10.5 | 6/3/13 14:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | | |
| SL-525-SA7-SB-9.5-10.5 | 6/3/13 14:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| SL-525-SA7-SB-4.0-5.0 | 6/3/13 13:30 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| SL-525-SA7-SB-9.5-10.5 | 6/3/13 14:00 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |

Special Instructions:

Sampler: V. Cortez

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steve Mysel | 06/03/13 | 1600 | | | | | | | | | |

Amended COC received 6/5/13 from S Mysel [illegible] 6/5/13

COC Rev 2

COC: 20130603-03 Page 1 of 1

## Natalie R. Luciano

**From:** Mysel, Stefanie [MyselSJ@cdmsmith.com]
**Sent:** Wednesday, June 05, 2013 11:48 AM
**To:** Natalie R. Luciano; Burgesser, Todd
**Cc:** Hartman, Pamela
**Subject:** RE: SSFL 06/03/2013 COC

**Attachments:** Lancaster 060313.pdf



Lancaster 060313.pdf (83 KB)

Natalie,

Thanks for letting me know about these issues. For SL-525-SA7-SB-4.0-5.0 and SL-525-SA7-SB-9.5-10.5 we would like TPH-GRO analyzed. I missed entering it on the COC. I attached a revised COC with those samples on it. As for Pesticides, today's delivery (yesterday's sampling) will have soil needing to be analyzed for Pesticides. We would like the EBs to be analyzed for pesticides. Let me know if you have any other questions.

Regards,

Stefanie

Stefanie J. Mysel
Geologist

CDM Smith
100 Pringle Avenue
Suite 300
Walnut Creek, CA 94596

Main: 925-933-2900
Direct: 925-296-8081
Cell: 610-248-2430
Email: myselsj@cdmsmith.com<mailto:myselsj@cdmsmith.com>

---

From: Natalie R. Luciano [NLuciano@lancasterlabs.com]
Sent: Wednesday, June 05, 2013 8:33 AM
To: Mysel, Stefanie; Burgesser, Todd
Cc: Hartman, Pamela
Subject: RE: SSFL 06/03/2013 COC

Good morning,

I have a couple questions regarding yesterday's submittal.

- COC 20130603-03 does not have samples SL-525-SA7-SB-4.0-5.0 or SL-525-SA7-SB-9.5-10.5 marked for analysis of GRO, but we received containers for these. Is GRO needed?

- I also noticed that EB1 and EB2 (20130603-01 & 20130603-02) are marked for analysis of Pesticides 8081; however, none of the soils are being analyzed for Pesticides. Please confirm whether the EBs should be analyzed for pesticides.

Thanks for your help with this.

Natalie

Senior Specialist, Environmental Client Services

Phone: 717-556-7258

-----Original Message-----
From: Mysel, Stefanie [mailto:MyselSJ@cdmsmith.com]
Sent: Monday, June 03, 2013 6:31 PM
To: !US19_SSFLShip; Burgesser, Todd
Cc: Hartman, Pamela; Mysel, Stefanie
Subject: SSFL 06/03/2013 COC

3 coolers were shipped to your lab for delivery tomorrow. These samples are from today's sampling. Samples were collected from subarea 7. The airbill number for today's shipment is 799910081427. Let me know if you have any questions or issues. Attached is an excel table with sample names, dates and times from today's sampling. Tomorrow we will continue sampling subarea 7 and will sample subarea 5A also.

Stefanie J. Mysel

Geologist

CDM Smith

100 Pringle Avenue

Suite 300

Walnut Creek, CA 94596

Main: 925-933-2900

Direct: 925-296-8081

Cell: 610-248-2430

Email: myselsj@cdmsmith.com<mailto:myselsj@cdmsmith.com>

eurofins | Lancaster Laboratories

G-139426-1

# Environmental Sample Administration
# Receipt Documentation Log

**Client/Project:** CDM

**Date of Receipt:** 6/4/13

**Time of Receipt:** 0930

**Source Code:** SC

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT131 | 1.3 | TB | WI | Y | B | |
| 2 | ↓ | 1.0 | ↓ | ↓ | ↓ | ↓ | |
| 3 | ↓ | 0.9 | ↓ | ↓ | ↓ | ↓ | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

Also sent GRO bags for
SL-525-SA7-SB 4.0-5.0 &
SL-525-SA7-SB 9.5-10.5

**Unpacker Signature/Emp#:** 964 **Date/Time:** 6/4/13 1023

Issued by Dept. 6042 Management

2174.06

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 21, 2013

Project: Phase 3 Subarea 7

Submittal Date: 06/05/2013
Group Number: 1394643
SDG: PH046
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| SL-545A-SA7-SB-0.0-0.5 Soil | 7081055 |
| SL-545B-SA7-SB-0.0-0.5 Soil | 7081056 |
| SL-545C-SA7-SB-0.0-0.5 Soil | 7081057 |
| SL-513-SA7-SB-0.0-0.5 Soil | 7081058 |
| SL-513-SA7-SB-0.0-0.5MS Soil | 7081059 |
| SL-513-SA7-SB-0.0-0.5MSD Soil | 7081060 |
| SL-513-SA7-SB-0.0-0.5DUP Soil | 7081061 |
| SL-913-SA7-SB-0.0-0.5 Soil | 7081062 |
| SL-516-SA7-SB-0.0-0.5 Soil | 7081063 |
| SL-524-SA7-SB-1.0-2.0 Soil | 7081064 |
| SL-524-SA7-SB-1.0-2.0MS Soil | 7081065 |
| SL-524-SA7-SB-1.0-2.0MSD Soil | 7081066 |
| SL-524-SA7-SB-1.0-2.0DUP Soil | 7081067 |
| SL-524-SA7-SB-0.0-0.5 Soil | 7081068 |
| SL-924-SA7-SB-1.0-2.0 Soil | 7081069 |
| TB-060413 Water | 7081070 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Natalie R. Luciano
Senior Specialist

(717) 556-7258

**Sample Description:** SL-545A-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7081055
**LLI Group #** 1394643
**Account #** 13013

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 14:50 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S545A SDG#: PH046-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.3 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131580010A | 06/10/2013 18:55 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131580010A | 06/08/2013 01:30 | Karen L Beyer | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401A | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-545B-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081056**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:00 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S545B SDG#: PH046-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.0 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131580010A | 06/10/2013 19:13 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131580010A | 06/08/2013 01:30 | Karen L Beyer | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401A | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-545C-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7081057
**LLI Group #** 1394643
**Account #** 13013

**Project Name: Phase 3 Subarea 7**

Collected: 06/03/2013 15:10 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S545C SDG#: PH046-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.8 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131580010A | 06/10/2013 19:32 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131580010A | 06/08/2013 01:30 | Karen L Beyer | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401A | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-513-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081058**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 18 | | 17 | 6.8 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 170 | U | 170 | 34 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Chrysene | 218-01-9 | 23 | | 17 | 3.4 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 180 | U | 180 | 61 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 7.0 | J | 17 | 6.8 | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | U | 17 | 6.8 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.8 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Naphthalene | 91-20-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 180 | U | 180 | 61 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Pyrene | 129-00-0 | 7.5 | J | 17 | 6.8 | 10 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 0.53 | J | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 7.0 | | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 0.63 | J | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-513-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081058**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 13 | J | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 25 | U | 25 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 25 | U | 25 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 100 | | 25 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 160 | | 51 | 20 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 25 | U | 25 | 10 | 5 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,050 | | 40.7 | 7.85 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.573 | J | 4.07 | 0.509 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.18 | | 4.07 | 0.336 | 1 |
| 06946 | Barium | 7440-39-3 | 61.3 | | 1.02 | 0.0336 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.404 | J | 1.02 | 0.0682 | 1 |
| 07914 | Boron | 7440-42-8 | 6.16 | J | 10.2 | 0.845 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.513 | J | 1.02 | 0.0336 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,450 | | 20.4 | 4.09 | 1 |
| 06951 | Chromium | 7440-47-3 | 11.6 | | 3.05 | 0.0896 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.77 | | 1.02 | 0.0916 | 1 |
| 06953 | Copper | 7440-50-8 | 5.37 | | 2.04 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 16,400 | | 40.7 | 3.87 | 1 |
| 06955 | Lead | 7439-92-1 | 7.81 | | 3.05 | 0.479 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.2 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,550 | | 10.2 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 243 | | 1.02 | 0.0845 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.773 | J | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 6.82 | | 2.04 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 385 | | 10.2 | 0.519 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,980 | | 102 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 63.8 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.71 | J | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 945 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 25.0 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 67.4 | | 4.07 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.22 | J | 5.09 | 0.845 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081058**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.407 U | 0.407 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0323 J | 0.204 | 0.0204 | 2 |
| 06144 | Strontium | 7440-24-6 | 8.69 | 0.407 | 0.0346 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.202 J | 0.204 | 0.0305 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0151 J | 0.0168 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.68 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.3 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.8 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-513-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081058**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.110 | J | 1.02 | 0.0312 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.451 | JB | 5.09 | 0.0588 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.06 | JBQ | 5.09 | 0.0415 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 3.18 | J | 5.09 | 0.0445 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.87 | JB | 5.09 | 0.0401 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 95.8 | B | 5.09 | 0.0514 | 1 |
| 11031 | OCDD | 3268-87-9 | 906 | B | 10.2 | 0.0441 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.763 | JB | 1.02 | 0.0947 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.702 | JB | 5.09 | 0.0491 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.839 | JB | 5.09 | 0.0439 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.876 | JB | 5.09 | 0.0378 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.913 | J | 5.09 | 0.0376 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.242 | JB | 5.09 | 0.0380 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.894 | JB | 5.09 | 0.0375 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 19.2 | B | 5.09 | 0.0315 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 1.28 | JB | 5.09 | 0.0342 | 1 |
| 11031 | OCDF | 39001-02-0 | 82.8 | B | 10.2 | 0.0356 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 3.17 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 83 | 25 - 164 |
| 13C12-12378-PeCDD | 91 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 92 | 23 - 140 |
| 13C12-OCDD | 95 | 17 - 157 |
| 13C12-2378-TCDF | 79 | 24 - 169 |
| 13C12-12378-PeCDF | 88 | 24 - 185 |
| 13C12-23478-PeCDF | 91 | 21 - 178 |
| 13C12-123478-HxCDF | 90 | 26 - 152 |
| 13C12-123678-HxCDF | 89 | 26 - 123 |
| 13C12-234678-HxCDF | 90 | 28 - 136 |
| 13C12-123789-HxCDF | 96 | 29 - 147 |
| 13C12-1234678-HpCDF | 96 | 28 - 143 |
| 13C12-1234789-HpCDF | 98 | 26 - 138 |
| 13C12-OCDF | 97 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081058**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081058**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04BKG

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13158SLB026 | 06/13/2013 04:03 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13158SLB026 | 06/07/2013 17:40 | Sally L Appleyard | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131620099A | 06/20/2013 19:43 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131580010A | 06/10/2013 10:47 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131580010A | 06/08/2013 01:30 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131620099A | 06/11/2013 19:00 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131580013A | 06/10/2013 23:57 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131580013A | 06/09/2013 08:00 | Joseph S Feister | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13168006 | 06/19/2013 15:20 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 2 | 13168006 | 06/17/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 16:57 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081058**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131600637001B | 06/11/2013 18:04 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:04 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:04 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:04 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638002 | 06/11/2013 19:12 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637001 | 06/10/2013 23:43 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638002 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13156039401A | 06/05/2013 21:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 2 | 13163162401A | 06/12/2013 20:12 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-513-SA7-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081059**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 36 | | 17 | 6.8 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 30 | | 17 | 3.4 | 10 |
| 12969 | Anthracene | 120-12-7 | 32 | | 17 | 3.4 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 37 | | 17 | 6.8 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 38 | | 17 | 6.8 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 67 | | 17 | 6.8 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 55 | J | 170 | 34 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 20 | | 17 | 6.8 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 46 | | 17 | 6.8 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Chrysene | 218-01-9 | 59 | | 17 | 3.4 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 24 | | 17 | 6.8 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 180 | U | 180 | 61 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 41 | | 17 | 6.8 | 10 |
| 12969 | Fluorene | 86-73-7 | 33 | | 17 | 6.8 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 25 | | 17 | 6.8 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 31 | | 17 | 6.8 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 31 | | 17 | 6.8 | 10 |
| 12969 | Naphthalene | 91-20-3 | 35 | | 17 | 6.8 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 55 | | 17 | 6.8 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 65 | J | 180 | 61 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 32 | | 17 | 6.8 | 10 |
| 12969 | Pyrene | 129-00-0 | 41 | | 17 | 6.8 | 10 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 3.0 | | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.1 | | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.9 | | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 3.2 | | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 6.4 | | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 7.0 | | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 40 | | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.1 | | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 6.8 | | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 2.7 | | 0.85 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 7.4 | | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 6.6 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 6.3 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 4.3 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 5.4 | | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.0 | | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.5 | | 0.85 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 33 | | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-513-SA7-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7081059
**LLI Group #** 1394643
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 140 | | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 44 | | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 120 | | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 25 | U | 25 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 25 | U | 25 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 170 | | 25 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 310 | | 51 | 20 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 25 | U | 25 | 10 | 5 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,400 | | 40.7 | 7.85 | 1 |
| 06944 | Antimony | 7440-36-0 | 41.8 | | 4.07 | 0.509 | 1 |
| 06935 | Arsenic | 7440-38-2 | 20.4 | | 4.07 | 0.336 | 1 |
| 06946 | Barium | 7440-39-3 | 271 | | 1.02 | 0.0336 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.58 | | 1.02 | 0.0682 | 1 |
| 07914 | Boron | 7440-42-8 | 202 | | 10.2 | 0.845 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.50 | | 1.02 | 0.0336 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,970 | | 20.4 | 4.09 | 1 |
| 06951 | Chromium | 7440-47-3 | 33.8 | | 3.05 | 0.0896 | 1 |
| 06952 | Cobalt | 7440-48-4 | 53.4 | | 1.02 | 0.0916 | 1 |
| 06953 | Copper | 7440-50-8 | 30.6 | | 2.04 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 18,000 | | 40.7 | 3.87 | 1 |
| 06955 | Lead | 7439-92-1 | 23.2 | | 3.05 | 0.479 | 1 |
| 01656 | Lithium | 7439-93-2 | 129 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,270 | | 10.2 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 307 | | 1.02 | 0.0845 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 200 | | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 57.9 | | 2.04 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 490 | | 10.2 | 0.519 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,520 | | 102 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,080 | | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 380 | | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,390 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 77.7 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 123 | | 4.07 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 104 | | 5.09 | 0.845 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081059**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.17 | 0.407 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 9.90 | 0.204 | 0.0204 | 2 |
| 06144 | Strontium | 7440-24-6 | 16.4 | 0.407 | 0.0346 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.658 | 0.204 | 0.0305 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.183 | 0.0164 | 0.0098 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 1.8 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-513-SA7-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081059**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 19.1 | | 1.00 | 0.0368 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 101 | B | 5.02 | 0.0557 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 108 | B | 5.02 | 0.0394 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 106 | | 5.02 | 0.0403 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 105 | B | 5.02 | 0.0381 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 149 | B | 5.02 | 0.0446 | 1 |
| 11031 | OCDD | 3268-87-9 | 656 | B | 10.0 | 0.0386 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.1 | B | 1.00 | 0.0612 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 104 | B | 5.02 | 0.0419 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 106 | B | 5.02 | 0.0382 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 108 | B | 5.02 | 0.0376 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 104 | | 5.02 | 0.0368 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 105 | B | 5.02 | 0.0378 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 105 | B | 5.02 | 0.0360 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 113 | B | 5.02 | 0.0441 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 104 | B | 5.02 | 0.0496 | 1 |
| 11031 | OCDF | 39001-02-0 | 232 | B | 10.0 | 0.0352 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 81 | 25 - 164 |
| 13C12-12378-PeCDD | 92 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 91 | 23 - 140 |
| 13C12-OCDD | 92 | 17 - 157 |
| 13C12-2378-TCDF | 79 | 24 - 169 |
| 13C12-12378-PeCDF | 90 | 24 - 185 |
| 13C12-23478-PeCDF | 92 | 21 - 178 |
| 13C12-123478-HxCDF | 88 | 26 - 152 |
| 13C12-123678-HxCDF | 89 | 26 - 123 |
| 13C12-234678-HxCDF | 89 | 28 - 136 |
| 13C12-123789-HxCDF | 92 | 29 - 147 |
| 13C12-1234678-HpCDF | 96 | 28 - 143 |
| 13C12-1234789-HpCDF | 96 | 26 - 138 |
| 13C12-OCDF | 91 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081059**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04MS

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13158SLB026 | 06/13/2013 04:36 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13158SLB026 | 06/07/2013 17:40 | Sally L Appleyard | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131620099A | 06/20/2013 20:14 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131580010A | 06/10/2013 11:06 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131580010A | 06/08/2013 01:30 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131620099A | 06/11/2013 19:00 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131580013A | 06/11/2013 00:39 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131580013A | 06/09/2013 08:00 | Joseph S Feister | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13168006 | 06/19/2013 16:17 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 2 | 13168006 | 06/17/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:09 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081059**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131600637001B | 06/11/2013 18:11 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:11 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:11 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:11 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638002 | 06/11/2013 19:18 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637001 | 06/10/2013 23:43 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638002 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 2 | 13163162401A | 06/12/2013 20:12 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081060**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 37 | | 17 | 6.8 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 31 | | 17 | 3.4 | 10 |
| 12969 | Anthracene | 120-12-7 | 34 | | 17 | 3.4 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 42 | | 17 | 6.8 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 39 | | 17 | 6.8 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 56 | | 17 | 6.8 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 60 | J | 170 | 34 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 21 | | 17 | 6.8 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 45 | | 17 | 6.8 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Chrysene | 218-01-9 | 57 | | 17 | 3.4 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 26 | | 17 | 6.8 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 180 | U | 180 | 61 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 40 | | 17 | 6.8 | 10 |
| 12969 | Fluorene | 86-73-7 | 34 | | 17 | 6.8 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 24 | | 17 | 6.8 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 32 | | 17 | 6.8 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 32 | | 17 | 6.8 | 10 |
| 12969 | Naphthalene | 91-20-3 | 36 | | 17 | 6.8 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 46 | | 17 | 6.8 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 61 | J | 180 | 61 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 32 | | 17 | 6.8 | 10 |
| 12969 | Pyrene | 129-00-0 | 38 | | 17 | 6.8 | 10 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 3.1 | | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.2 | | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.9 | | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 3.3 | | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 6.2 | | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 6.8 | | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 11 | | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.3 | | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 6.4 | | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 2.9 | | 0.85 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 6.5 | | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 6.2 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 6.3 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 5.0 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 5.9 | | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.1 | | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.4 | | 0.85 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 33 | | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-513-SA7-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081060**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 160 | | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 44 | | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 140 | | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 25 | U | 25 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 11 | J | 25 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 200 | | 25 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 420 | | 51 | 20 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 25 | U | 25 | 10 | 5 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,200 | | 40.7 | 7.85 | 1 |
| 06944 | Antimony | 7440-36-0 | 42.0 | | 4.07 | 0.509 | 1 |
| 06935 | Arsenic | 7440-38-2 | 20.4 | | 4.07 | 0.336 | 1 |
| 06946 | Barium | 7440-39-3 | 280 | | 1.02 | 0.0336 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.66 | | 1.02 | 0.0682 | 1 |
| 07914 | Boron | 7440-42-8 | 206 | | 10.2 | 0.845 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.54 | | 1.02 | 0.0336 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,910 | | 20.4 | 4.09 | 1 |
| 06951 | Chromium | 7440-47-3 | 32.8 | | 3.05 | 0.0896 | 1 |
| 06952 | Cobalt | 7440-48-4 | 53.6 | | 1.02 | 0.0916 | 1 |
| 06953 | Copper | 7440-50-8 | 31.8 | | 2.04 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 17,700 | | 40.7 | 3.87 | 1 |
| 06955 | Lead | 7439-92-1 | 23.1 | | 3.05 | 0.479 | 1 |
| 01656 | Lithium | 7439-93-2 | 130 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,320 | | 10.2 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 309 | | 1.02 | 0.0845 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 202 | | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 57.4 | | 2.04 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 501 | | 10.2 | 0.519 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,500 | | 102 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,090 | | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 379 | | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,360 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 78.3 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 124 | | 4.07 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 105 | | 5.09 | 0.845 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081060**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.21 | 0.407 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 10.0 | 0.204 | 0.0204 | 2 |
| 06144 | Strontium | 7440-24-6 | 16.3 | 0.407 | 0.0346 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.636 | 0.204 | 0.0305 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.178 | 0.0163 | 0.0098 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 1.8 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-513-SA7-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081060**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 19.3 | | 1.00 | 0.0462 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 101 | B | 5.01 | 0.0555 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 106 | B | 5.01 | 0.0540 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 105 | | 5.01 | 0.0573 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 106 | B | 5.01 | 0.0521 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 149 | B | 5.01 | 0.0573 | 1 |
| 11031 | OCDD | 3268-87-9 | 646 | B | 10.0 | 0.0419 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.5 | B | 1.00 | 0.0782 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 104 | B | 5.01 | 0.0451 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 104 | B | 5.01 | 0.0411 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 108 | B | 5.01 | 0.0434 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 103 | | 5.01 | 0.0424 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 107 | B | 5.01 | 0.0458 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 104 | B | 5.01 | 0.0407 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 115 | B | 5.01 | 0.0367 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 106 | B | 5.01 | 0.0405 | 1 |
| 11031 | OCDF | 39001-02-0 | 237 | B | 10.0 | 0.0375 | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 79 | 25 - 164 |
| 13C12-12378-PeCDD | 88 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 91 | 23 - 140 |
| 13C12-OCDD | 94 | 17 - 157 |
| 13C12-2378-TCDF | 75 | 24 - 169 |
| 13C12-12378-PeCDF | 85 | 24 - 185 |
| 13C12-23478-PeCDF | 89 | 21 - 178 |
| 13C12-123478-HxCDF | 86 | 26 - 152 |
| 13C12-123678-HxCDF | 87 | 26 - 123 |
| 13C12-234678-HxCDF | 87 | 28 - 136 |
| 13C12-123789-HxCDF | 87 | 29 - 147 |
| 13C12-1234678-HpCDF | 95 | 28 - 143 |
| 13C12-1234789-HpCDF | 95 | 26 - 138 |
| 13C12-OCDF | 96 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081060**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04MSD

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13158SLB026 | 06/13/2013 05:09 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13158SLB026 | 06/07/2013 17:40 | Sally L Appleyard | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131620099A | 06/20/2013 20:29 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131580010A | 06/10/2013 11:24 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131580010A | 06/08/2013 01:30 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131620099A | 06/11/2013 19:00 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131580013A | 06/11/2013 01:20 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131580013A | 06/09/2013 08:00 | Joseph S Feister | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13168006 | 06/19/2013 17:13 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 2 | 13168006 | 06/17/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:13 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081060**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131600637001B | 06/11/2013 18:13 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:13 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:13 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:13 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638002 | 06/11/2013 19:20 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637001 | 06/10/2013 23:43 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638002 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 2 | 13163162401A | 06/12/2013 20:12 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081061**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,100 | | 40.7 | 7.85 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.07 | U | 4.07 | 0.509 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.70 | | 4.07 | 0.336 | 1 |
| 06946 | Barium | 7440-39-3 | 65.6 | | 1.02 | 0.0336 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.451 | J | 1.02 | 0.0682 | 1 |
| 07914 | Boron | 7440-42-8 | 6.26 | J | 10.2 | 0.845 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.535 | J | 1.02 | 0.0336 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,330 | | 20.4 | 4.09 | 1 |
| 06951 | Chromium | 7440-47-3 | 13.3 | | 3.05 | 0.0896 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.96 | | 1.02 | 0.0916 | 1 |
| 06953 | Copper | 7440-50-8 | 5.61 | | 2.04 | 0.183 | 1 |
| 01654 | Iron | 7439-89-6 | 17,800 | | 40.7 | 3.87 | 1 |
| 06955 | Lead | 7439-92-1 | 8.76 | | 3.05 | 0.479 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.8 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,950 | | 10.2 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 261 | | 1.02 | 0.0845 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.392 | J | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.40 | | 2.04 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 390 | | 10.2 | 0.519 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,240 | | 102 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 69.2 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.73 | J | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,060 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 28.5 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 72.5 | | 4.07 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.02 | J | 5.09 | 0.845 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.407 | U | 0.407 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.204 | U | 0.204 | 0.0204 | 2 |
| 06144 | Strontium | 7440-24-6 | 8.42 | | 0.407 | 0.0346 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.234 | | 0.204 | 0.0305 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0143 | J | 0.0164 | 0.0098 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.71 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 1.8 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 1.9 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-SA7-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081061**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH046-04DUP

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:05 | John P Hook | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131600637001B | 06/11/2013 18:09 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:09 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:09 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:09 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638002 | 06/11/2013 19:16 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637001 | 06/10/2013 23:43 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638002 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13156039401A | 06/05/2013 21:00 | Luz M Groff | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 2 | 13163162401A | 06/12/2013 20:12 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 2 | 13163162401A | 06/12/2013 20:12 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-913-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081062**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:45 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

91300 SDG#: PH046-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 13 | J | 17 | 6.8 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 170 | U | 170 | 34 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Chrysene | 218-01-9 | 20 | | 17 | 3.4 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 180 | U | 180 | 61 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 8.3 | J | 17 | 6.8 | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | U | 17 | 6.8 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.8 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Naphthalene | 91-20-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 180 | U | 180 | 61 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Pyrene | 129-00-0 | 8.4 | J | 17 | 6.8 | 10 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.97 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 1.8 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 6.3 | | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.84 | U | 0.84 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.84 | U | 0.84 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.84 | U | 0.84 | 0.43 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 0.89 | J | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-913-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081062**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:45 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

91300 SDG#: PH046-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 17 | J | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 13 | J | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 50 | U | 50 | 20 | 10 |
| 12952 | EFH (C15-C20) | n.a. | 50 | U | 50 | 20 | 10 |
| 12952 | EFH (C21-C30) | n.a. | 160 | | 50 | 20 | 10 |
| 12952 | EFH (C30-C40) | n.a. | 350 | | 100 | 40 | 10 |
| 12952 | EFH (C8-C11) | n.a. | 50 | U | 50 | 20 | 10 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,640 | | 40.2 | 7.75 | 1 |
| 06944 | Antimony | 7440-36-0 | 0.637 | J | 4.02 | 0.503 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.31 | | 4.02 | 0.332 | 1 |
| 06946 | Barium | 7440-39-3 | 65.4 | | 1.01 | 0.0332 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.453 | J | 1.01 | 0.0673 | 1 |
| 07914 | Boron | 7440-42-8 | 6.30 | J | 10.1 | 0.834 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.511 | J | 1.01 | 0.0332 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,620 | | 20.1 | 4.04 | 1 |
| 06951 | Chromium | 7440-47-3 | 12.4 | | 3.02 | 0.0885 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.18 | | 1.01 | 0.0905 | 1 |
| 06953 | Copper | 7440-50-8 | 5.92 | | 2.01 | 0.181 | 1 |
| 01654 | Iron | 7439-89-6 | 16,700 | | 40.2 | 3.82 | 1 |
| 06955 | Lead | 7439-92-1 | 9.75 | | 3.02 | 0.472 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.4 | | 4.0 | 0.55 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,720 | | 10.1 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 255 | | 1.01 | 0.0834 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.282 | J | 2.01 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 7.63 | | 2.01 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 389 | | 10.1 | 0.513 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,160 | | 101 | 13.6 | 1 |
| 01667 | Sodium | 7440-23-5 | 63.2 | J | 101 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 2.90 | J | 10.1 | 0.221 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,030 | | 1.01 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 26.7 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 76.4 | | 4.02 | 0.201 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.48 | J | 5.03 | 0.834 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-913-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081062**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:45 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

91300 SDG#: PH046-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.402 | U | 0.402 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.201 | U | 0.201 | 0.0201 | 2 |
| 06144 | Strontium | 7440-24-6 | 9.91 | | 0.402 | 0.0342 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.209 | | 0.201 | 0.0302 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0267 | | 0.0167 | 0.0100 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.72 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.6 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-913-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081062**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:45 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

91300 SDG#: PH046-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0389 | J | 0.992 | 0.0347 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.315 | JBQ | 4.96 | 0.0482 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.527 | JB | 4.96 | 0.0443 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.49 | J | 4.96 | 0.0483 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.998 | JB | 4.96 | 0.0434 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 40.7 | B | 4.96 | 0.0470 | 1 |
| 11031 | OCDD | 3268-87-9 | 396 | B | 9.92 | 0.0392 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.457 | JB | 0.992 | 0.0692 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.646 | JB | 4.96 | 0.0435 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.691 | JB | 4.96 | 0.0384 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.864 | JB | 4.96 | 0.0332 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.706 | J | 4.96 | 0.0330 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.332 | JB | 4.96 | 0.0351 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.624 | JB | 4.96 | 0.0318 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 8.72 | B | 4.96 | 0.0317 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.775 | JB | 4.96 | 0.0357 | 1 |
| 11031 | OCDF | 39001-02-0 | 28.3 | B | 9.92 | 0.0302 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.49 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 78 | 25 - 164 |
| 13C12-12378-PeCDD | 91 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 95 | 23 - 140 |
| 13C12-OCDD | 98 | 17 - 157 |
| 13C12-2378-TCDF | 74 | 24 - 169 |
| 13C12-12378-PeCDF | 86 | 24 - 185 |
| 13C12-23478-PeCDF | 90 | 21 - 178 |
| 13C12-123478-HxCDF | 86 | 26 - 152 |
| 13C12-123678-HxCDF | 88 | 26 - 123 |
| 13C12-234678-HxCDF | 87 | 28 - 136 |
| 13C12-123789-HxCDF | 89 | 29 - 147 |
| 13C12-1234678-HpCDF | 99 | 28 - 143 |
| 13C12-1234789-HpCDF | 99 | 26 - 138 |
| 13C12-OCDF | 101 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-913-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081062**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:45 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

91300 SDG#: PH046-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-913-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081062**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:45 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

91300 SDG#: PH046-05

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13158SLB026 | 06/13/2013 05:42 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13158SLB026 | 06/07/2013 17:40 | Sally L Appleyard | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131620099A | 06/20/2013 20:44 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131620008A | 06/12/2013 13:11 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131620008A | 06/11/2013 18:30 | Sally L Appleyard | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131620099A | 06/11/2013 19:00 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131580013A | 06/11/2013 02:02 | Heather E Williams | 10 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131580013A | 06/09/2013 08:00 | Joseph S Feister | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13168006 | 06/19/2013 18:10 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 2 | 13168006 | 06/17/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:50 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-913-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081062**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:45 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

91300 SDG#: PH046-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131600637001B | 06/11/2013 18:34 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:34 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:34 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:34 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638002 | 06/11/2013 19:22 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637001 | 06/10/2013 23:43 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638002 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13156039401A | 06/05/2013 21:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401A | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-516-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7081063
**LLI Group #** 1394643
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 06/04/2013 09:55 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51600 SDG#: PH046-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 3.4 | J | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 4.8 | J | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-516-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081063**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 09:55 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51600 SDG#: PH046-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,400 | | 40.8 | 7.87 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.08 | U | 4.08 | 0.510 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.10 | | 4.08 | 0.337 | 1 |
| 06946 | Barium | 7440-39-3 | 72.9 | | 1.02 | 0.0337 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.538 | J | 1.02 | 0.0684 | 1 |
| 07914 | Boron | 7440-42-8 | 6.24 | J | 10.2 | 0.847 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.518 | J | 1.02 | 0.0337 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,380 | | 20.4 | 4.10 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.4 | | 3.06 | 0.0898 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.41 | | 1.02 | 0.0918 | 1 |
| 06953 | Copper | 7440-50-8 | 6.89 | | 2.04 | 0.184 | 1 |
| 01654 | Iron | 7439-89-6 | 20,900 | | 40.8 | 3.88 | 1 |
| 06955 | Lead | 7439-92-1 | 4.80 | | 3.06 | 0.479 | 1 |
| 01656 | Lithium | 7439-93-2 | 28.3 | | 4.1 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,790 | | 10.2 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 308 | | 1.02 | 0.0847 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.331 | J | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.5 | | 2.04 | 0.112 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 410 | | 10.2 | 0.520 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,930 | | 102 | 13.8 | 1 |
| 01667 | Sodium | 7440-23-5 | 319 | | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.93 | J | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,270 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 39.3 | | 1.02 | 0.112 | 1 |
| 06972 | Zinc | 7440-66-6 | 58.8 | | 4.08 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.72 | J | 5.10 | 0.847 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.108 | J | 0.408 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0368 | J | 0.204 | 0.0204 | 2 |
| 06144 | Strontium | 7440-24-6 | 15.0 | | 0.408 | 0.0347 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.304 | | 0.204 | 0.0306 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0108 | J | 0.0170 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.14 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.9 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-516-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081063**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 09:55 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51600 SDG#: PH046-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0468 | J | 0.993 | 0.0310 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 4.96 | U | 4.96 | 0.0365 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0727 | JB | 4.96 | 0.0238 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0848 | J | 4.96 | 0.0251 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0883 | JBQ | 4.96 | 0.0235 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.123 | JBQ | 4.96 | 0.0238 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.498 | JB | 9.93 | 0.0281 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0260 | JBQ | 0.993 | 0.0223 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.111 | JB | 4.96 | 0.0180 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.136 | JB | 4.96 | 0.0186 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0778 | JB | 4.96 | 0.0136 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0854 | JQ | 4.96 | 0.0126 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.123 | JBQ | 4.96 | 0.0159 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0743 | JB | 4.96 | 0.0129 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0727 | JBQ | 4.96 | 0.0469 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.165 | JBQ | 4.96 | 0.0779 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.210 | JB | 9.93 | 0.0387 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.122 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 80 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 91 | 23 - 140 |
| 13C12-OCDD | 95 | 17 - 157 |
| 13C12-2378-TCDF | 66 | 24 - 169 |
| 13C12-12378-PeCDF | 81 | 24 - 185 |
| 13C12-23478-PeCDF | 76 | 21 - 178 |
| 13C12-123478-HxCDF | 80 | 26 - 152 |
| 13C12-123678-HxCDF | 88 | 26 - 123 |
| 13C12-234678-HxCDF | 82 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 113 | 28 - 143 |
| 13C12-1234789-HpCDF | 78 | 26 - 138 |
| 13C12-OCDF | 73 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-516-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081063**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 09:55 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51600 SDG#: PH046-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-516-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081063**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 09:55 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51600 SDG#: PH046-06

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13158SLB026 | 06/13/2013 06:15 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13158SLB026 | 06/07/2013 17:40 | Sally L Appleyard | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131620008A | 06/12/2013 13:29 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131620008A | 06/11/2013 18:30 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131580013A | 06/10/2013 23:36 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131580013A | 06/09/2013 08:00 | Joseph S Feister | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13168006 | 06/19/2013 19:06 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 2 | 13168006 | 06/17/2013 12:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637001 | 06/11/2013 17:54 | John P Hook | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131600637001B | 06/11/2013 18:37 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:37 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:37 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637001A | 06/11/2013 18:37 | David K Beck | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-516-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081063**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 09:55 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51600 SDG#: PH046-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638002 | 06/11/2013 19:24 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637001 | 06/10/2013 23:43 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638002 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13156039401A | 06/05/2013 21:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401A | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-524-SA7-SB-1.0-2.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081064**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.5 | J | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.5 | J | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.5 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 6.5 | J | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.3 | J | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 7.2 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 0.75 | J | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.96 | J | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 4.1 | | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.5 | | 1.8 | 0.72 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 22.89 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081064**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 12 | | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 23 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,300 | | 41.6 | 8.01 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.16 | U | 4.16 | 0.520 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.93 | J | 4.16 | 0.343 | 1 |
| 06946 | Barium | 7440-39-3 | 88.1 | | 1.04 | 0.0343 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.480 | J | 1.04 | 0.0696 | 1 |
| 07914 | Boron | 7440-42-8 | 1.87 | J | 10.4 | 0.863 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.370 | J | 1.04 | 0.0343 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,580 | | 20.8 | 4.18 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.5 | | 3.12 | 0.0915 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.59 | | 1.04 | 0.0936 | 1 |
| 06953 | Copper | 7440-50-8 | 10.3 | J | 10.4 | 0.936 | 5 |
| 01654 | Iron | 7439-89-6 | 22,000 | | 41.6 | 3.95 | 1 |
| 06955 | Lead | 7439-92-1 | 5.69 | | 3.12 | 0.489 | 1 |
| 01656 | Lithium | 7439-93-2 | 27.4 | | 4.2 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,840 | | 10.4 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 280 | | 1.04 | 0.0863 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.777 | J | 2.08 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 7.90 | | 2.08 | 0.114 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 401 | | 10.4 | 0.530 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,230 | | 104 | 14.0 | 1 |
| 01667 | Sodium | 7440-23-5 | 123 | | 104 | 17.4 | 1 |
| 06969 | Tin | 7440-31-5 | 3.08 | J | 10.4 | 0.229 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,280 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 32.9 | | 1.04 | 0.114 | 1 |
| 06972 | Zinc | 7440-66-6 | 59.2 | | 4.16 | 0.208 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.20 | U | 5.20 | 0.863 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.416 | U | 0.416 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.208 | U | 0.208 | 0.0208 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.9 | | 0.416 | 0.0353 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.285 | | 0.208 | 0.0312 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0178 | U | 0.0178 | 0.0107 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.18 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.5 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-524-SA7-SB-1.0-2.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081064**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-524-SA7-SB-1.0-2.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081064**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0250 JBQ | 1.07 | 0.0165 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0475 JBQ | 5.34 | 0.0179 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0246 JBQ | 5.34 | 0.0181 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0966 JBQ | 5.34 | 0.0191 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0998 JB | 5.34 | 0.0186 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.859 JB | 5.34 | 0.0175 | 1 |
| 11031 | OCDD | 3268-87-9 | 10.5 JB | 10.7 | 0.0189 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0189 JQ | 1.07 | 0.0139 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.156 JB | 5.34 | 0.00984 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0555 JBQ | 5.34 | 0.00919 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0474 JBQ | 5.34 | 0.00876 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0572 JBQ | 5.34 | 0.00854 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0748 JBQ | 5.34 | 0.00930 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0368 JB | 5.34 | 0.00843 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.186 JB | 5.34 | 0.0138 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0607 JB | 5.34 | 0.0150 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.277 JBQ | 10.7 | 0.0178 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0324 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 81 | 25 - 164 |
| 13C12-12378-PeCDD | 83 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 78 | 17 - 157 |
| 13C12-2378-TCDF | 80 | 24 - 169 |
| 13C12-12378-PeCDF | 84 | 24 - 185 |
| 13C12-23478-PeCDF | 86 | 21 - 178 |
| 13C12-123478-HxCDF | 89 | 26 - 152 |
| 13C12-123678-HxCDF | 89 | 26 - 123 |
| 13C12-234678-HxCDF | 89 | 28 - 136 |
| 13C12-123789-HxCDF | 90 | 29 - 147 |
| 13C12-1234678-HpCDF | 87 | 28 - 143 |
| 13C12-1234789-HpCDF | 86 | 26 - 138 |
| 13C12-OCDF | 84 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081064**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081064**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07BKG

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13158SLC026 | 06/13/2013 01:18 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13158SLC026 | 06/07/2013 17:50 | Sally L Appleyard | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13160A16A | 06/09/2013 19:51 | Laura M Krieger | 22.89 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201315631319 | 06/05/2013 14:25 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201315631319 | 06/05/2013 14:25 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131620008A | 06/12/2013 13:47 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131620008A | 06/11/2013 18:30 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131610003A | 06/12/2013 06:02 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131610003A | 06/10/2013 13:45 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13163006 | 06/15/2013 13:45 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13163006 | 06/12/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637003 | 06/14/2013 04:49 | Tara L Snyder | 5 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:29 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081064**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131600637003B | 06/11/2013 19:52 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637003A | 06/11/2013 19:52 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 19:52 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 19:52 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131640638001 | 06/16/2013 06:38 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637003 | 06/11/2013 00:03 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131640638001 | 06/15/2013 14:50 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13156039401B | 06/05/2013 21:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401B | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-524-SA7-SB-1.0-2.0MS Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7081065
**LLI Group #** 1394643
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 37 | | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 35 | | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 33 | | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 55 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 37 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 52 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 55 | | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 16 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 44 | | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 59 | | 19 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 39 | | 19 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 73 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 19 | | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 41 | | 19 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 44 | | 19 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 50 | | 19 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 44 | | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 37 | | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 18 | | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 36 | | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 35 | | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 38 | | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 40 | | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 71 | | 19 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 60 | | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 56 | | 1.8 | 0.72 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 11 | | 1 | 0.2 | 23.11 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 85 | | 18 | 3.6 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 76 | | 18 | 4.2 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 11 | U | 11 | 4.3 | 2 |
| 12952 | EFH (C15-C20) | n.a. | 7.9 | J | 11 | 4.3 | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081065**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 72 | | 11 | 4.3 | 2 |
| 12952 | EFH (C30-C40) | n.a. | 160 | | 22 | 8.6 | 2 |
| 12952 | EFH (C8-C11) | n.a. | 11 | U | 11 | 4.3 | 2 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,800 | | 41.6 | 8.01 | 1 |
| 06944 | Antimony | 7440-36-0 | 40.2 | | 4.16 | 0.520 | 1 |
| 06935 | Arsenic | 7440-38-2 | 20.5 | | 4.16 | 0.343 | 1 |
| 06946 | Barium | 7440-39-3 | 313 | | 1.04 | 0.0343 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.92 | | 1.04 | 0.0696 | 1 |
| 07914 | Boron | 7440-42-8 | 214 | | 10.4 | 0.863 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.50 | | 1.04 | 0.0343 | 1 |
| 01650 | Calcium | 7440-70-2 | 7,180 | | 20.8 | 4.18 | 1 |
| 06951 | Chromium | 7440-47-3 | 42.0 | | 3.12 | 0.0915 | 1 |
| 06952 | Cobalt | 7440-48-4 | 56.0 | | 1.04 | 0.0936 | 1 |
| 06953 | Copper | 7440-50-8 | 38.4 | | 10.4 | 0.936 | 5 |
| 01654 | Iron | 7439-89-6 | 24,700 | | 41.6 | 3.95 | 1 |
| 06955 | Lead | 7439-92-1 | 21.5 | | 3.12 | 0.489 | 1 |
| 01656 | Lithium | 7439-93-2 | 136 | | 4.2 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,740 | | 10.4 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 365 | | 1.04 | 0.0863 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 206 | | 2.08 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 61.5 | | 2.08 | 0.114 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 563 | | 10.4 | 0.530 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,660 | | 104 | 14.0 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,180 | | 104 | 17.4 | 1 |
| 06969 | Tin | 7440-31-5 | 387 | | 10.4 | 0.229 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,670 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 92.0 | | 1.04 | 0.114 | 1 |
| 06972 | Zinc | 7440-66-6 | 115 | | 4.16 | 0.208 | 1 |
| 10146 | Zirconium | 7440-67-7 | 106 | | 5.20 | 0.863 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.36 | | 0.416 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 11.0 | | 0.208 | 0.0208 | 2 |
| 06144 | Strontium | 7440-24-6 | 28.2 | | 0.416 | 0.0353 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.671 | | 0.208 | 0.0312 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.178 | | 0.0177 | 0.0106 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 7.5 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081065**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 21.2 | B | 1.08 | 0.0299 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 106 | B | 5.38 | 0.0315 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 115 | B | 5.38 | 0.0383 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 112 | B | 5.38 | 0.0390 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 113 | B | 5.38 | 0.0366 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 112 | B | 5.38 | 0.0369 | 1 |
| 11031 | OCDD | 3268-87-9 | 231 | B | 10.8 | 0.0486 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 21.8 | | 1.08 | 0.0201 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 110 | B | 5.38 | 0.0172 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 113 | B | 5.38 | 0.0162 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 115 | B | 5.38 | 0.0264 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 112 | B | 5.38 | 0.0255 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 113 | B | 5.38 | 0.0276 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 114 | B | 5.38 | 0.0255 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 114 | B | 5.38 | 0.0301 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 113 | B | 5.38 | 0.0311 | 1 |
| 11031 | OCDF | 39001-02-0 | 222 | B | 10.8 | 0.0400 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 84 | 25 - 164 |
| 13C12-12378-PeCDD | 87 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 72 | 17 - 157 |
| 13C12-2378-TCDF | 83 | 24 - 169 |
| 13C12-12378-PeCDF | 88 | 24 - 185 |
| 13C12-23478-PeCDF | 88 | 21 - 178 |
| 13C12-123478-HxCDF | 93 | 26 - 152 |
| 13C12-123678-HxCDF | 92 | 26 - 123 |
| 13C12-234678-HxCDF | 92 | 28 - 136 |
| 13C12-123789-HxCDF | 93 | 29 - 147 |
| 13C12-1234678-HpCDF | 88 | 28 - 143 |
| 13C12-1234789-HpCDF | 88 | 26 - 138 |
| 13C12-OCDF | 82 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081065**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07MS

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13158SLC026 | 06/13/2013 01:51 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13158SLC026 | 06/07/2013 17:50 | Sally L Appleyard | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13160A16A | 06/09/2013 20:29 | Laura M Krieger | 23.11 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201315631319 | 06/05/2013 14:26 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201315631319 | 06/05/2013 14:26 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131620008A | 06/12/2013 14:06 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131620008A | 06/11/2013 18:30 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131610003A | 06/12/2013 14:28 | Heather E Williams | 2 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131610003A | 06/10/2013 13:45 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13163006 | 06/15/2013 14:41 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13163006 | 06/12/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637003 | 06/14/2013 05:00 | Tara L Snyder | 5 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:41 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0MS Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081065**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131600637003B | 06/11/2013 19:59 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637003A | 06/11/2013 19:59 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 19:59 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 19:59 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131640638001 | 06/16/2013 06:44 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637003 | 06/11/2013 00:03 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131640638001 | 06/15/2013 14:50 | Annamaria Stipkovits | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401B | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-524-SA7-SB-1.0-2.0MSD Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081066**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 31 | | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 30 | | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 32 | | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 42 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 35 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 44 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 41 | | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 15 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 42 | | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 41 | | 19 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 34 | | 19 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 49 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 19 | | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 33 | | 19 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 36 | | 19 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 38 | | 19 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 39 | | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 18 | | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 32 | | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 55 | | 19 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 42 | | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 42 | | 1.8 | 0.72 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 11 | | 1.0 | 0.2 | 24.13 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 120 | | 18 | 3.6 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 96 | | 18 | 4.2 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 11 | U | 11 | 4.3 | 2 |
| 12952 | EFH (C15-C20) | n.a. | 7.3 | J | 11 | 4.3 | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081066**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 87 | | 11 | 4.3 | 2 |
| 12952 | EFH (C30-C40) | n.a. | 180 | | 22 | 8.6 | 2 |
| 12952 | EFH (C8-C11) | n.a. | 11 | U | 11 | 4.3 | 2 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,300 | | 41.6 | 8.01 | 1 |
| 06944 | Antimony | 7440-36-0 | 40.8 | | 4.16 | 0.520 | 1 |
| 06935 | Arsenic | 7440-38-2 | 20.1 | | 4.16 | 0.343 | 1 |
| 06946 | Barium | 7440-39-3 | 303 | | 1.04 | 0.0343 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.87 | | 1.04 | 0.0696 | 1 |
| 07914 | Boron | 7440-42-8 | 214 | | 10.4 | 0.863 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.46 | | 1.04 | 0.0343 | 1 |
| 01650 | Calcium | 7440-70-2 | 6,550 | | 20.8 | 4.18 | 1 |
| 06951 | Chromium | 7440-47-3 | 40.5 | | 3.12 | 0.0915 | 1 |
| 06952 | Cobalt | 7440-48-4 | 55.4 | | 1.04 | 0.0936 | 1 |
| 06953 | Copper | 7440-50-8 | 38.1 | | 10.4 | 0.936 | 5 |
| 01654 | Iron | 7439-89-6 | 23,000 | | 41.6 | 3.95 | 1 |
| 06955 | Lead | 7439-92-1 | 20.7 | | 3.12 | 0.489 | 1 |
| 01656 | Lithium | 7439-93-2 | 134 | | 4.2 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,450 | | 10.4 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 354 | | 1.04 | 0.0863 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 205 | | 2.08 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 60.7 | | 2.08 | 0.114 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 513 | | 10.4 | 0.530 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,280 | | 104 | 14.0 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,160 | | 104 | 17.4 | 1 |
| 06969 | Tin | 7440-31-5 | 386 | | 10.4 | 0.229 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,580 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 89.4 | | 1.04 | 0.114 | 1 |
| 06972 | Zinc | 7440-66-6 | 111 | | 4.16 | 0.208 | 1 |
| 10146 | Zirconium | 7440-67-7 | 105 | | 5.20 | 0.863 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.19 | | 0.416 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 10.7 | | 0.208 | 0.0208 | 2 |
| 06144 | Strontium | 7440-24-6 | 27.5 | | 0.416 | 0.0353 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.665 | | 0.208 | 0.0312 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.169 | | 0.0174 | 0.0104 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 7.5 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-524-SA7-SB-1.0-2.0MSD Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081066**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 20.6 | B | 1.07 | 0.0275 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 108 | B | 5.36 | 0.0301 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 114 | B | 5.36 | 0.0326 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 111 | B | 5.36 | 0.0348 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 112 | B | 5.36 | 0.0320 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 110 | B | 5.36 | 0.0417 | 1 |
| 11031 | OCDD | 3268-87-9 | 229 | B | 10.7 | 0.0467 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 21.5 | | 1.07 | 0.0204 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 111 | B | 5.36 | 0.0197 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 111 | B | 5.36 | 0.0187 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 113 | B | 5.36 | 0.0270 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 109 | B | 5.36 | 0.0261 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 112 | B | 5.36 | 0.0275 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 113 | B | 5.36 | 0.0250 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 112 | B | 5.36 | 0.0256 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 112 | B | 5.36 | 0.0296 | 1 |
| 11031 | OCDF | 39001-02-0 | 223 | B | 10.7 | 0.0388 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 82 | 25 - 164 |
| 13C12-12378-PeCDD | 84 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 82 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 82 | 23 - 140 |
| 13C12-OCDD | 81 | 17 - 157 |
| 13C12-2378-TCDF | 79 | 24 - 169 |
| 13C12-12378-PeCDF | 85 | 24 - 185 |
| 13C12-23478-PeCDF | 86 | 21 - 178 |
| 13C12-123478-HxCDF | 87 | 26 - 152 |
| 13C12-123678-HxCDF | 88 | 26 - 123 |
| 13C12-234678-HxCDF | 87 | 28 - 136 |
| 13C12-123789-HxCDF | 90 | 29 - 147 |
| 13C12-1234678-HpCDF | 90 | 28 - 143 |
| 13C12-1234789-HpCDF | 87 | 26 - 138 |
| 13C12-OCDF | 87 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081066**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07MSD

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13158SLC026 | 06/13/2013 02:24 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13158SLC026 | 06/07/2013 17:50 | Sally L Appleyard | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13160A16A | 06/09/2013 21:07 | Laura M Krieger | 24.13 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201315631319 | 06/05/2013 14:26 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201315631319 | 06/05/2013 14:26 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131620008A | 06/12/2013 14:25 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131620008A | 06/11/2013 18:30 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131610003A | 06/12/2013 14:49 | Heather E Williams | 2 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131610003A | 06/10/2013 13:45 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13163006 | 06/15/2013 15:38 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13163006 | 06/12/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637003 | 06/14/2013 05:04 | Tara L Snyder | 5 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:44 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0MSD Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081066**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131600637003B | 06/11/2013 20:02 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637003A | 06/11/2013 20:02 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 20:02 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 20:02 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131640638001 | 06/16/2013 06:46 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637003 | 06/11/2013 00:03 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131640638001 | 06/15/2013 14:50 | Annamaria Stipkovits | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401B | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0DUP Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081067**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,000 | | 41.6 | 8.01 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.16 | U | 4.16 | 0.520 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.82 | | 4.16 | 0.343 | 1 |
| 06946 | Barium | 7440-39-3 | 106 | | 1.04 | 0.0343 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.570 | J | 1.04 | 0.0696 | 1 |
| 07914 | Boron | 7440-42-8 | 1.42 | J | 10.4 | 0.863 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.365 | J | 1.04 | 0.0343 | 1 |
| 01650 | Calcium | 7440-70-2 | 8,510 | | 20.8 | 4.18 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.4 | | 3.12 | 0.0915 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.33 | | 1.04 | 0.0936 | 1 |
| 06953 | Copper | 7440-50-8 | 12.4 | | 10.4 | 0.936 | 5 |
| 01654 | Iron | 7439-89-6 | 24,900 | | 41.6 | 3.95 | 1 |
| 06955 | Lead | 7439-92-1 | 6.54 | | 3.12 | 0.489 | 1 |
| 01656 | Lithium | 7439-93-2 | 29.3 | | 4.2 | 0.57 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,370 | | 10.4 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 298 | | 1.04 | 0.0863 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.391 | J | 2.08 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.3 | | 2.08 | 0.114 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 486 | | 10.4 | 0.530 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,560 | | 104 | 14.0 | 1 |
| 01667 | Sodium | 7440-23-5 | 137 | | 104 | 17.4 | 1 |
| 06969 | Tin | 7440-31-5 | 3.08 | J | 10.4 | 0.229 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,430 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.3 | | 1.04 | 0.114 | 1 |
| 06972 | Zinc | 7440-66-6 | 66.0 | | 4.16 | 0.208 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.13 | J | 5.20 | 0.863 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.416 | U | 0.416 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0220 | J | 0.208 | 0.0208 | 2 |
| 06144 | Strontium | 7440-24-6 | 24.4 | | 0.416 | 0.0353 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.287 | | 0.208 | 0.0312 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0172 | U | 0.0172 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.20 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 7.5 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 8.4 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-1.0-2.0DUP Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081067**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:20 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52410 SDG#: PH046-07DUP

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637003 | 06/14/2013 04:57 | Tara L Snyder | 5 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:37 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131600637003B | 06/11/2013 19:57 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637003A | 06/11/2013 19:57 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 19:57 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 19:57 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131640638001 | 06/16/2013 06:42 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637003 | 06/11/2013 00:03 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131640638001 | 06/15/2013 14:50 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13156039401B | 06/05/2013 21:00 | Luz M Groff | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401B | 06/11/2013 23:07 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401B | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-524-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7081068
**LLI Group #** 1394643
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 06/04/2013 13:10 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH046-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.63 | J | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 4.3 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 3.7 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 8.0 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 13 | J | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 20 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.1 | J | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 7.8 | J | 19 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.1 | | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.1 | J | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | J | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 2.0 | | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 16 | | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 8.9 | | 1.8 | 0.72 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 11 | U | 11 | 4.3 | 2 |
| 12952 | EFH (C15-C20) | n.a. | 11 | U | 11 | 4.3 | 2 |
| 12952 | EFH (C21-C30) | n.a. | 28 | | 11 | 4.3 | 2 |
| 12952 | EFH (C30-C40) | n.a. | 120 | | 22 | 8.6 | 2 |
| 12952 | EFH (C8-C11) | n.a. | 11 | U | 11 | 4.3 | 2 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-524-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081068**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:10 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH046-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,300 | | 42.2 | 8.14 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.22 | U | 4.22 | 0.528 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.01 | J | 4.22 | 0.348 | 1 |
| 06946 | Barium | 7440-39-3 | 70.4 | | 1.06 | 0.0348 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.490 | J | 1.06 | 0.0707 | 1 |
| 07914 | Boron | 7440-42-8 | 2.52 | J | 10.6 | 0.876 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.06 | U | 1.06 | 0.0348 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,380 | | 21.1 | 4.24 | 1 |
| 06951 | Chromium | 7440-47-3 | 14.3 | | 3.17 | 0.0929 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.77 | | 1.06 | 0.0950 | 1 |
| 06953 | Copper | 7440-50-8 | 7.27 | | 2.11 | 0.190 | 1 |
| 01654 | Iron | 7439-89-6 | 19,000 | | 42.2 | 4.01 | 1 |
| 06955 | Lead | 7439-92-1 | 4.20 | | 3.17 | 0.496 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.4 | | 4.2 | 0.58 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,960 | | 10.6 | 1.83 | 1 |
| 06958 | Manganese | 7439-96-5 | 258 | | 1.06 | 0.0876 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.912 | J | 2.11 | 0.179 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.34 | | 2.11 | 0.116 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 513 | | 10.6 | 0.538 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,560 | | 106 | 14.2 | 1 |
| 01667 | Sodium | 7440-23-5 | 111 | | 106 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 2.76 | J | 10.6 | 0.232 | 1 |
| 06970 | Titanium | 7440-32-6 | 926 | | 1.06 | 0.179 | 1 |
| 06971 | Vanadium | 7440-62-2 | 42.4 | | 1.06 | 0.116 | 1 |
| 06972 | Zinc | 7440-66-6 | 50.2 | | 4.22 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.19 | J | 5.28 | 0.876 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.137 | J | 0.422 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0320 | J | 0.211 | 0.0211 | 2 |
| 06144 | Strontium | 7440-24-6 | 23.9 | | 0.422 | 0.0359 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.303 | | 0.211 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0177 | U | 0.0177 | 0.0106 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.25 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.1 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-524-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081068**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:10 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH046-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0213 JBQ | 1.04 | 0.0173 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0892 JB | 5.22 | 0.0219 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0453 JB | 5.22 | 0.0201 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.171 JB | 5.22 | 0.0212 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.108 JB | 5.22 | 0.0198 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.69 JB | 5.22 | 0.0243 | 1 |
| 11031 | OCDD | 3268-87-9 | 41.0 B | 10.4 | 0.0295 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0282 J | 1.04 | 0.0207 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.646 JB | 5.22 | 0.0143 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0763 JBQ | 5.22 | 0.0129 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0973 JBQ | 5.22 | 0.0136 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.129 JBQ | 5.22 | 0.0131 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.122 JB | 5.22 | 0.0141 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.177 JB | 5.22 | 0.0125 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.644 JB | 5.22 | 0.0111 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0837 JB | 5.22 | 0.0127 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.19 JB | 10.4 | 0.0188 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.221 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 82 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 85 | 23 - 140 |
| 13C12-OCDD | 87 | 17 - 157 |
| 13C12-2378-TCDF | 83 | 24 - 169 |
| 13C12-12378-PeCDF | 87 | 24 - 185 |
| 13C12-23478-PeCDF | 89 | 21 - 178 |
| 13C12-123478-HxCDF | 90 | 26 - 152 |
| 13C12-123678-HxCDF | 90 | 26 - 123 |
| 13C12-234678-HxCDF | 90 | 28 - 136 |
| 13C12-123789-HxCDF | 90 | 29 - 147 |
| 13C12-1234678-HpCDF | 94 | 28 - 143 |
| 13C12-1234789-HpCDF | 91 | 26 - 138 |
| 13C12-OCDF | 91 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081068**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:10 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH046-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081068**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:10 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH046-08

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13158SLC026 | 06/13/2013 02:57 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13158SLC026 | 06/07/2013 17:50 | Sally L Appleyard | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131620008A | 06/12/2013 14:43 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131620008A | 06/11/2013 18:30 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131610003A | 06/12/2013 15:10 | Heather E Williams | 2 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131610003A | 06/10/2013 13:45 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13163006 | 06/15/2013 16:34 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13163006 | 06/12/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131640637001 | 06/17/2013 02:57 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131640637001B | 06/17/2013 11:34 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131640637001A | 06/17/2013 11:34 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131640637001A | 06/17/2013 11:34 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131640637001A | 06/17/2013 11:34 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081068**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:10 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH046-08

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131640638001 | 06/16/2013 06:48 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131640637001 | 06/15/2013 11:34 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131640638001 | 06/15/2013 14:50 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13156039401B | 06/05/2013 21:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401B | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-924-SA7-SB-1.0-2.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081069**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

92410 SDG#: PH046-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.3 | J | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | J | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.7 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 8.0 | J | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.0 | J | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | J | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 8.6 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.1 | J | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 3.7 | | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 4.6 | | 1.8 | 0.72 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 23.41 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-924-SA7-SB-1.0-2.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081069**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

92410 SDG#: PH046-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 14 | | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 36 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,300 | | 42.5 | 8.19 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.25 | U | 4.25 | 0.531 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.15 | J | 4.25 | 0.351 | 1 |
| 06946 | Barium | 7440-39-3 | 78.6 | | 1.06 | 0.0351 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.518 | J | 1.06 | 0.0712 | 1 |
| 07914 | Boron | 7440-42-8 | 2.31 | J | 10.6 | 0.882 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.363 | J | 1.06 | 0.0351 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,310 | | 21.2 | 4.27 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.8 | | 3.19 | 0.0935 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.93 | | 1.06 | 0.0956 | 1 |
| 06953 | Copper | 7440-50-8 | 10.1 | J | 10.6 | 0.956 | 5 |
| 01654 | Iron | 7439-89-6 | 21,500 | | 42.5 | 4.04 | 1 |
| 06955 | Lead | 7439-92-1 | 5.95 | | 3.19 | 0.499 | 1 |
| 01656 | Lithium | 7439-93-2 | 27.0 | | 4.2 | 0.58 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,600 | | 10.6 | 1.84 | 1 |
| 06958 | Manganese | 7439-96-5 | 269 | | 1.06 | 0.0882 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.422 | J | 2.12 | 0.181 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.12 | | 2.12 | 0.117 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 410 | | 10.6 | 0.542 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,870 | | 106 | 14.3 | 1 |
| 01667 | Sodium | 7440-23-5 | 132 | | 106 | 17.7 | 1 |
| 06969 | Tin | 7440-31-5 | 3.11 | J | 10.6 | 0.234 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,250 | | 1.06 | 0.181 | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.2 | | 1.06 | 0.117 | 1 |
| 06972 | Zinc | 7440-66-6 | 54.3 | | 4.25 | 0.212 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.01 | J | 5.31 | 0.882 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.425 | U | 0.425 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0230 | J | 0.212 | 0.0212 | 2 |
| 06144 | Strontium | 7440-24-6 | 15.4 | | 0.425 | 0.0361 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.228 | | 0.212 | 0.0319 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0178 | U | 0.0178 | 0.0107 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.30 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.8 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.7 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-924-SA7-SB-1.0-2.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081069**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

92410 SDG#: PH046-09

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-924-SA7-SB-1.0-2.0 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7081069**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

92410 SDG#: PH046-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.07 | U | 1.07 | 0.0181 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0567 | JB | 5.37 | 0.0207 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0417 | JBQ | 5.37 | 0.0166 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0499 | JB | 5.37 | 0.0179 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0755 | JBQ | 5.37 | 0.0163 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.270 | JB | 5.37 | 0.0184 | 1 |
| 11031 | OCDD | 3268-87-9 | 2.71 | JB | 10.7 | 0.0223 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0139 | J | 1.07 | 0.0124 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0904 | JBQ | 5.37 | 0.00986 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0338 | JB | 5.37 | 0.00910 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0488 | JBQ | 5.37 | 0.00856 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0296 | JBQ | 5.37 | 0.00823 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0603 | JBQ | 5.37 | 0.00888 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0408 | JB | 5.37 | 0.00791 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0678 | JB | 5.37 | 0.00813 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0329 | JBQ | 5.37 | 0.0105 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.135 | JB | 10.7 | 0.0215 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0816 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 81 | 25 - 164 |
| 13C12-12378-PeCDD | 83 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 87 | 23 - 140 |
| 13C12-OCDD | 88 | 17 - 157 |
| 13C12-2378-TCDF | 78 | 24 - 169 |
| 13C12-12378-PeCDF | 85 | 24 - 185 |
| 13C12-23478-PeCDF | 85 | 21 - 178 |
| 13C12-123478-HxCDF | 89 | 26 - 152 |
| 13C12-123678-HxCDF | 91 | 26 - 123 |
| 13C12-234678-HxCDF | 89 | 28 - 136 |
| 13C12-123789-HxCDF | 91 | 29 - 147 |
| 13C12-1234678-HpCDF | 98 | 28 - 143 |
| 13C12-1234789-HpCDF | 89 | 26 - 138 |
| 13C12-OCDF | 90 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-924-SA7-SB-1.0-2.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081069**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

92410 SDG#: PH046-09

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-924-SA7-SB-1.0-2.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081069**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

92410 SDG#: PH046-09

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13158SLC026 | 06/13/2013 03:30 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13158SLC026 | 06/07/2013 17:50 | Sally L Appleyard | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13160A16A | 06/09/2013 22:23 | Laura M Krieger | 23.41 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201315631319 | 06/05/2013 14:21 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201315631319 | 06/05/2013 14:22 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131620008A | 06/12/2013 15:02 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131620008A | 06/11/2013 18:30 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131610003A | 06/12/2013 06:23 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131610003A | 06/10/2013 13:45 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13163006 | 06/15/2013 17:31 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13163006 | 06/12/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637003 | 06/14/2013 05:12 | Tara L Snyder | 5 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 20:52 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-924-SA7-SB-1.0-2.0 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7081069**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 13:30 by VC

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

92410 SDG#: PH046-09

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 131600637003B | 06/11/2013 20:06 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637003A | 06/11/2013 20:06 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 20:06 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 20:06 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131640638001 | 06/16/2013 06:50 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637003 | 06/11/2013 00:03 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131640638001 | 06/15/2013 14:50 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13156039401B | 06/05/2013 21:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162401B | 06/11/2013 23:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-060413 Water**
**SSFL Phase 3 Subarea 7**

**LLI Sample # WW 7081070**
**LLI Group # 1394643**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/04/2013 08:00

Submitted: 06/05/2013 09:20
Reported: 06/21/2013 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

604TB SDG#: PH046-10TB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13162B20A | 06/11/2013 23:24 | Marie D John | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13162B20A | 06/11/2013 23:24 | Marie D John | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13158SLB026 | Sample number(s): 7081058-7081060,7081062-7081063 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 91 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 92 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 79 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 120 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 98 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 79 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 84 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 91 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 87 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 106 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 85 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 86 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 90 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 87 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 87 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 71-120 | | |
| Batch number: 13158SLC026 | Sample number(s): 7081064-7081066,7081068-7081069 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 92 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 114 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 96 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 95 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 105 | | 70-130 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 92 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 86 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 71-120 | | |
| Batch number: 13160A16A | Sample number(s): 7081064-7081066,7081069 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 91 | | 67-119 | | |
| Batch number: 13162B20A | Sample number(s): 7081070 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 105 | 101 | 75-135 | 4 | 30 |
| Batch number: 131580010A | Sample number(s): 7081055-7081060 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 75 | 78 | 36-106 | 4 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 96 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 96 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131620008A | Sample number(s): 7081062-7081066,7081068-7081069 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 75 | 73 | 36-106 | 3 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 101 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 103 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131620099A | Sample number(s): 7081058-7081060,7081062 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 98 | | 73-119 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 104 | | 72-126 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 99 | | 76-123 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 104 | | 72-128 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 76-138 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 76-126 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 105 | | 72-131 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 102 | | 73-128 | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 114 | | 78-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 104 | | 62-125 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 72-138 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 75-130 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 95 | | 55-132 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 101 | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 98 | | 69-125 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 101 | | 78-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 102 | | 59-125 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 131580013A | Sample number(s): 7081058-7081060,7081062-7081063 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 97 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 103 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 101 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 93 | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 76 | | 49-107 | | |
| Batch number: 131610003A | Sample number(s): 7081064-7081066,7081068-7081069 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 94 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 100 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 97 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 104 | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 71 | | 49-107 | | |
| Batch number: 131600637001 | Sample number(s): 7081058-7081063 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 100 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 104 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 103 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 99 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Calcium | 11.1 | J | 20.0 | 4.02 | mg/kg | 102 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 101 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 105 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 109 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 103 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 106 | | 80-120 | | |
| Phosphorus | 1.14 | J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 98 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.50 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 99 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 104 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 103 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 131600637001A | Sample number(s): 7081058-7081063 | | | | | | | | |
| Silver | 0.200 U | 0.200 | 0.0200 | mg/kg | 103 | | 80-120 | | |
| Strontium | 0.0780 J | 0.400 | 0.0340 | mg/kg | 101 | | 80-120 | | |
| Thallium | 0.200 U | 0.200 | 0.0300 | mg/kg | 104 | | 80-120 | | |
| Batch number: 131600637001B | Sample number(s): 7081058-7081063 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 100 | | 80-120 | | |
| Batch number: 131600637003 | Sample number(s): 7081064-7081067,7081069 | | | | | | | | |
| Aluminum | 40.0 U | 40.0 | 7.71 | mg/kg | 102 | | 80-120 | | |
| Antimony | 4.00 U | 4.00 | 0.500 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 U | 4.00 | 0.330 | mg/kg | 103 | | 80-120 | | |
| Barium | 1.00 U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 10.0 U | 10.0 | 0.830 | mg/kg | 102 | | 80-120 | | |
| Cadmium | 1.00 U | 1.00 | 0.0330 | mg/kg | 105 | | 80-120 | | |
| Calcium | 6.15 J | 20.0 | 4.02 | mg/kg | 105 | | 80-120 | | |
| Chromium | 3.00 U | 3.00 | 0.0880 | mg/kg | 104 | | 80-120 | | |
| Cobalt | 1.00 U | 1.00 | 0.0900 | mg/kg | 105 | | 80-120 | | |
| Copper | 2.00 U | 2.00 | 0.180 | mg/kg | 100 | | 80-120 | | |
| Iron | 4.39 J | 40.0 | 3.80 | mg/kg | 102 | | 80-120 | | |
| Lead | 3.00 U | 3.00 | 0.470 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 U | 4.0 | 0.55 | mg/kg | 104 | | 80-120 | | |
| Magnesium | 10.0 U | 10.0 | 1.73 | mg/kg | 104 | | 80-120 | | |
| Manganese | 1.00 U | 1.00 | 0.0830 | mg/kg | 103 | | 80-120 | | |
| Molybdenum | 2.00 U | 2.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Nickel | 2.00 U | 2.00 | 0.110 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 1.17 J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | 100. | 13.5 | mg/kg | 100 | | 80-120 | | |
| Sodium | 100 U | 100. | 16.7 | mg/kg | 101 | | 80-120 | | |
| Tin | 1.43 J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 U | 1.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Vanadium | 1.00 U | 1.00 | 0.110 | mg/kg | 104 | | 80-120 | | |
| Zinc | 4.00 U | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 U | 5.00 | 0.830 | mg/kg | 104 | | 80-120 | | |
| Batch number: 131600637003A | Sample number(s): 7081064-7081067,7081069 | | | | | | | | |
| Silver | 0.200 U | 0.200 | 0.0200 | mg/kg | 107 | | 80-120 | | |
| Strontium | 0.400 U | 0.400 | 0.0340 | mg/kg | 106 | | 80-120 | | |
| Thallium | 0.200 U | 0.200 | 0.0300 | mg/kg | 98 | | 80-120 | | |
| Batch number: 131600637003B | Sample number(s): 7081064-7081067,7081069 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 113 | | 80-120 | | |
| Batch number: 131600638002 | Sample number(s): 7081058-7081063 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 103 | | 85-120 | | |
| Batch number: 131640637001 | Sample number(s): 7081068 | | | | | | | | |
| Aluminum | 8.46 J | 40.0 | 7.71 | mg/kg | 101 | | 80-120 | | |
| Antimony | 4.00 U | 4.00 | 0.500 | mg/kg | 106 | | 80-120 | | |
| Arsenic | 4.00 U | 4.00 | 0.330 | mg/kg | 103 | | 80-120 | | |
| Barium | 1.00 U | 1.00 | 0.0330 | mg/kg | 100 | | 80-120 | | |
| Beryllium | 1.00 U | 1.00 | 0.0670 | mg/kg | 99 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 95 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Calcium | 9.77 | J | 20.0 | 4.02 | mg/kg | 102 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 101 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 104 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 102 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.80 | mg/kg | 102 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 104 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 100 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 106 | | 80-120 | | |
| Phosphorus | 1.17 | J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 97 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 97 | | 80-120 | | |
| Tin | 1.48 | J | 10.0 | 0.220 | mg/kg | 102 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 101 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 98 | | 80-120 | | |
| Zinc | 1.92 | J | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 104 | | 80-120 | | |
| Batch number: 131640637001A | Sample number(s): 7081068 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 103 | | 80-120 | | |
| Strontium | 0.0566 | J | 0.400 | 0.0340 | mg/kg | 103 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 105 | | 80-120 | | |
| Batch number: 131640637001B | Sample number(s): 7081068 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 109 | | 80-120 | | |
| Batch number: 131640638001 | Sample number(s): 7081064-7081069 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 96 | | 85-120 | | |
| Batch number: 13156039401A | Sample number(s): 7081058,7081061-7081063 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 13156039401B | Sample number(s): 7081064,7081067-7081069 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 13162162401A | Sample number(s): 7081055-7081057,7081062-7081063 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| Batch number: 13162162401B | Sample number(s): 7081064-7081069 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| Batch number: 13163162401A | Sample number(s): 7081058-7081061 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13163006 | Sample number(s): 7081064-7081066,7081068-7081069 | | | | | | | | | |
| 2378-TCDD | 0.0555 | J | 1.00 | 0.0213 | ng/kg | 95 | | 67-158 | | |
| 12378-PeCDD | 0.0468 | J | 5.00 | 0.0192 | ng/kg | 100 | | 70-142 | | |
| 123478-HxCDD | 0.0141 | J | 5.00 | 0.0121 | ng/kg | 106 | | 70-164 | | |
| 123678-HxCDD | 0.0191 | J | 5.00 | 0.0132 | ng/kg | 105 | | 76-134 | | |
| 123789-HxCDD | 0.0376 | J | 5.00 | 0.0129 | ng/kg | 105 | | 64-162 | | |
| 1234678-HpCDD | 0.0612 | J | 5.00 | 0.0138 | ng/kg | 103 | | 70-140 | | |
| OCDD | 0.295 | J | 10.0 | 0.0136 | ng/kg | 103 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0154 | ng/kg | 104 | | 75-158 | | |
| 12378-PeCDF | 0.0591 | J | 5.00 | 0.00970 | ng/kg | 103 | | 80-134 | | |
| 23478-PeCDF | 0.0223 | J | 5.00 | 0.00940 | ng/kg | 105 | | 68-160 | | |
| 123478-HxCDF | 0.0365 | J | 5.00 | 0.00700 | ng/kg | 108 | | 72-134 | | |
| 123678-HxCDF | 0.0232 | J | 5.00 | 0.00670 | ng/kg | 104 | | 84-130 | | |
| 123789-HxCDF | 0.0595 | J | 5.00 | 0.00810 | ng/kg | 106 | | 78-130 | | |
| 234678-HxCDF | 0.0280 | J | 5.00 | 0.00660 | ng/kg | 106 | | 70-156 | | |
| 1234678-HpCDF | 0.0525 | J | 5.00 | 0.00490 | ng/kg | 104 | | 82-122 | | |
| 1234789-HpCDF | 0.0372 | J | 5.00 | 0.00750 | ng/kg | 104 | | 78-138 | | |
| OCDF | 0.0998 | J | 10.0 | 0.0166 | ng/kg | 104 | | 63-170 | | |
| Batch number: 13168006 | Sample number(s): 7081058-7081060,7081062-7081063 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0330 | ng/kg | 94 | | 67-158 | | |
| 12378-PeCDD | 0.0664 | J | 5.00 | 0.0393 | ng/kg | 100 | | 70-142 | | |
| 123478-HxCDD | 0.0408 | J | 5.00 | 0.0206 | ng/kg | 109 | | 70-164 | | |
| 123678-HxCDD | 5.00 | U | 5.00 | 0.0217 | ng/kg | 101 | | 76-134 | | |
| 123789-HxCDD | 0.0618 | J | 5.00 | 0.0201 | ng/kg | 104 | | 64-162 | | |
| 1234678-HpCDD | 0.100 | J | 5.00 | 0.0237 | ng/kg | 101 | | 70-140 | | |
| OCDD | 0.342 | J | 10.0 | 0.0288 | ng/kg | 103 | | 78-144 | | |
| 2378-TCDF | 0.0365 | J | 1.00 | 0.0355 | ng/kg | 100 | | 75-158 | | |
| 12378-PeCDF | 0.0798 | J | 5.00 | 0.0213 | ng/kg | 103 | | 80-134 | | |
| 23478-PeCDF | 0.0765 | J | 5.00 | 0.0218 | ng/kg | 103 | | 68-160 | | |
| 123478-HxCDF | 0.0548 | J | 5.00 | 0.0115 | ng/kg | 106 | | 72-134 | | |
| 123678-HxCDF | 5.00 | U | 5.00 | 0.0103 | ng/kg | 102 | | 84-130 | | |
| 123789-HxCDF | 0.0712 | J | 5.00 | 0.0135 | ng/kg | 106 | | 78-130 | | |
| 234678-HxCDF | 0.0700 | J | 5.00 | 0.0111 | ng/kg | 103 | | 70-156 | | |
| 1234678-HpCDF | 0.0263 | J | 5.00 | 0.00670 | ng/kg | 102 | | 82-122 | | |
| 1234789-HpCDF | 0.0600 | J | 5.00 | 0.0114 | ng/kg | 101 | | 78-138 | | |
| OCDF | 0.155 | J | 10.0 | 0.0310 | ng/kg | 103 | | 63-170 | | |
| Batch number: 13163006 | Sample number(s): 7081064-7081066,7081068-7081069 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0507 | | | | ng/kg | | | | | |
| Batch number: 13168006 | Sample number(s): 7081058-7081060,7081062-7081063 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0289 | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13158SLB026 | Sample number(s): 7081058-7081060,7081062-7081063 UNSPK: 7081058 | | | | | | | | |
| Acenaphthene | 106 | 109 | 48-127 | 3 | 30 | | | | |
| Acenaphthylene | 88 | 92 | 49-121 | 5 | 30 | | | | |
| Anthracene | 93 | 100 | 52-126 | 7 | 30 | | | | |
| Benzo(a)anthracene | 108 | 123 | 32-135 | 12 | 30 | | | | |
| Benzo(a)pyrene | 111 | 116 | 36-138 | 5 | 30 | | | | |
| Benzo(b)fluoranthene | 143* | 112 | 26-142 | 18 | 30 | | | | |
| Benzo(e)pyrene | 161* | 175* | 70-130 | 9 | 30 | | | | |
| Benzo(g,h,i)perylene | 59 | 61 | 33-141 | 3 | 30 | | | | |
| Benzo(k)fluoranthene | 136* | 133* | 47-129 | 2 | 30 | | | | |
| Butylbenzylphthalate | 0* | 0* | 59-153 | 0 | 30 | | | | |
| Di-n-butylphthalate | 0* | 0* | 62-154 | 0 | 30 | | | | |
| Chrysene | 107 | 101 | 29-148 | 3 | 30 | | | | |
| Dibenz(a,h)anthracene | 70 | 75 | 34-125 | 7 | 30 | | | | |
| Diethylphthalate | 0* | 0* | 76-127 | 0 | 30 | | | | |
| Dimethylphthalate | 0* | 0* | 62-136 | 0 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 0* | 0* | 39-167 | 0 | 30 | | | | |
| Fluoranthene | 99 | 98 | 47-135 | 1 | 30 | | | | |
| Fluorene | 97 | 99 | 50-129 | 2 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 72 | 70 | 17-136 | 2 | 30 | | | | |
| 1-Methylnaphthalene | 92 | 95 | 50-131 | 4 | 30 | | | | |
| 2-Methylnaphthalene | 91 | 94 | 28-144 | 3 | 30 | | | | |
| Naphthalene | 104 | 107 | 31-148 | 3 | 30 | | | | |
| N-Nitrosodimethylamine | 163* | 136* | 48-113 | 18 | 30 | | | | |
| Di-n-octylphthalate | 192* | 181* | 52-162 | 6 | 30 | | | | |
| Phenanthrene | 95 | 96 | 29-142 | 0 | 30 | | | | |
| Pyrene | 100 | 90 | 26-143 | 9 | 30 | | | | |
| Batch number: 13158SLC026 | Sample number(s): 7081064-7081066,7081068-7081069 UNSPK: 7081064 | | | | | | | | |
| Acenaphthene | 103 | 87 | 48-127 | 17 | 30 | | | | |
| Acenaphthylene | 96 | 84 | 49-121 | 13 | 30 | | | | |
| Anthracene | 93 | 89 | 52-126 | 4 | 30 | | | | |
| Benzo(a)anthracene | 148* | 113 | 32-135 | 26 | 30 | | | | |
| Benzo(a)pyrene | 98 | 93 | 36-138 | 6 | 30 | | | | |
| Benzo(b)fluoranthene | 137 | 116 | 26-142 | 16 | 30 | | | | |
| Benzo(e)pyrene | 134* | 96 | 70-130 | 28 | 30 | | | | |
| Benzo(g,h,i)perylene | 41 | 37 | 33-141 | 10 | 30 | | | | |
| Benzo(k)fluoranthene | 123 | 115 | 47-129 | 7 | 30 | | | | |
| Butylbenzylphthalate | 165* | 113 | 59-153 | 37* | 30 | | | | |
| Di-n-butylphthalate | 108 | 93 | 62-154 | 14 | 30 | | | | |
| Chrysene | 183* | 116 | 29-148 | 40* | 30 | | | | |
| Dibenz(a,h)anthracene | 51 | 51 | 34-125 | 1 | 30 | | | | |
| Diethylphthalate | 115 | 92 | 76-127 | 22 | 30 | | | | |
| Dimethylphthalate | 123 | 100 | 62-136 | 20 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 138 | 105 | 39-167 | 28 | 30 | | | | |
| Fluoranthene | 120 | 104 | 47-135 | 14 | 30 | | | | |
| Fluorene | 103 | 93 | 50-129 | 11 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 50 | 50 | 17-136 | 1 | 30 | | | | |
| 1-Methylnaphthalene | 99 | 90 | 50-131 | 10 | 30 | | | | |
| 2-Methylnaphthalene | 96 | 90 | 28-144 | 7 | 30 | | | | |
| Naphthalene | 104 | 92 | 31-148 | 13 | 30 | | | | |
| N-Nitrosodimethylamine | 112 | 94 | 48-113 | 17 | 30 | | | | |
| Di-n-octylphthalate | 197* | 152 | 52-162 | 26 | 30 | | | | |
| Phenanthrene | 156* | 106 | 29-142 | 35* | 30 | | | | |
| Pyrene | 149* | 109 | 26-143 | 29 | 30 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13160A16A | Sample number(s): 7081064-7081066,7081069 UNSPK: 7081064 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 103 | 101 | 39-118 | 7 | 30 | | | | |
| Batch number: 131580010A | Sample number(s): 7081055-7081060 UNSPK: 7081058 | | | | | | | | |
| PCB-1016 | 81 | 92 | 16-146 | 12 | 50 | | | | |
| PCB-1260 | 68 | 85 | 40-134 | 21 | 50 | | | | |
| Batch number: 131620008A | Sample number(s): 7081062-7081066,7081068-7081069 UNSPK: 7081064 | | | | | | | | |
| PCB-1016 | 47 | 66 | 16-146 | 33 | 50 | | | | |
| PCB-1260 | 42 | 53 | 40-134 | 23 | 50 | | | | |
| Batch number: 131620099A | Sample number(s): 7081058-7081060,7081062 UNSPK: 7081058 | | | | | | | | |
| Aldrin | 87 | 90 | 16-126 | 3 | 50 | | | | |
| Alpha BHC | 91 | 92 | 14-140 | 1 | 50 | | | | |
| Beta BHC | 84 | 85 | 10-173 | 1 | 50 | | | | |
| Gamma BHC - Lindane | 92 | 95 | 30-137 | 3 | 50 | | | | |
| p,p-DDD | 94 | 90 | 43-149 | 4 | 50 | | | | |
| p,p-DDE | 95 | 92 | 18-161 | 3 | 50 | | | | |
| p,p-DDT | 449* | 61 | 12-193 | 111* | 50 | | | | |
| Delta BHC | 90 | 94 | 13-153 | 5 | 50 | | | | |
| Dieldrin | 98 | 92 | 19-154 | 7 | 50 | | | | |
| Endosulfan I | 78 | 84 | 16-137 | 6 | 50 | | | | |
| Endosulfan II | 107 | 95 | 10-156 | 12 | 50 | | | | |
| Endosulfan Sulfate | 98 | 91 | 10-181 | 7 | 50 | | | | |
| Endrin | 92 | 92 | 30-152 | 0 | 50 | | | | |
| Endrin Aldehyde | 60 | 71 | 10-152 | 17 | 35 | | | | |
| Endrin Ketone | 79 | 85 | 10-160 | 8 | 50 | | | | |
| Heptachlor | 86 | 91 | 16-152 | 5 | 50 | | | | |
| Heptachlor Epoxide | 101 | 98 | 17-167 | 3 | 50 | | | | |
| Methoxychlor | 93 | 94 | 34-168 | 0 | 50 | | | | |
| Batch number: 131580013A | Sample number(s): 7081058-7081060,7081062-7081063 UNSPK: 7081058 | | | | | | | | |
| EFH (C12-C14) | 91 | 97 | 49-123 | 7 | 20 | | | | |
| EFH (C15-C20) | 394* | 444* | 49-123 | 12 | 20 | | | | |
| EFH (C21-C30) | 1639 (2) | 2238 (2) | 49-123 | 14 | 20 | | | | |
| EFH (C30-C40) | 2997 (2) | 5212 (2) | 49-123 | 31* | 20 | | | | |
| EFH (C8-C11) | 74 | 82 | 49-123 | 11 | 20 | | | | |
| Batch number: 131610003A | Sample number(s): 7081064-7081066,7081068-7081069 UNSPK: 7081064 | | | | | | | | |
| EFH (C12-C14) | 96 | 91 | 49-123 | 5 | 20 | | | | |
| EFH (C15-C20) | 293* | 270* | 49-123 | 8 | 20 | | | | |
| EFH (C21-C30) | 1322* | 1646* | 49-123 | 18 | 20 | | | | |
| EFH (C30-C40) | 2447 (2) | 2930 (2) | 49-123 | 16 | 20 | | | | |
| EFH (C8-C11) | 79 | 74 | 49-123 | 7 | 20 | | | | |
| Batch number: 131600637001 | Sample number(s): 7081058-7081063 UNSPK: 7081058 BKG: 7081058 | | | | | | | | |
| Aluminum | 1622 (2) | 1543 (2) | 75-125 | 1 | 20 | 8,890 | 9,900 | 11 | 20 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 81 | 81 | 75-125 | 1 | 20 | 0.563 J | 4.00 U | 200* (1) | 20 |
| Arsenic | 106 | 106 | 75-125 | 0 | 20 | 4.10 | 4.62 | 12 (1) | 20 |
| Barium | 103 | 108 | 75-125 | 4 | 20 | 60.2 | 64.4 | 7 | 20 |
| Beryllium | 102 | 103 | 75-125 | 1 | 20 | 0.397 J | 0.443 J | 11 (1) | 20 |
| Boron | 96 | 98 | 75-125 | 2 | 20 | 6.05 J | 6.15 J | 2 (1) | 20 |
| Cadmium | 98 | 99 | 75-125 | 1 | 20 | 0.504 J | 0.525 J | 4 (1) | 20 |
| Calcium | 127 (2) | 111 (2) | 75-125 | 2 | 20 | 2,410 | 2,290 | 5 | 20 |
| Chromium | 109 | 104 | 75-125 | 3 | 20 | 11.4 | 13.0 | 14 (1) | 20 |
| Cobalt | 97 | 98 | 75-125 | 0 | 20 | 3.70 | 3.89 | 5 (1) | 20 |
| Copper | 99 | 104 | 75-125 | 4 | 20 | 5.27 | 5.51 | 4 (1) | 20 |
| Iron | 1612 (2) | 1351 (2) | 75-125 | 1 | 20 | 16,100 | 17,500 | 9 | 20 |
| Lead | 101 | 100 | 75-125 | 1 | 20 | 7.67 | 8.60 | 11 (1) | 20 |
| Lithium | 105 | 105 | 75-125 | 1 | 20 | 21.8 | 24.4 | 11 | 20 |
| Magnesium | 353 (2) | 374 (2) | 75-125 | 1 | 20 | 3,490 | 3,880 | 11 | 20 |
| Manganese | 125 (2) | 129 (2) | 75-125 | 1 | 20 | 239 | 256 | 7 | 20 |
| Molybdenum | 98 | 99 | 75-125 | 1 | 20 | 0.759 J | 0.385 J | 65* (1) | 20 |
| Nickel | 100 | 99 | 75-125 | 1 | 20 | 6.70 | 8.25 | 21* (1) | 20 |
| Phosphorus | 103 | 114 | 75-125 | 2 | 20 | 378 | 383 | 1 | 20 |
| Potassium | 150* | 149* | 75-125 | 0 | 20 | 2,930 | 3,180 | 8 | 20 |
| Sodium | 100 | 101 | 75-125 | 1 | 20 | 62.7 J | 68.0 J | 8 (1) | 20 |
| Tin | 93 | 92 | 75-125 | 0 | 20 | 2.66 J | 2.68 J | 1 (1) | 20 |
| Titanium | 441 (2) | 406 (2) | 75-125 | 3 | 20 | 928 | 1,040 | 11 | 20 |
| Vanadium | 104 | 105 | 75-125 | 1 | 20 | 24.6 | 28.0 | 13 | 20 |
| Zinc | 110 | 111 | 75-125 | 1 | 20 | 66.1 | 71.2 | 7 | 20 |
| Zirconium | 100 | 101 | 75-125 | 1 | 20 | 2.18 J | 2.97 J | 31* (1) | 20 |
| Batch number: 131600637001A | Sample number(s): 7081058-7081063 UNSPK: 7081058 BKG: 7081058 | | | | | | | | |
| Silver | 97 | 98 | 75-125 | 1 | 20 | 0.0317 J | 0.200 U | 200* (1) | 20 |
| Strontium | 94 | 94 | 75-125 | 0 | 20 | 8.54 | 8.26 | 3 | 20 |
| Thallium | 112 | 107 | 75-125 | 3 | 20 | 0.198 J | 0.229 | 15 (1) | 20 |
| Batch number: 131600637001B | Sample number(s): 7081058-7081063 UNSPK: 7081058 BKG: 7081058 | | | | | | | | |
| Selenium | 107 | 108 | 75-125 | 2 | 20 | 0.400 U | 0.400 U | 0 (1) | 20 |
| Batch number: 131600637003 | Sample number(s): 7081064-7081067,7081069 UNSPK: 7081064 BKG: 7081064 | | | | | | | | |
| Aluminum | 1690 (2) | 1435 (2) | 75-125 | 3 | 20 | 11,400 | 12,900 | 13 | 20 |
| Antimony | 77 | 78 | 75-125 | 1 | 20 | 3.85 U | 3.85 U | 0 (1) | 20 |
| Arsenic | 106 | 104 | 75-125 | 2 | 20 | 3.64 J | 4.46 | 20 (1) | 20 |
| Barium | 108 | 103 | 75-125 | 3 | 20 | 81.5 | 97.6 | 18 | 20 |
| Beryllium | 105 | 104 | 75-125 | 1 | 20 | 0.444 J | 0.527 J | 17 (1) | 20 |
| Boron | 102 | 102 | 75-125 | 0 | 20 | 1.73 J | 1.31 J | 27* (1) | 20 |
| Cadmium | 99 | 98 | 75-125 | 1 | 20 | 0.342 J | 0.338 J | 1 (1) | 20 |
| Calcium | 385 (2) | 235 (2) | 75-125 | 9 | 20 | 5,160 | 7,880 | 42* | 20 |
| Chromium | 113 | 106 | 75-125 | 4 | 20 | 17.1 | 19.8 | 15 | 20 |
| Cobalt | 99 | 98 | 75-125 | 1 | 20 | 4.24 | 4.93 | 15 (1) | 20 |
| Copper | 108 | 107 | 75-125 | 1 | 20 | 9.53 J | 11.5 | 19 (1) | 20 |
| Iron | 2592 (2) | 918 (2) | 75-125 | 7 | 20 | 20,400 | 23,100 | 12 | 20 |
| Lead | 102 | 96 | 75-125 | 4 | 20 | 5.26 | 6.05 | 14 (1) | 20 |
| Lithium | 105 | 102 | 75-125 | 2 | 20 | 25.4 | 27.1 | 7 | 20 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Magnesium | 435 (2) | 294 (2) | 75-125 | 5 | 20 | 4,470 | 4,970 | 11 | 20 |
| Manganese | 164 (2) | 142 (2) | 75-125 | 3 | 20 | 259 | 275 | 6 | 20 |
| Molybdenum | 98 | 98 | 75-125 | 0 | 20 | 0.718 J | 0.362 J | 66* (1) | 20 |
| Nickel | 103 | 102 | 75-125 | 1 | 20 | 7.30 | 9.54 | 27* (1) | 20 |
| Phosphorus | 156* | 108 | 75-125 | 9 | 20 | 371 | 449 | 19 | 20 |
| Potassium | 138* | 100 | 75-125 | 9 | 20 | 2,990 | 3,300 | 10 | 20 |
| Sodium | 102 | 100 | 75-125 | 2 | 20 | 114 | 127 | 10 (1) | 20 |
| Tin | 92 | 92 | 75-125 | 0 | 20 | 2.85 J | 2.85 J | 0 (1) | 20 |
| Titanium | 368 (2) | 282 (2) | 75-125 | 5 | 20 | 1,190 | 1,320 | 11 | 20 |
| Vanadium | 114 | 109 | 75-125 | 3 | 20 | 30.4 | 33.6 | 10 | 20 |
| Zinc | 107 | 99 | 75-125 | 4 | 20 | 54.8 | 61.1 | 11 | 20 |
| Zirconium | 102 | 101 | 75-125 | 1 | 20 | 4.81 U | 1.05 J | 200* (1) | 20 |
| Batch number: 131600637003A | Sample number(s): 7081064-7081067,7081069 UNSPK: 7081064 BKG: 7081064 | | | | | | | | |
| Silver | 106 | 103 | 75-125 | 2 | 20 | 0.192 U | 0.0203 J | 200* (1) | 20 |
| Strontium | 124 | 115 | 75-125 | 3 | 20 | 16.6 | 22.6 | 31* | 20 |
| Thallium | 93 | 91 | 75-125 | 1 | 20 | 0.263 | 0.266 | 1 (1) | 20 |
| Batch number: 131600637003B | Sample number(s): 7081064-7081067,7081069 UNSPK: 7081064 BKG: 7081064 | | | | | | | | |
| Selenium | 114 | 106 | 75-125 | 7 | 20 | 0.385 U | 0.385 U | 0 (1) | 20 |
| Batch number: 131600638002 | Sample number(s): 7081058-7081063 UNSPK: 7081058 BKG: 7081058 | | | | | | | | |
| 3a Mercury 7471A | 102 | 100 | 65-135 | 3 | 20 | 0.0148 J | 0.0141 J | 5 (1) | 20 |
| Batch number: 131640637001 | Sample number(s): 7081068 UNSPK: P085556 BKG: P085556 | | | | | | | | |
| Aluminum | 1575 (2) | 1333 (2) | 75-125 | 3 | 20 | 14,600 | 14,300 | 2 | 20 |
| Antimony | 61* | 61* | 75-125 | 0 | 20 | 3.88 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 99 | 98 | 75-125 | 1 | 20 | 4.93 | 5.27 | 7 (1) | 20 |
| Barium | 102 | 100 | 75-125 | 1 | 20 | 105 | 106 | 1 | 20 |
| Beryllium | 100 | 100 | 75-125 | 0 | 20 | 0.626 J | 0.624 J | 0 (1) | 20 |
| Boron | 96 | 95 | 75-125 | 0 | 20 | 4.64 J | 3.81 J | 20 (1) | 20 |
| Cadmium | 96 | 95 | 75-125 | 1 | 20 | 0.971 U | 0.971 U | 0 (1) | 20 |
| Calcium | 133 (2) | 120 (2) | 75-125 | 2 | 20 | 2,420 | 2,300 | 5 | 20 |
| Chromium | 113 | 107 | 75-125 | 3 | 20 | 22.0 | 22.3 | 1 | 20 |
| Cobalt | 95 | 94 | 75-125 | 1 | 20 | 5.48 | 5.86 | 7 | 20 |
| Copper | 100 | 100 | 75-125 | 0 | 20 | 11.6 | 11.6 | 0 | 20 |
| Iron | 767 (2) | -175 (2) | 75-125 | 5 | 20 | 19,000 | 19,300 | 2 | 20 |
| Lead | 97 | 95 | 75-125 | 1 | 20 | 8.32 | 8.57 | 3 (1) | 20 |
| Lithium | 105 | 103 | 75-125 | 1 | 20 | 23.2 | 23.2 | 0 | 20 |
| Magnesium | 216 (2) | 144 (2) | 75-125 | 3 | 20 | 4,390 | 4,400 | 0 | 20 |
| Manganese | 115 (2) | 79 (2) | 75-125 | 5 | 20 | 321 | 334 | 4 | 20 |
| Molybdenum | 95 | 95 | 75-125 | 0 | 20 | 0.687 J | 0.500 J | 32* (1) | 20 |
| Nickel | 97 | 97 | 75-125 | 0 | 20 | 14.7 | 14.8 | 1 | 20 |
| Phosphorus | 97 (2) | 72 (2) | 75-125 | 5 | 20 | 429 | 415 | 3 | 20 |
| Potassium | 135 (2) | 126 (2) | 75-125 | 2 | 20 | 3,930 | 3,910 | 0 | 20 |
| Sodium | 97 | 97 | 75-125 | 1 | 20 | 69.7 J | 68.3 J | 2 (1) | 20 |
| Tin | 90 | 90 | 75-125 | 0 | 20 | 2.75 J | 2.75 J | 0 (1) | 20 |
| Titanium | 321 (2) | 280 (2) | 75-125 | 3 | 20 | 1,170 | 1,140 | 3 | 20 |
| Vanadium | 106 | 102 | 75-125 | 2 | 20 | 37.2 | 37.6 | 1 | 20 |
| Zinc | 100 | 97 | 75-125 | 2 | 20 | 62.6 | 62.3 | 0 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Zirconium | 92 | 91 | 75-125 | 1 | 20 | 2.86 J | 3.45 J | 19 (1) | 20 |
| Batch number: 131640637001A | Sample number(s): 7081068 UNSPK: P085556 BKG: P085556 | | | | | | | | |
| Silver | 112 | 122 | 75-125 | 8 | 20 | 0.0429 J | 0.0940 J | 75* (1) | 20 |
| Strontium | 121 | 153* | 75-125 | 7 | 20 | 22.8 | 30.2 | 28* | 20 |
| Thallium | 138* | 137* | 75-125 | 0 | 20 | 0.299 | 0.397 | 28* (1) | 20 |
| Batch number: 131640637001B | Sample number(s): 7081068 UNSPK: P085556 BKG: P085556 | | | | | | | | |
| Selenium | 111 | 117 | 75-125 | 5 | 20 | 0.148 J | 0.230 J | 43* (1) | 20 |
| Batch number: 131640638001 | Sample number(s): 7081064-7081069 UNSPK: 7081064 BKG: 7081064 | | | | | | | | |
| 3a Mercury 7471A | 100 | 98 | 65-135 | 5 | 20 | 0.0165 U | 0.0159 U | 0 (1) | 20 |
| Batch number: 13156039401A | Sample number(s): 7081058,7081061-7081063 BKG: 7081058 | | | | | | | | |
| 15a pH by 9045D | | | | | | 6.68 | 6.71 | 0 | 3 |
| Batch number: 13156039401B | Sample number(s): 7081064,7081067-7081069 BKG: 7081064 | | | | | | | | |
| 15a pH by 9045D | | | | | | 8.18 | 8.20 | 0 | 3 |
| Batch number: 13162162401A | Sample number(s): 7081055-7081057,7081062-7081063 BKG: P081058 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 2.1 | 1.4 | 40* | 20 |
| Batch number: 13162162401B | Sample number(s): 7081064-7081069 BKG: 7081064 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 7.5 | 8.4 | 11 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 7.5 | 8.4 | 11 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 7.5 | 8.4 | 11 | 20 |
| Batch number: 13163162401A | Sample number(s): 7081058-7081061 BKG: 7081058 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 1.8 | 1.9 | 7 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 1.8 | 1.9 | 7 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 1.8 | 1.9 | 7 | 20 |
| Batch number: 13163006 | Sample number(s): 7081064-7081066,7081068-7081069 UNSPK: 7081064 | | | | | | | | |
| 2378-TCDD | 99 | 96 | 40-135 | 3 | 20 | | | | |
| 12378-PeCDD | 99 | 101 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDD | 107 | 106 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDD | 104 | 103 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDD | 105 | 105 | 40-135 | 0 | 20 | | | | |
| 1234678-HpCDD | 104 | 102 | 40-135 | 2 | 20 | | | | |
| OCDD | 103 | 102 | 40-135 | 1 | 20 | | | | |
| 2378-TCDF | 101 | 100 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDF | 102 | 103 | 40-135 | 0 | 20 | | | | |
| 23478-PeCDF | 105 | 103 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDF | 107 | 105 | 40-135 | 2 | 20 | | | | |
| 123678-HxCDF | 104 | 102 | 40-135 | 3 | 20 | | | | |
| 123789-HxCDF | 105 | 105 | 40-135 | 1 | 20 | | | | |
| 234678-HxCDF | 106 | 105 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 106 | 105 | 40-135 | 1 | 20 | | | | |
| 1234789-HpCDF | 105 | 105 | 40-135 | 0 | 20 | | | | |
| OCDF | 103 | 104 | 40-135 | 1 | 20 | | | | |
| Batch number: 13168006 | Sample number(s): 7081058-7081060,7081062-7081063 UNSPK: 7081058 | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 2378-TCDD | 94 | 96 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDD | 100 | 100 | 40-135 | 0 | 20 | | | | |
| 123478-HxCDD | 106 | 105 | 40-135 | 2 | 20 | | | | |
| 123678-HxCDD | 103 | 102 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDD | 102 | 104 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDD | 53 | 53 | 40-135 | 0 | 20 | | | | |
| OCDD | -124 (2) | -129 (2) | 40-135 | 2 | 20 | | | | |
| 2378-TCDF | 96 | 98 | 40-135 | 2 | 20 | | | | |
| 12378-PeCDF | 103 | 103 | 40-135 | 0 | 20 | | | | |
| 23478-PeCDF | 105 | 103 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDF | 107 | 107 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDF | 102 | 102 | 40-135 | 0 | 20 | | | | |
| 123789-HxCDF | 104 | 107 | 40-135 | 2 | 20 | | | | |
| 234678-HxCDF | 104 | 103 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 94 | 95 | 40-135 | 1 | 20 | | | | |
| 1234789-HpCDF | 102 | 105 | 40-135 | 2 | 20 | | | | |
| OCDF | 74 | 77 | 40-135 | 2 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13158SLB026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7081058 | 89 | 93 | 94 |
| 7081059 | 95 | 99 | 100 |
| 7081060 | 108 | 98 | 106 |
| 7081062 | 97 | 92 | 98 |
| 7081063 | 89 | 89 | 92 |
| Blank | 86 | 89 | 96 |
| LCS | 90 | 94 | 97 |
| MS | 95 | 99 | 100 |
| MSD | 108 | 98 | 106 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13158SLC026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7081064 | 94 | 86 | 95 |
| 7081065 | 108 | 83 | 102 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

## Surrogate Quality Control

| | | | |
|---|---|---|---|
| 7081066 | 96 | 82 | 95 |
| 7081068 | 103 | 80 | 100 |
| 7081069 | 95 | 91 | 97 |
| Blank | 90 | 94 | 94 |
| LCS | 90 | 95 | 96 |
| MS | 108 | 83 | 102 |
| MSD | 96 | 82 | 95 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13160A16A

| | Trifluorotoluene-F |
|---|---|
| 7081064 | 81 |
| 7081065 | 80 |
| 7081066 | 91 |
| 7081069 | 78 |
| Blank | 87 |
| LCS | 93 |
| MS | 80 |
| MSD | 91 |
| Limits: | 61-122 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13162B20A

| | Trifluorotoluene-F |
|---|---|
| 7081070 | 87 |
| Blank | 84 |
| LCS | 120 |
| LCSD | 119 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131580010A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7081055 | 113 | 102 |
| 7081056 | 114 | 114 |
| 7081057 | 120 | 141* |
| 7081058 | 115 | 107 |
| 7081059 | 99 | 93 |
| 7081060 | 113 | 104 |
| Blank | 116 | 116 |
| LCS | 107 | 112 |
| LCSD | 115 | 119 |
| MS | 99 | 93 |
| MSD | 113 | 104 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131620008A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

## Surrogate Quality Control

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7081062 | 100 | 90 |
| 7081063 | 116 | 114 |
| 7081064 | 112 | 102 |
| 7081065 | 58 | 53 |
| 7081066 | 76 | 68 |
| 7081068 | 98 | 89 |
| 7081069 | 95 | 90 |
| Blank | 113 | 122* |
| LCS | 121* | 124* |
| LCSD | 118 | 127* |
| MS | 58 | 53 |
| MSD | 76 | 68 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 131620099A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7081058 | 87 | 83 |
| 7081059 | 92 | 94 |
| 7081060 | 92 | 86 |
| 7081062 | 88 | 83 |
| Blank | 104 | 105 |
| LCS | 102 | 105 |
| MS | 92 | 94 |
| MSD | 92 | 86 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131580013A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7081058 | 85 | 77 |
| 7081059 | 88 | 66 |
| 7081060 | 94 | 82 |
| 7081062 | 112 | 88 |
| 7081063 | 92 | 91 |
| Blank | 93 | 85 |
| LCS | 94 | 95 |
| MS | 88 | 66 |
| MSD | 94 | 82 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131610003A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7081064 | 83 | 83 |
| 7081065 | 90 | 88 |
| 7081066 | 89 | 84 |
| 7081068 | 88 | 92 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7081069 | 82 | 84 |
| Blank | 86 | 82 |
| LCS | 90 | 91 |
| MS | 90 | 88 |
| MSD | 89 | 84 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13163006

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7081064 | 81 | 86 | 89 | 89 | 89 | 90 |
| 7081065 | 84 | 88 | 93 | 92 | 92 | 93 |
| 7081066 | 82 | 86 | 87 | 88 | 87 | 90 |
| 7081068 | 82 | 89 | 90 | 90 | 90 | 90 |
| 7081069 | 81 | 85 | 89 | 91 | 89 | 91 |
| Blank | 69 | 79 | 85 | 93 | 88 | 84 |
| MS | 84 | 88 | 93 | 92 | 92 | 93 |
| MSD | 82 | 86 | 87 | 88 | 87 | 90 |
| OPR | 71 | 79 | 85 | 91 | 86 | 87 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7081064 | 87 | 86 | 84 | 83 | 82 | 84 |
| 7081065 | 88 | 88 | 82 | 87 | 85 | 86 |
| 7081066 | 90 | 87 | 87 | 84 | 82 | 82 |
| 7081068 | 94 | 91 | 91 | 85 | 84 | 84 |
| 7081069 | 98 | 89 | 90 | 83 | 84 | 84 |
| Blank | 110 | 81 | 84 | 81 | 84 | 86 |
| MS | 88 | 88 | 82 | 87 | 85 | 86 |
| MSD | 90 | 87 | 87 | 84 | 82 | 82 |
| OPR | 104 | 85 | 87 | 80 | 83 | 85 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7081064 | 83 | 81 | 78 | 80 | 84 |
| 7081065 | 86 | 81 | 72 | 83 | 88 |
| 7081066 | 82 | 82 | 81 | 79 | 85 |
| 7081068 | 84 | 85 | 87 | 83 | 87 |
| 7081069 | 84 | 87 | 88 | 78 | 85 |
| Blank | 84 | 87 | 92 | 63 | 81 |
| MS | 86 | 81 | 72 | 83 | 88 |
| MSD | 82 | 82 | 81 | 79 | 85 |
| OPR | 83 | 86 | 92 | 63 | 79 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13168006

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1394643
Reported: 06/21/13 at 04:43 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7081058 | 83 | 91 | 90 | 89 | 90 | 96 |
| 7081059 | 81 | 92 | 88 | 89 | 89 | 92 |
| 7081060 | 79 | 89 | 86 | 87 | 87 | 87 |
| 7081062 | 78 | 90 | 86 | 88 | 87 | 89 |
| 7081063 | 72 | 76 | 80 | 88 | 82 | 77 |
| Blank | 61 | 64 | 73 | 81 | 75 | 69 |
| MS | 81 | 92 | 88 | 89 | 89 | 92 |
| MSD | 79 | 89 | 86 | 87 | 87 | 87 |
| OPR | 60 | 63 | 71 | 81 | 74 | 67 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |
| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
| 7081058 | 96 | 98 | 97 | 91 | 85 | 85 |
| 7081059 | 96 | 96 | 91 | 92 | 85 | 85 |
| 7081060 | 95 | 95 | 96 | 88 | 84 | 84 |
| 7081062 | 99 | 99 | 101 | 91 | 84 | 84 |
| 7081063 | 113 | 78 | 73 | 80 | 82 | 83 |
| Blank | 107 | 73 | 76 | 70 | 79 | 81 |
| MS | 96 | 96 | 91 | 92 | 85 | 85 |
| MSD | 95 | 95 | 96 | 88 | 84 | 84 |
| OPR | 100 | 73 | 77 | 68 | 75 | 79 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |
| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
| 7081058 | 85 | 92 | 95 | 79 | 88 | |
| 7081059 | 86 | 91 | 92 | 79 | 90 | |
| 7081060 | 83 | 91 | 94 | 75 | 85 | |
| 7081062 | 84 | 95 | 98 | 74 | 86 | |
| 7081063 | 82 | 91 | 95 | 66 | 81 | |
| Blank | 78 | 85 | 91 | 53 | 69 | |
| MS | 86 | 91 | 92 | 79 | 90 | |
| MSD | 83 | 91 | 94 | 75 | 85 | |
| OPR | 76 | 83 | 88 | 54 | 66 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

13013 1394643 7081055-70

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/4/2013
CarrierName: FedEx
AirbillNo: 799920832400

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130604-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-545A-SA7-SB-0.0-0.5 | 6/3/13 14:50 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| SL-545B-SA7-SB-0.0-0.5 | 6/3/13 15:00 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| SL-545C-SA7-SB-0.0-0.5 | 6/3/13 15:10 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| SL-513-SA7-SB-0.0-0.5MS | 6/4/13 08:30 | SO | None | 6 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | X | | | | X | | | | | | | | | | | MS/MSD |
| SL-513-SA7-SB-0.0-0.5MS | 6/4/13 08:30 | SO | None | 1 - 8 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | MS/MSD |
| SL-913-SA7-SB-0.0-0.5 | 6/4/13 08:45 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | X | | | | X | | | | | | | | | | | |
| SL-913-SA7-SB-0.0-0.5 | 6/4/13 08:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-516-SA7-SB-0.0-0.5 | 6/4/13 09:55 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-516-SA7-SB-0.0-0.5 | 6/4/13 09:55 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-524-SA7-SB-1.0-2.0MS | 6/4/13 13:20 | SO | None | 6 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | MS/MSD |
| SL-524-SA7-SB-1.0-2.0MS | 6/4/13 13:20 | SO | None | 1 - 8 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | MS/MSD |
| SL-524-SA7-SB-1.0-2.0MS | 6/4/13 13:20 | SO | None | 6 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | MS/MSD |
| SL-524-SA7-SB-0.0-0.5 | 6/4/13 13:10 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-524-SA7-SB-0.0-0.5 | 6/4/13 13:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-924-SA7-SB-1.0-2.0 | 6/4/13 13:30 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-924-SA7-SB-1.0-2.0 | 6/4/13 13:30 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-924-SA7-SB-1.0-2.0 | 6/4/13 13:30 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| TB-060413 | 6/4/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |

Subarea 7



Recd by: Pat Gh 6/5/2013 0920





1 of 2

13013 1394643 7081055-70

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/4/2013
CarrierName: FedEx
AirbillNo: 799920832400

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130604-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

Sampler: V. Cortez

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 06/04/13 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 6/5/13 | 0920 |

COC Rev 2

COC: 20130604-01, Page 2 of 2

2 of 2

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# Environmental Sample Administration Receipt Documentation Log

1394643

**Client/Project:** COM Smith

**Date of Receipt:** 6/5/13

**Time of Receipt:** 0920

**Source Code:** 50

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT121 | 1.0 | TB | WI | y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** Ø

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** 3472 **Date/Time:** 6/5/13 1000

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 20, 2013

Project: Phase 3 Subarea 7

Submittal Date: 06/07/2013
Group Number: 1395500
SDG: PH049
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| SL-514-SA7-SB-0.0-0.5 Soil | 7085553 |
| SL-515-SA7-SB-0.0-0.5 Soil | 7085554 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

| | | |
|---|---|---|
| ELECTRONIC COPY TO | LLI | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Eurofins Lancaster Labs | Attn: Natalie Luciano |

Respectfully Submitted,

Natalie R. Luciano
Senior Specialist

(717) 556-7258

**Sample Description:** SL-514-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7085553**
**LLI Group # 1395500**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/06/2013 08:55 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL514 SDG#: PH049-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.7 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.3 | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.3 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 6.7 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 17 | U | 17 | 6.7 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 17 | U | 17 | 6.7 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 170 | U | 170 | 33 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | U | 17 | 6.7 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 17 | U | 17 | 6.7 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 180 | U | 180 | 60 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 180 | U | 180 | 60 | 10 |
| 12969 | Chrysene | 218-01-9 | 5.1 | J | 17 | 3.3 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 6.7 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 180 | U | 180 | 60 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 180 | U | 180 | 60 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 180 | U | 180 | 60 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 6.8 | J | 17 | 6.7 | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.7 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | U | 17 | 6.7 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.7 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 17 | U | 17 | 6.7 | 10 |
| 12969 | Naphthalene | 91-20-3 | 17 | U | 17 | 6.7 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.7 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 180 | U | 180 | 60 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 17 | U | 17 | 6.7 | 10 |
| 12969 | Pyrene | 129-00-0 | 17 | U | 17 | 6.7 | 10 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 180 | | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 52 | | 17 | 4.4 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 10 | U | 10 | 4.0 | 2 |
| 12952 | EFH (C15-C20) | n.a. | 10 | U | 10 | 4.0 | 2 |
| 12952 | EFH (C21-C30) | n.a. | 46 | | 10 | 4.0 | 2 |
| 12952 | EFH (C30-C40) | n.a. | 100 | | 20 | 8.1 | 2 |
| 12952 | EFH (C8-C11) | n.a. | 10 | U | 10 | 4.0 | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-514-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample #** SW 7085553
**LLI Group #** 1395500
**Account #** 13013

**Project Name:** Phase 3 Subarea 7

Collected: 06/06/2013 08:55 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL514 SDG#: PH049-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,700 | | 40.4 | 7.80 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.04 | U | 4.04 | 0.506 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.74 | | 4.04 | 0.334 | 1 |
| 06946 | Barium | 7440-39-3 | 70.9 | | 1.01 | 0.0334 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.476 | J | 1.01 | 0.0677 | 1 |
| 07914 | Boron | 7440-42-8 | 2.55 | J | 10.1 | 0.839 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.397 | J | 1.01 | 0.0334 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,260 | | 20.2 | 4.06 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.4 | | 3.03 | 0.0890 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.20 | | 1.01 | 0.0910 | 1 |
| 06953 | Copper | 7440-50-8 | 11.7 | | 10.1 | 0.910 | 5 |
| 01654 | Iron | 7439-89-6 | 23,600 | | 40.4 | 3.84 | 1 |
| 06955 | Lead | 7439-92-1 | 10.5 | | 3.03 | 0.475 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.9 | | 4.0 | 0.56 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,930 | | 10.1 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 253 | | 1.01 | 0.0839 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.02 | U | 2.02 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.44 | | 2.02 | 0.111 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 417 | | 10.1 | 0.516 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,600 | | 101 | 13.7 | 1 |
| 01667 | Sodium | 7440-23-5 | 111 | | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.78 | J | 10.1 | 0.222 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,190 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 38.3 | | 1.01 | 0.111 | 1 |
| 06972 | Zinc | 7440-66-6 | 61.7 | | 4.04 | 0.202 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.06 | U | 5.06 | 0.839 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.120 | J | 0.404 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0339 | J | 0.202 | 0.0202 | 2 |
| 06144 | Strontium | 7440-24-6 | 15.7 | | 0.404 | 0.0344 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.217 | | 0.202 | 0.0303 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0264 | | 0.0158 | 0.0095 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.18 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.1 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-514-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7085553**
**LLI Group # 1395500**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/06/2013 08:55 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL514 SDG#: PH049-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0421 | JQ | 0.992 | 0.0257 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.458 | JB | 4.96 | 0.0834 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.29 | J | 4.96 | 0.0405 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 3.93 | JB | 4.96 | 0.0434 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 2.02 | JB | 4.96 | 0.0385 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 138 | B | 4.96 | 0.0833 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,320 | B | 9.92 | 0.0683 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 2.63 | C | 0.992 | 0.0804 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 3.12 | JB | 4.96 | 0.0338 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 3.48 | JB | 4.96 | 0.0328 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 6.25 | B | 4.96 | 0.0332 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 2.73 | JB | 4.96 | 0.0315 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 4.96 | U | 4.96 | 0.0361 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 3.13 | JB | 4.96 | 0.0310 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 39.3 | B | 4.96 | 0.0279 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 4.01 | JB | 4.96 | 0.0338 | 1 |
| 11031 | OCDF | 39001-02-0 | 109 | B | 9.92 | 0.0359 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 6.04 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 72 | 25 - 181 |
| 13C12-123478-HxCDD | 73 | 32 - 141 |
| 13C12-123678-HxCDD | 75 | 28 - 130 |
| 13C12-123789-HxCDD | 74 | 28 - 130 |
| 13C12-1234678-HpCDD | 73 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 70 | 24 - 169 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 75 | 21 - 178 |
| 13C12-123478-HxCDF | 80 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 79 | 29 - 147 |
| 13C12-1234678-HpCDF | 82 | 28 - 143 |
| 13C12-1234789-HpCDF | 75 | 26 - 138 |
| 13C12-OCDF | 76 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-514-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7085553**
**LLI Group # 1395500**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/06/2013 08:55 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL514 SDG#: PH049-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-514-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7085553**
**LLI Group # 1395500**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/06/2013 08:55 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL514 SDG#: PH049-01

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13159SLD026 | 06/18/2013 11:50 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13159SLD026 | 06/10/2013 08:55 | Katheryne V Sponheimer | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131620008A | 06/12/2013 18:24 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131620008A | 06/11/2013 18:30 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131610003A | 06/12/2013 14:08 | Heather E Williams | 2 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131610003A | 06/10/2013 13:45 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13165001 | 06/18/2013 12:44 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13165001 | 06/14/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637003 | 06/14/2013 05:53 | Tara L Snyder | 5 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:07 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131600637003B | 06/11/2013 20:54 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637003A | 06/11/2013 20:54 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 20:54 | David K Beck | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-514-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7085553**
**LLI Group # 1395500**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/06/2013 08:55 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL514 SDG#: PH049-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 20:54 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638002 | 06/11/2013 20:05 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637003 | 06/11/2013 00:03 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638002 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13158039402A | 06/07/2013 21:10 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162402A | 06/11/2013 22:45 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-515-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7085554**
**LLI Group # 1395500**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/06/2013 09:15 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL515 SDG#: PH049-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.34 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | | 18 | 6.0 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.67 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.97 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.35 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.84 | U | 0.84 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.84 | U | 0.84 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.35 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 33 | U | 33 | 14 | 1 |

A target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits. The following

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-515-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7085554**
**LLI Group # 1395500**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/06/2013 09:15 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL515 SDG#: PH049-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,100 | | 39.4 | 7.59 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.94 | U | 3.94 | 0.492 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.87 | | 3.94 | 0.325 | 1 |
| 06946 | Barium | 7440-39-3 | 66.9 | | 0.985 | 0.0325 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.439 | J | 0.985 | 0.0660 | 1 |
| 07914 | Boron | 7440-42-8 | 1.67 | J | 9.85 | 0.817 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.404 | J | 0.985 | 0.0325 | 1 |
| 01650 | Calcium | 7440-70-2 | 12,000 | | 19.7 | 3.96 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.1 | | 2.95 | 0.0866 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.94 | | 0.985 | 0.0886 | 1 |
| 06953 | Copper | 7440-50-8 | 8.75 | J | 9.85 | 0.886 | 5 |
| 01654 | Iron | 7439-89-6 | 23,100 | | 39.4 | 3.74 | 1 |
| 06955 | Lead | 7439-92-1 | 4.81 | | 2.95 | 0.463 | 1 |
| 01656 | Lithium | 7439-93-2 | 28.1 | | 3.9 | 0.54 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,680 | | 9.85 | 1.70 | 1 |
| 06958 | Manganese | 7439-96-5 | 412 | | 0.985 | 0.0817 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 1.97 | U | 1.97 | 0.167 | 1 |
| 06961 | Nickel | 7440-02-0 | 7.22 | | 1.97 | 0.108 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 438 | | 9.85 | 0.502 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,750 | | 98.5 | 13.3 | 1 |
| 01667 | Sodium | 7440-23-5 | 81.3 | J | 98.5 | 16.4 | 1 |
| 06969 | Tin | 7440-31-5 | 2.96 | J | 9.85 | 0.217 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,290 | | 0.985 | 0.167 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-515-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LLI Sample # SW 7085554**
**LLI Group # 1395500**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/06/2013 09:15 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL515 SDG#: PH049-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06971 | Vanadium | 7440-62-2 | 33.9 | | 0.985 | 0.108 | 1 |
| 06972 | Zinc | 7440-66-6 | 54.1 | | 3.94 | 0.197 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.92 | U | 4.92 | 0.817 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.105 | J | 0.394 | 0.0985 | 2 |
| 06142 | Silver | 7440-22-4 | 0.197 | U | 0.197 | 0.0197 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.2 | | 0.394 | 0.0335 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.237 | | 0.197 | 0.0295 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0112 | J | 0.0168 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.32 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-515-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7085554**
**LLI Group # 1395500**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/06/2013 09:15 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL515 SDG#: PH049-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0419 | JQ | 1.01 | 0.0383 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.04 | U | 5.04 | 0.0428 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0344 | JQ | 5.04 | 0.0313 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.170 | JB | 5.04 | 0.0317 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0968 | JB | 5.04 | 0.0306 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.47 | JB | 5.04 | 0.0282 | 1 |
| 11031 | OCDD | 3268-87-9 | 13.5 | B | 10.1 | 0.0265 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0312 | JQ | 1.01 | 0.0243 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0929 | JBQ | 5.04 | 0.0163 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0618 | JBQ | 5.04 | 0.0146 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0372 | JBQ | 5.04 | 0.0150 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.04 | U | 5.04 | 0.0141 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0614 | JBQ | 5.04 | 0.0166 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 5.04 | U | 5.04 | 0.0136 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.366 | JB | 5.04 | 0.0141 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0673 | JB | 5.04 | 0.0213 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.979 | JB | 10.1 | 0.0233 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0500 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 67 | 25 - 164 |
| 13C12-12378-PeCDD | 73 | 25 - 181 |
| 13C12-123478-HxCDD | 76 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 80 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 74 | 24 - 185 |
| 13C12-23478-PeCDF | 76 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 86 | 28 - 136 |
| 13C12-123789-HxCDF | 82 | 29 - 147 |
| 13C12-1234678-HpCDF | 93 | 28 - 143 |
| 13C12-1234789-HpCDF | 76 | 26 - 138 |
| 13C12-OCDF | 74 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-515-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7085554**
**LLI Group # 1395500**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/06/2013 09:15 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL515 SDG#: PH049-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-515-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7085554**
**LLI Group # 1395500**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/06/2013 09:15 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL515 SDG#: PH049-02*

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13159SLD026 | 06/18/2013 12:22 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13159SLD026 | 06/10/2013 08:55 | Katheryne V Sponheimer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 131620007A | 06/15/2013 02:00 | Jamie L Brillhart | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 131620008A | 06/12/2013 18:43 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 131620008A | 06/11/2013 18:30 | Sally L Appleyard | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 131620007A | 06/11/2013 19:00 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 131610003A | 06/12/2013 05:41 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 131610003A | 06/10/2013 13:45 | David S Schrum | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13165001 | 06/18/2013 13:41 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13165001 | 06/14/2013 13:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 131600637003 | 06/14/2013 05:57 | Tara L Snyder | 5 |
| 01654 | Iron | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-515-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LLI Sample # SW 7085554**
**LLI Group # 1395500**
**Account # 13013**

**Project Name: Phase 3 Subarea 7**

Collected: 06/06/2013 09:15 by VC

Submitted: 06/07/2013 09:20
Reported: 06/20/2013 14:02

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL515 SDG#: PH049-02*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 131600637003 | 06/12/2013 22:11 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 131600637003B | 06/11/2013 20:56 | David K Beck | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 131600637003A | 06/11/2013 20:56 | David K Beck | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 20:56 | David K Beck | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 131600637003A | 06/11/2013 20:56 | David K Beck | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 131600638002 | 06/11/2013 20:07 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 131600637003 | 06/11/2013 00:03 | Annamaria Stipkovits | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 131600638002 | 06/11/2013 04:00 | Annamaria Stipkovits | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13158039402A | 06/07/2013 21:10 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13162162402A | 06/11/2013 22:45 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1395500
Reported: 06/20/13 at 02:02 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13159SLD026 | Sample number(s): 7085553-7085554 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 69-114 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 71-113 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 75-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 76-115 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 76-117 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 77-129 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 92 | | 70-130 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 64-120 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 71-120 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 65-131 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 67-140 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 99 | | 78-111 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 65-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 92 | | 68-125 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 70-130 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 67-143 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 68-119 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 75-123 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 66-122 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 74-113 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 64-120 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 30-125 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 105 | | 57-133 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 71-120 | | |
| Batch number: 131620007A | Sample number(s): 7085554 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 113 | | 73-119 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 122 | | 72-126 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 71* | | 76-123 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 136* | | 72-128 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 142* | | 76-138 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 109 | | 76-126 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 134* | | 72-131 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 124 | | 73-128 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 128 | | 78-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 118 | | 62-125 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 137* | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 137 | | 72-138 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 124 | | 75-130 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 120 | | 55-132 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1395500
Reported: 06/20/13 at 02:02 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 138* | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 128* | | 69-125 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 121 | | 78-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 119 | | 59-125 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 131620008A | Sample number(s): 7085553-7085554 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 75 | 73 | 36-106 | 3 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 101 | | 80-120 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 103 | | 72-120 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 131610003A | Sample number(s): 7085553-7085554 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 94 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 100 | | 75-128 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 97 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 104 | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 71 | | 49-107 | | |
| Batch number: 131600637003 | Sample number(s): 7085553-7085554 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.71 | mg/kg | 102 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.500 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.330 | mg/kg | 103 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.830 | mg/kg | 102 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 105 | | 80-120 | | |
| Calcium | 6.15 | J | 20.0 | 4.02 | mg/kg | 105 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.0880 | mg/kg | 104 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0900 | mg/kg | 105 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.180 | mg/kg | 100 | | 80-120 | | |
| Iron | 4.39 | J | 40.0 | 3.80 | mg/kg | 102 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.470 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.55 | mg/kg | 104 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.73 | mg/kg | 104 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 103 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.110 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 1.17 | J | 10.0 | 0.510 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 13.5 | mg/kg | 100 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 101 | | 80-120 | | |
| Tin | 1.43 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.110 | mg/kg | 104 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1395500
Reported: 06/20/13 at 02:02 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Zirconium | 5.00 | U | 5.00 | 0.830 | mg/kg | 104 | | 80-120 | | |
| Batch number: 131600637003A | Sample number(s): 7085553-7085554 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0200 | mg/kg | 107 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0340 | mg/kg | 106 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 98 | | 80-120 | | |
| Batch number: 131600637003B | Sample number(s): 7085553-7085554 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 113 | | 80-120 | | |
| Batch number: 131600638002 | Sample number(s): 7085553-7085554 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 103 | | 85-120 | | |
| Batch number: 13158039402A | Sample number(s): 7085553-7085554 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 13162162402A | Sample number(s): 7085553-7085554 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13165001 | Sample number(s): 7085553-7085554 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0268 | ng/kg | 99 | | 67-158 | | |
| 12378-PeCDD | 0.0542 | J | 5.00 | 0.0310 | ng/kg | 101 | | 70-142 | | |
| 123478-HxCDD | 5.00 | U | 5.00 | 0.0174 | ng/kg | 107 | | 70-164 | | |
| 123678-HxCDD | 0.0389 | J | 5.00 | 0.0179 | ng/kg | 105 | | 76-134 | | |
| 123789-HxCDD | 0.0490 | J | 5.00 | 0.0182 | ng/kg | 106 | | 64-162 | | |
| 1234678-HpCDD | 0.0445 | J | 5.00 | 0.0188 | ng/kg | 106 | | 70-140 | | |
| OCDD | 0.385 | J | 10.0 | 0.0213 | ng/kg | 105 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0212 | ng/kg | 102 | | 75-158 | | |
| 12378-PeCDF | 0.0711 | J | 5.00 | 0.0136 | ng/kg | 106 | | 80-134 | | |
| 23478-PeCDF | 0.0370 | J | 5.00 | 0.0134 | ng/kg | 107 | | 68-160 | | |
| 123478-HxCDF | 0.0411 | J | 5.00 | 0.00900 | ng/kg | 108 | | 72-134 | | |
| 123678-HxCDF | 0.0374 | J | 5.00 | 0.00850 | ng/kg | 108 | | 84-130 | | |
| 123789-HxCDF | 0.0753 | J | 5.00 | 0.0106 | ng/kg | 107 | | 78-130 | | |
| 234678-HxCDF | 0.0261 | J | 5.00 | 0.00840 | ng/kg | 107 | | 70-156 | | |
| 1234678-HpCDF | 0.0586 | J | 5.00 | 0.00600 | ng/kg | 106 | | 82-122 | | |
| 1234789-HpCDF | 0.0448 | J | 5.00 | 0.0106 | ng/kg | 105 | | 78-138 | | |
| OCDF | 0.124 | J | 10.0 | 0.0277 | ng/kg | 106 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0112 | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| | MS | MSD | MS/MSD | RPD | BKG | DUP | DUP | Dup RPD |
|---|---|---|---|---|---|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1395500
Reported: 06/20/13 at 02:02 PM

| Analysis Name | %REC | %REC | Limits | RPD | MAX | Conc | Conc | RPD | Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13159SLD026 | Sample number(s): 7085553-7085554 UNSPK: P085556 | | | | | | | | |
| Acenaphthene | 83 | 89 | 48-127 | 6 | 30 | | | | |
| Acenaphthylene | 86 | 90 | 49-121 | 4 | 30 | | | | |
| Anthracene | 84 | 91 | 52-126 | 8 | 30 | | | | |
| Benzo(a)anthracene | 85 | 92 | 32-135 | 8 | 30 | | | | |
| Benzo(a)pyrene | 77 | 86 | 36-138 | 10 | 30 | | | | |
| Benzo(b)fluoranthene | 96 | 99 | 26-142 | 3 | 30 | | | | |
| Benzo(e)pyrene | 77 | 84 | 70-130 | 8 | 30 | | | | |
| Benzo(g,h,i)perylene | 64 | 68 | 33-141 | 5 | 30 | | | | |
| Benzo(k)fluoranthene | 75 | 87 | 47-129 | 14 | 30 | | | | |
| Butylbenzylphthalate | 93 | 99 | 59-153 | 6 | 30 | | | | |
| Di-n-butylphthalate | 101 | 103 | 62-154 | 2 | 30 | | | | |
| Chrysene | 81 | 89 | 29-148 | 10 | 30 | | | | |
| Dibenz(a,h)anthracene | 66 | 71 | 34-125 | 6 | 30 | | | | |
| Diethylphthalate | 62* | 80 | 76-127 | 25 | 30 | | | | |
| Dimethylphthalate | 81 | 82 | 62-136 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 108 | 120 | 39-167 | 11 | 30 | | | | |
| Fluoranthene | 90 | 99 | 47-135 | 9 | 30 | | | | |
| Fluorene | 80 | 92 | 50-129 | 13 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 68 | 74 | 17-136 | 8 | 30 | | | | |
| 1-Methylnaphthalene | 91 | 96 | 50-131 | 5 | 30 | | | | |
| 2-Methylnaphthalene | 91 | 95 | 28-144 | 4 | 30 | | | | |
| Naphthalene | 85 | 90 | 31-148 | 5 | 30 | | | | |
| N-Nitrosodimethylamine | 93 | 90 | 48-113 | 4 | 30 | | | | |
| Di-n-octylphthalate | 229* | -8* | 52-162 | 98* | 30 | | | | |
| Phenanthrene | 86 | 93 | 29-142 | 7 | 30 | | | | |
| Pyrene | 80 | 88 | 26-143 | 9 | 30 | | | | |
| Batch number: 131620007A | Sample number(s): 7085554 UNSPK: P081058 | | | | | | | | |
| Aldrin | 98 | 91 | 16-126 | 7 | 50 | | | | |
| Alpha BHC | 113 | 106 | 14-140 | 6 | 50 | | | | |
| Beta BHC | 61 | 42 | 10-173 | 36 | 50 | | | | |
| Gamma BHC - Lindane | 131 | 123 | 30-137 | 6 | 50 | | | | |
| p,p-DDD | 171* | 127 | 43-149 | 29 | 50 | | | | |
| p,p-DDE | 126 | 107 | 18-161 | 16 | 50 | | | | |
| p,p-DDT | 995* | 125 | 12-193 | 113* | 50 | | | | |
| Delta BHC | 117 | 107 | 13-153 | 9 | 50 | | | | |
| Dieldrin | 131 | 116 | 19-154 | 12 | 50 | | | | |
| Endosulfan I | 103 | 99 | 16-137 | 4 | 50 | | | | |
| Endosulfan II | 148 | 0* | 10-156 | 200* | 50 | | | | |
| Endosulfan Sulfate | 176 | 162 | 10-181 | 9 | 50 | | | | |
| Endrin | 128 | 128 | 30-152 | 0 | 50 | | | | |
| Endrin Aldehyde | 119 | 106 | 10-152 | 12 | 35 | | | | |
| Endrin Ketone | 162* | 160 | 10-160 | 1 | 50 | | | | |
| Heptachlor | 147 | 134 | 16-152 | 9 | 50 | | | | |
| Heptachlor Epoxide | 118 | 105 | 17-167 | 12 | 50 | | | | |
| Methoxychlor | 219* | 215* | 34-168 | 2 | 50 | | | | |
| Batch number: 131620008A | Sample number(s): 7085553-7085554 UNSPK: P081064 | | | | | | | | |
| PCB-1016 | 47 | 66 | 16-146 | 33 | 50 | | | | |
| PCB-1260 | 42 | 53 | 40-134 | 23 | 50 | | | | |
| Batch number: 131610003A | Sample number(s): 7085553-7085554 UNSPK: P081064 | | | | | | | | |
| EFH (C12-C14) | 96 | 91 | 49-123 | 5 | 20 | | | | |
| EFH (C15-C20) | 293* | 270* | 49-123 | 8 | 20 | | | | |
| EFH (C21-C30) | 1322* | 1646* | 49-123 | 18 | 20 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1395500
Reported: 06/20/13 at 02:02 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C30-C40) | 2447 (2) | 2930 (2) | 49-123 | 16 | 20 | | | | |
| EFH (C8-C11) | 79 | 74 | 49-123 | 7 | 20 | | | | |
| Batch number: 131600637003 | Sample number(s): 7085553-7085554 UNSPK: P081064 BKG: P081064 | | | | | | | | |
| Aluminum | 1690 (2) | 1435 (2) | 75-125 | 3 | 20 | 11,400 | 12,900 | 13 | 20 |
| Antimony | 77 | 78 | 75-125 | 1 | 20 | 3.85 U | 3.85 U | 0 (1) | 20 |
| Arsenic | 106 | 104 | 75-125 | 2 | 20 | 3.64 J | 4.46 | 20 (1) | 20 |
| Barium | 108 | 103 | 75-125 | 3 | 20 | 81.5 | 97.6 | 18 | 20 |
| Beryllium | 105 | 104 | 75-125 | 1 | 20 | 0.444 J | 0.527 J | 17 (1) | 20 |
| Boron | 102 | 102 | 75-125 | 0 | 20 | 1.73 J | 1.31 J | 27* (1) | 20 |
| Cadmium | 99 | 98 | 75-125 | 1 | 20 | 0.342 J | 0.338 J | 1 (1) | 20 |
| Calcium | 385 (2) | 235 (2) | 75-125 | 9 | 20 | 5,160 | 7,880 | 42* | 20 |
| Chromium | 113 | 106 | 75-125 | 4 | 20 | 17.1 | 19.8 | 15 | 20 |
| Cobalt | 99 | 98 | 75-125 | 1 | 20 | 4.24 | 4.93 | 15 (1) | 20 |
| Copper | 108 | 107 | 75-125 | 1 | 20 | 9.53 J | 11.5 | 19 (1) | 20 |
| Iron | 2592 (2) | 918 (2) | 75-125 | 7 | 20 | 20,400 | 23,100 | 12 | 20 |
| Lead | 102 | 96 | 75-125 | 4 | 20 | 5.26 | 6.05 | 14 (1) | 20 |
| Lithium | 105 | 102 | 75-125 | 2 | 20 | 25.4 | 27.1 | 7 | 20 |
| Magnesium | 435 (2) | 294 (2) | 75-125 | 5 | 20 | 4,470 | 4,970 | 11 | 20 |
| Manganese | 164 (2) | 142 (2) | 75-125 | 3 | 20 | 259 | 275 | 6 | 20 |
| Molybdenum | 98 | 98 | 75-125 | 0 | 20 | 0.718 J | 0.362 J | 66* (1) | 20 |
| Nickel | 103 | 102 | 75-125 | 1 | 20 | 7.30 | 9.54 | 27* (1) | 20 |
| Phosphorus | 156* | 108 | 75-125 | 9 | 20 | 371 | 449 | 19 | 20 |
| Potassium | 138* | 100 | 75-125 | 9 | 20 | 2,990 | 3,300 | 10 | 20 |
| Sodium | 102 | 100 | 75-125 | 2 | 20 | 114 | 127 | 10 (1) | 20 |
| Tin | 92 | 92 | 75-125 | 0 | 20 | 2.85 J | 2.85 J | 0 (1) | 20 |
| Titanium | 368 (2) | 282 (2) | 75-125 | 5 | 20 | 1,190 | 1,320 | 11 | 20 |
| Vanadium | 114 | 109 | 75-125 | 3 | 20 | 30.4 | 33.6 | 10 | 20 |
| Zinc | 107 | 99 | 75-125 | 4 | 20 | 54.8 | 61.1 | 11 | 20 |
| Zirconium | 102 | 101 | 75-125 | 1 | 20 | 4.81 U | 1.05 J | 200* (1) | 20 |
| Batch number: 131600637003A | Sample number(s): 7085553-7085554 UNSPK: P081064 BKG: P081064 | | | | | | | | |
| Silver | 106 | 103 | 75-125 | 2 | 20 | 0.192 U | 0.0203 J | 200* (1) | 20 |
| Strontium | 124 | 115 | 75-125 | 3 | 20 | 16.6 | 22.6 | 31* | 20 |
| Thallium | 93 | 91 | 75-125 | 1 | 20 | 0.263 | 0.266 | 1 (1) | 20 |
| Batch number: 131600637003B | Sample number(s): 7085553-7085554 UNSPK: P081064 BKG: P081064 | | | | | | | | |
| Selenium | 114 | 106 | 75-125 | 7 | 20 | 0.385 U | 0.385 U | 0 (1) | 20 |
| Batch number: 131600638002 | Sample number(s): 7085553-7085554 UNSPK: P081058 BKG: P081058 | | | | | | | | |
| 3a Mercury 7471A | 102 | 100 | 65-135 | 3 | 20 | 0.0148 J | 0.0141 J | 5 (1) | 20 |
| Batch number: 13158039402A | Sample number(s): 7085553-7085554 BKG: P085556 | | | | | | | | |
| 15a pH by 9045D | | | | | | 6.45 | 6.42 | 0 | 3 |
| Batch number: 13162162402A | Sample number(s): 7085553-7085554 BKG: P085556 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 2.8 | 2.7 | 1 | 20 |
| Batch number: 13165001 | Sample number(s): 7085553-7085554 UNSPK: P085556 | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1395500
Reported: 06/20/13 at 02:02 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 2378-TCDD | 97 | 98 | 40-135 | 2 | 20 | | | | |
| 12378-PeCDD | 100 | 100 | 40-135 | 4 | 20 | | | | |
| 123478-HxCDD | 107 | 108 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDD | 105 | 106 | 40-135 | 3 | 20 | | | | |
| 123789-HxCDD | 106 | 105 | 40-135 | 4 | 20 | | | | |
| 1234678-HpCDD | 118 | 120 | 40-135 | 2 | 20 | | | | |
| OCDD | 207* | 221* | 40-135 | 3 | 20 | | | | |
| 2378-TCDF | 104 | 103 | 40-135 | 4 | 20 | | | | |
| 12378-PeCDF | 106 | 106 | 40-135 | 3 | 20 | | | | |
| 23478-PeCDF | 105 | 107 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 108 | 108 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDF | 107 | 107 | 40-135 | 3 | 20 | | | | |
| 123789-HxCDF | 108 | 109 | 40-135 | 3 | 20 | | | | |
| 234678-HxCDF | 107 | 107 | 40-135 | 3 | 20 | | | | |
| 1234678-HpCDF | 110 | 112 | 40-135 | 2 | 20 | | | | |
| 1234789-HpCDF | 106 | 107 | 40-135 | 2 | 20 | | | | |
| OCDF | 114 | 114 | 40-135 | 3 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13159SLD026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7085553 | 80 | 83 | 92 |
| 7085554 | 85 | 91 | 96 |
| Blank | 85 | 93 | 96 |
| LCS | 85 | 93 | 99 |
| MS | 76 | 78 | 92 |
| MSD | 80 | 80 | 93 |
| Limits: | 54-129 | 61-134 | 55-129 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 131620007A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7085554 | 102 | 128* |
| Blank | 101 | 130* |
| LCS | 103 | 129* |
| MS | 99 | 160* |
| MSD | 89 | 134* |
| Limits: | 50-130 | 20-120 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1395500
Reported: 06/20/13 at 02:02 PM

## Surrogate Quality Control

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 131620008A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7085553 | 106 | 104 |
| 7085554 | 113 | 112 |
| Blank | 113 | 122* |
| LCS | 121* | 124* |
| LCSD | 118 | 127* |
| MS | 58 | 53 |
| MSD | 76 | 68 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 131610003A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7085553 | 83 | 85 |
| 7085554 | 85 | 86 |
| Blank | 86 | 82 |
| LCS | 90 | 91 |
| MS | 90 | 88 |
| MSD | 89 | 84 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13165001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7085553 | 72 | 75 | 80 | 82 | 81 | 79 |
| 7085554 | 67 | 76 | 81 | 84 | 86 | 82 |
| Blank | 66 | 75 | 87 | 96 | 89 | 83 |
| MS | 69 | 77 | 82 | 89 | 87 | 79 |
| MSD | 64 | 70 | 78 | 80 | 86 | 78 |
| OPR | 59 | 68 | 73 | 83 | 75 | 61 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7085553 | 82 | 75 | 76 | 72 | 73 | 75 |
| 7085554 | 93 | 76 | 74 | 73 | 76 | 81 |
| Blank | 119 | 78 | 75 | 73 | 80 | 85 |
| MS | 107 | 69 | 62 | 75 | 80 | 80 |
| MSD | 85 | 70 | 68 | 68 | 74 | 75 |
| OPR | 99 | 53 | 45 | 66 | 70 | 71 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7085553 | 74 | 73 | 77 | 70 | 75 |
| 7085554 | 78 | 77 | 80 | 64 | 74 |
| Blank | 82 | 86 | 89 | 64 | 78 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1395500
Reported: 06/20/13 at 02:02 PM

## Surrogate Quality Control

| | | | | | |
|---|---|---|---|---|---|
| MS | 78 | 75 | 76 | 65 | 80 |
| MSD | 73 | 70 | 69 | 59 | 69 |
| OPR | 70 | 67 | 67 | 57 | 73 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Grp# 1395500 sample# 7085553-54

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/6/2013
CarrierName: FedEx
AirbillNo: 799943102615

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20130606-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-514-SA7-SB-0.0-0.5 | 6/6/13 08:55 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | X | | | | | | | | | | | |
| SL-514-SA7-SB-0.0-0.5 | 6/6/13 08:55 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-515-SA7-SB-0.0-0.5 | 6/6/13 09:15 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | X | | | | X | | | | | | | | | | | |
| SL-515-SA7-SB-0.0-0.5 | 6/6/13 09:15 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

Special Instructions:

Sampler: V. Cortez

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stephanie Myers | 06/06/13 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | CCastle | 6/7/13 | 0920 |

Subarea 7

eurofins | Lancaster Laboratories

C#1395500

# Environmental Sample Administration
# Receipt Documentation Log

**Client/Project:** CDM Smith

**Date of Receipt:** 6/7/13

**Time of Receipt:** 0920

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | 1396 | 4.0 | ST | WI | Y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** ∅

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** [signature] 3647 **Date/Time:** 6/7/13 1030

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**J** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

| | |
|---|---|
| **A** | TIC is a possible aldol-condensation product |
| **B** | Analyte was also detected in the blank |
| **C** | Pesticide result confirmed by GC/MS |
| **D** | Compound quantitated on a diluted sample |
| **E** | Concentration exceeds the calibration range of the instrument |
| **N** | Presumptive evidence of a compound (TICs only) |
| **P** | Concentration difference between primary and confirmation columns >25% |
| **U** | Compound was not detected |
| **X,Y,Z** | Defined in case narrative |

**Inorganic Qualifiers**

| | |
|---|---|
| **B** | Value is <CRDL, but ≥IDL |
| **E** | Estimated due to interference |
| **M** | Duplicate injection precision not met |
| **N** | Spike sample not within control limits |
| **S** | Method of standard additions (MSA) used for calculation |
| **U** | Compound was not detected |
| **W** | Post digestion spike out of control limits |
| ***** | Duplicate analysis not within control limits |
| **+** | Correlation coefficient for MSA <0.995 |

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

October 17, 2013

Project: SSFL Phase 3 Sampling

Submittal Date: 10/03/2013
Group Number: 1423512
SDG: PH121
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| EB2-100213 Water | 7222777 |
| SL-541-SA7-SB-0.0-0.5 Soil | 7222778 |
| SL-541-SA7-SB-2.0-3.0 Soil | 7222779 |
| TB2-100213 Water | 7222780 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: EB2-100213 Water**
**SSFL Phase 3 Subarea 7**

**LL Sample # WW 7222777**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 14:30 by PH

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

21EB2 SDG#: PH121-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | |
| 12971 | Acenaphthene | 83-32-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.25 | J | 1.1 | 0.053 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.29 | J | 1.1 | 0.053 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.41 | J | 1.1 | 0.053 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.053 | U | 0.053 | 0.032 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.053 | U | 0.053 | 0.032 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.053 | U | 0.053 | 0.011 | 1 |
| | The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis. | | | | | | |
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.42 | U | 0.42 | 0.092 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.42 | U | 0.42 | 0.13 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.42 | U | 0.42 | 0.13 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-100213 Water**
**SSFL Phase 3 Subarea 7**

**LL Sample # WW 7222777**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 14:30 by PH

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

21EB2 SDG#: PH121-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.096 U | 0.096 | 0.048 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.096 U | 0.096 | 0.048 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.096 U | 0.096 | 0.048 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.48 U | 0.48 | 0.096 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.096 U | 0.096 | 0.048 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 U | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0027 J | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-100213 Water**
**SSFL Phase 3 Subarea 7**

**LL Sample # WW 7222777**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 14:30 by PH

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

21EB2 SDG#: PH121-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 7.1 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

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**SSFL Phase 3 Subarea 7**

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

21EB2 SDG#: PH121-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.93 | U | 1.93 | 0.387 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 0.317 | JBQ | 9.67 | 0.255 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 9.67 | U | 9.67 | 0.195 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 0.258 | JB | 9.67 | 0.203 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 0.321 | JBQ | 9.67 | 0.190 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.531 | JB | 9.67 | 0.182 | 1 |
| 10915 | OCDD | 3268-87-9 | 1.33 | JBQ | 19.3 | 0.342 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.93 | U | 1.93 | 0.267 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.550 | JBQ | 9.67 | 0.145 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.285 | JBQ | 9.67 | 0.133 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.297 | JB | 9.67 | 0.114 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.210 | JBQ | 9.67 | 0.113 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 9.67 | U | 9.67 | 0.107 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.363 | JBQ | 9.67 | 0.102 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.342 | JBQ | 9.67 | 0.0854 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.249 | JBQ | 9.67 | 0.0916 | 1 |
| 10915 | OCDF | 39001-02-0 | 1.23 | JBQ | 19.3 | 0.248 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0608 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 81 | 28 - 130 |
| 13C12-1234678-HpCDD | 91 | 23 - 140 |
| 13C12-OCDD | 101 | 17 - 157 |
| 13C12-2378-TCDF | 70 | 24 - 169 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 76 | 21 - 178 |
| 13C12-123478-HxCDF | 77 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 79 | 28 - 136 |
| 13C12-123789-HxCDF | 88 | 29 - 147 |
| 13C12-1234678-HpCDF | 86 | 28 - 143 |
| 13C12-1234789-HpCDF | 92 | 26 - 138 |
| 13C12-OCDF | 101 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-100213 Water**
**SSFL Phase 3 Subarea 7**

**LL Sample # WW 7222777**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 14:30 by PH

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21EB2 SDG#: PH121-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-100213 Water**
**SSFL Phase 3 Subarea 7**

**LL Sample # WW 7222777**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 14:30 by PH

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21EB2 SDG#: PH121-01EB

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13282WAI026 | 10/13/2013 16:50 | Catherine E Bachman | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13282WAI026 | 10/09/2013 16:55 | JoElla L Rice | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13277A20A | 10/07/2013 13:07 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13277A20A | 10/07/2013 13:07 | Marie D Beamenderfer | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 132800002A | 10/08/2013 12:34 | Monica M Souders | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 132800002A | 10/07/2013 16:30 | Seth A Farrier | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 132800018A | 10/08/2013 19:03 | Heather E Williams | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 132800018A | 10/07/2013 23:00 | Karen L Beyer | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13281001 | 10/10/2013 17:33 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13281001 | 10/08/2013 08:30 | Deborah M Zimmerman | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-100213 Water**
**SSFL Phase 3 Subarea 7**

**LL Sample # WW 7222777**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 14:30 by PH

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

21EB2 SDG#: PH121-01EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10144 | Zirconium | SW-846 6010C | 1 | 132810635001 | 10/12/2013 11:33 | Katlin N Cataldi | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 132810639001B | 10/14/2013 11:13 | Choon Y Tian | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 132810639001A | 10/14/2013 11:13 | Choon Y Tian | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 132810639001A | 10/14/2013 11:13 | Choon Y Tian | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 132810639001A | 10/14/2013 11:13 | Choon Y Tian | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 132845713016 | 10/13/2013 12:07 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 132810635001 | 10/09/2013 10:33 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 132810639001 | 10/09/2013 11:02 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 132845713016 | 10/12/2013 14:00 | Damary Valentin | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 13276003101A | 10/03/2013 18:24 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LL Sample # SW 7222778**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:45 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54100 SDG#: PH121-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 18 | U | 18 | 7.0 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 18 | U | 18 | 3.5 | 10 |
| 12969 | Anthracene | 120-12-7 | 18 | U | 18 | 3.5 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 18 | U | 18 | 7.0 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 18 | U | 18 | 7.0 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 18 | U | 18 | 7.0 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 180 | U | 180 | 35 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 18 | U | 18 | 7.0 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 18 | U | 18 | 7.0 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 190 | U | 190 | 63 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 190 | U | 190 | 63 | 10 |
| 12969 | Chrysene | 218-01-9 | 18 | U | 18 | 3.5 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 18 | U | 18 | 7.0 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 190 | U | 190 | 63 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 190 | U | 190 | 63 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 190 | U | 190 | 63 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 18 | U | 18 | 7.0 | 10 |
| 12969 | Fluorene | 86-73-7 | 18 | U | 18 | 7.0 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 18 | U | 18 | 7.0 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 18 | U | 18 | 7.0 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 18 | U | 18 | 7.0 | 10 |
| 12969 | Naphthalene | 91-20-3 | 18 | U | 18 | 7.0 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 18 | U | 18 | 7.0 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 190 | U | 190 | 63 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 18 | U | 18 | 7.0 | 10 |
| 12969 | Pyrene | 129-00-0 | 18 | U | 18 | 7.0 | 10 |

Reporting limits were raised due to interference from the sample matrix.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-541-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LL Sample # SW 7222778**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:45 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54100 SDG#: PH121-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 4.5 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 18 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,800 | | 42.3 | 7.63 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.23 | U | 4.23 | 0.783 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.05 | J | 4.23 | 0.741 | 1 |
| 06946 | Barium | 7440-39-3 | 81.0 | | 1.06 | 0.0349 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.402 | J | 1.06 | 0.0709 | 1 |
| 07914 | Boron | 7440-42-8 | 5.20 | J | 10.6 | 0.889 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.210 | J | 1.06 | 0.0804 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,350 | | 21.2 | 3.53 | 1 |
| 06951 | Chromium | 7440-47-3 | 13.2 | | 3.17 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.90 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 10.5 | | 2.12 | 0.307 | 1 |
| 01654 | Iron | 7439-89-6 | 16,400 | | 42.3 | 3.83 | 1 |
| 06955 | Lead | 7439-92-1 | 4.47 | | 3.17 | 0.529 | 1 |
| 01656 | Lithium | 7439-93-2 | 17.6 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,720 | | 10.6 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 274 | | 1.06 | 0.0878 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 1.41 | J | 2.12 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 7.67 | | 2.12 | 0.138 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 516 | | 10.6 | 3.06 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,340 | | 106 | 8.83 | 1 |
| 01667 | Sodium | 7440-23-5 | 114 | | 106 | 17.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.29 | J | 10.6 | 0.233 | 1 |
| 06970 | Titanium | 7440-32-6 | 735 | | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 26.4 | | 1.06 | 0.138 | 1 |
| 06972 | Zinc | 7440-66-6 | 42.5 | | 4.23 | 0.212 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.91 | J | 5.29 | 0.889 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.572 | | 0.423 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.212 | U | 0.212 | 0.0275 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.4 | | 1.06 | 0.180 | 5 |
| 06145 | Thallium | 7440-28-0 | 0.259 | | 0.212 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0194 | | 0.0164 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.06 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LL Sample # SW 7222778**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:45 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54100 SDG#: PH121-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.5 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-541-SA7-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 7

**LL Sample # SW 7222778**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:45 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54100 SDG#: PH121-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.06 | U | 1.06 | 0.148 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.29 | U | 5.29 | 0.107 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.29 | U | 5.29 | 0.0751 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.150 | J | 5.29 | 0.0836 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.121 | JQ | 5.29 | 0.0790 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 5.48 | B | 5.29 | 0.132 | 1 |
| 11031 | OCDD | 3268-87-9 | 56.2 | B | 10.6 | 0.0731 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.06 | U | 1.06 | 0.122 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 5.29 | U | 5.29 | 0.0771 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 5.29 | U | 5.29 | 0.0678 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.117 | JQ | 5.29 | 0.0628 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0774 | JBQ | 5.29 | 0.0604 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.29 | U | 5.29 | 0.0608 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.103 | JQ | 5.29 | 0.0578 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.747 | JB | 5.29 | 0.0417 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.115 | JQ | 5.29 | 0.0517 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.30 | JBQ | 10.6 | 0.0871 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0942 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 75 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 91 | 23 - 140 |
| 13C12-OCDD | 103 | 17 - 157 |
| 13C12-2378-TCDF | 67 | 24 - 169 |
| 13C12-12378-PeCDF | 69 | 24 - 185 |
| 13C12-23478-PeCDF | 71 | 21 - 178 |
| 13C12-123478-HxCDF | 74 | 26 - 152 |
| 13C12-123678-HxCDF | 79 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 97 | 29 - 147 |
| 13C12-1234678-HpCDF | 89 | 28 - 143 |
| 13C12-1234789-HpCDF | 88 | 26 - 138 |
| 13C12-OCDF | 97 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LL Sample # SW 7222778**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:45 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54100 SDG#: PH121-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LL Sample # SW 7222778**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:45 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54100 SDG#: PH121-02

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13280SLE026 | 10/09/2013 05:41 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13280SLE026 | 10/08/2013 09:25 | Anna E Stager | 1 |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 132780008A | 10/08/2013 04:15 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 132780008A | 10/07/2013 05:20 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 132800038A | 10/09/2013 02:09 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 132800038A | 10/08/2013 07:15 | Joseph S Feister | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13283005 | 10/14/2013 16:40 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13283005 | 10/10/2013 10:20 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 13:30 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 132810637001B | 10/14/2013 07:57 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 132810637001A | 10/14/2013 07:57 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 132810637001A | 10/14/2013 09:21 | Choon Y Tian | 5 |
| 06145 | Thallium | SW-846 6020A | 1 | 132810637001A | 10/14/2013 07:57 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-SA7-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 7**

**LL Sample # SW 7222778**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:45 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54100 SDG#: PH121-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 132810638001 | 10/10/2013 06:53 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 132810637001 | 10/09/2013 10:20 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 132810638001 | 10/09/2013 14:15 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13276039404B | 10/03/2013 23:25 | Michelle L Lalli | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13283162401B | 10/11/2013 00:56 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-541-SA7-SB-2.0-3.0 Soil
SSFL Phase 3 Subarea 7

**LL Sample # SW 7222779**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:50 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54123 SDG#: PH121-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.42 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 0.9 | U | 0.9 | 0.2 | 22.28 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10592 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 10592 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 10592 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 10592 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 10592 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 10592 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 10592 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 10592 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s)

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LL Sample # SW 7222779**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:50 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54123 SDG#: PH121-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| was not detected in the sample, the data is reported. | | | | | | | |
| **GC Petroleum Hydrocarbons** | | **SW-846 8015B modified** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 3.0 | J | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 13 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,070 | | 41.2 | 7.43 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.12 | U | 4.12 | 0.763 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.06 | J | 4.12 | 0.722 | 1 |
| 06946 | Barium | 7440-39-3 | 62.5 | | 1.03 | 0.0340 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.415 | J | 1.03 | 0.0691 | 1 |
| 07914 | Boron | 7440-42-8 | 6.34 | J | 10.3 | 0.866 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.219 | J | 1.03 | 0.0784 | 1 |
| 01650 | Calcium | 7440-70-2 | 7,590 | | 20.6 | 3.44 | 1 |
| 06951 | Chromium | 7440-47-3 | 14.7 | | 3.09 | 0.165 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.95 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 9.45 | | 2.06 | 0.299 | 1 |
| 01654 | Iron | 7439-89-6 | 15,900 | | 41.2 | 3.73 | 1 |
| 06955 | Lead | 7439-92-1 | 3.39 | | 3.09 | 0.515 | 1 |
| 01656 | Lithium | 7439-93-2 | 27.7 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,470 | | 10.3 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 228 | | 1.03 | 0.0856 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.275 | J | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 7.33 | | 2.06 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 383 | | 10.3 | 2.98 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,580 | | 103 | 8.60 | 1 |
| 01667 | Sodium | 7440-23-5 | 111 | | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 2.64 | J | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 833 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.6 | | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 48.8 | | 4.12 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.37 | J | 5.15 | 0.866 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.412 | U | 0.412 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.206 | U | 0.206 | 0.0268 | 2 |
| 06144 | Strontium | 7440-24-6 | 18.6 | | 0.412 | 0.0701 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.248 | | 0.206 | 0.0309 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0163 | U | 0.0163 | 0.0098 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.27 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LL Sample # SW 7222779**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:50 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54123 SDG#: PH121-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.0 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-541-SA7-SB-2.0-3.0 Soil
SSFL Phase 3 Subarea 7

**LL Sample # SW 7222779**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:50 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54123 SDG#: PH121-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.133 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.115 | JQ | 5.12 | 0.107 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.12 | U | 5.12 | 0.0497 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 5.12 | U | 5.12 | 0.0527 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 5.12 | U | 5.12 | 0.0543 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.397 | JB | 5.12 | 0.0685 | 1 |
| 11031 | OCDD | 3268-87-9 | 4.27 | JB | 10.2 | 0.0765 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 | U | 1.02 | 0.106 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0742 | JBQ | 5.12 | 0.0661 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 5.12 | U | 5.12 | 0.0610 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 5.12 | U | 5.12 | 0.0489 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.12 | U | 5.12 | 0.0461 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0426 | JQ | 5.12 | 0.0326 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 5.12 | U | 5.12 | 0.0455 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0790 | JBQ | 5.12 | 0.0267 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 5.12 | U | 5.12 | 0.0385 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.262 | JBQ | 10.2 | 0.0782 | 1 |
| **Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00526 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 88 | 23 - 140 |
| 13C12-OCDD | 94 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 70 | 24 - 185 |
| 13C12-23478-PeCDF | 67 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 80 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 139 | 29 - 147 |
| 13C12-1234678-HpCDF | 93 | 28 - 143 |
| 13C12-1234789-HpCDF | 81 | 26 - 138 |
| 13C12-OCDF | 87 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LL Sample # SW 7222779**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:50 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54123 SDG#: PH121-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LL Sample # SW 7222779**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:50 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54123 SDG#: PH121-03

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13280SLE026 | 10/09/2013 06:14 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13280SLE026 | 10/08/2013 09:25 | Anna E Stager | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13281A16A | 10/08/2013 23:26 | Laura M Krieger | 22.28 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201327632621 | 10/03/2013 14:17 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201327632621 | 10/03/2013 14:17 | Mitchell R Washel | n.a. |
| 10592 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 132780008A | 10/08/2013 04:33 | Monica M Souders | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 132780008A | 10/07/2013 05:20 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 132800038A | 10/09/2013 01:48 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 132800038A | 10/08/2013 07:15 | Joseph S Feister | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13283005 | 10/14/2013 17:36 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13283005 | 10/10/2013 10:20 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 132810637001 | 10/14/2013 12:48 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-SA7-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 7**

**LL Sample # SW 7222779**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:50 by VC

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54123 SDG#: PH121-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 132810637001B | 10/14/2013 07:34 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 132810637001A | 10/14/2013 07:34 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 132810637001A | 10/14/2013 07:34 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 132810637001A | 10/14/2013 07:34 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 132810638001 | 10/10/2013 06:55 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 132810637001 | 10/09/2013 10:20 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 132810638001 | 10/09/2013 14:15 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13276039404B | 10/03/2013 23:25 | Michelle L Lalli | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13283162401B | 10/11/2013 00:56 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-100213 Water**
**SSFL Phase 3 Subarea 7**

**LL Sample # WW 7222780**
**LL Group # 1423512**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 10/02/2013 08:00

Submitted: 10/03/2013 10:05
Reported: 10/17/2013 15:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

121TB SDG#: PH121-03TB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13277A20A | 10/07/2013 13:28 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13277A20A | 10/07/2013 13:28 | Marie D Beamenderfer | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1423512
Reported: 10/17/13 at 03:05 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13280SLE026 | Sample number(s): 7222778-7222779 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 120 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 93 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 99 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 106 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 74 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 104 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-112 | | |
| Batch number: 13282WAI026 | Sample number(s): 7222777 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 57* | 98 | 77-118 | 53* | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 57* | 104 | 80-123 | 59* | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 60* | 104 | 78-123 | 53* | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 62* | 103 | 73-127 | 50* | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 65* | 105 | 72-120 | 47* | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 66* | 107 | 79-136 | 47* | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 60* | 99 | 70-130 | 49* | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 75 | 105 | 64-130 | 33* | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 71* | 112 | 73-131 | 45* | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 42 | 71 | 40-138 | 50* | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 61* | 101 | 64-141 | 50* | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 63* | 100 | 76-125 | 45* | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 85 | 104 | 58-131 | 20 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 63* | 104 | 64-128 | 49* | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 50 | 83 | 23-139 | 50* | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1423512
Reported: 10/17/13 at 03:05 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 130 | 72 | 70-143 | 58* | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 61* | 104 | 79-124 | 51* | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 55* | 97 | 74-115 | 55* | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 78 | 104 | 62-130 | 29 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 60* | 106 | 80-126 | 55* | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 58* | 103 | 81-124 | 56* | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 57* | 101 | 75-120 | 56* | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 68 | 85 | 36-120 | 21 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 92 | 96 | 57-145 | 4 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 58* | 98 | 75-120 | 52* | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 61* | 99 | 71-130 | 48* | 30 |
| Batch number: 13277A20A | Sample number(s): 7222777,7222780 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 108 | 110 | 75-135 | 2 | 30 |
| Batch number: 13281A16A | Sample number(s): 7222779 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 78 | | 67-119 | | |
| Batch number: 132780008A | Sample number(s): 7222778-7222779 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 81 | 90* | 62-87 | 11 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 96 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 116 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 132800002A | Sample number(s): 7222777 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 63 | 73 | 35-84 | 14 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 80 | 87 | 67-117 | 8 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 99 | 108 | 67-128 | 9 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 132800018A | Sample number(s): 7222777 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 86 | 88 | 70-130 | 3 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 99 | 98 | 70-130 | 2 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 92 | 93 | 70-130 | 1 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 81 | 81 | 70-130 | 0 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 64* | 65* | 70-130 | 1 | 30 |
| Batch number: 132800038A | Sample number(s): 7222778-7222779 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 86 | | 70-123 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 75-128 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1423512
Reported: 10/17/13 at 03:05 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 86 | | 64-134 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 65 | | 65-128 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 71 | | 49-107 | | |
| Batch number: 132810635001 | Sample number(s): 7222777 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0828 | mg/l | 101 | 99 | 90-112 | 2 | 20 |
| Antimony | 0.0400 | U | 0.0400 | 0.0053 | mg/l | 102 | 103 | 88-111 | 1 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 102 | 99 | 90-113 | 3 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 103 | 101 | 90-110 | 2 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 100 | 98 | 90-111 | 1 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0084 | mg/l | 96 | 95 | 90-110 | 1 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00076 | mg/l | 102 | 101 | 90-112 | 1 | 20 |
| Calcium | 0.400 | U | 0.400 | 0.0334 | mg/l | 101 | 99 | 90-112 | 2 | 20 |
| Chromium | 0.0300 | U | 0.0300 | 0.0016 | mg/l | 101 | 99 | 90-110 | 2 | 20 |
| Cobalt | 0.0100 | U | 0.0100 | 0.0013 | mg/l | 103 | 102 | 90-110 | 1 | 20 |
| Copper | 0.0200 | U | 0.0200 | 0.0027 | mg/l | 106 | 105 | 90-112 | 1 | 20 |
| Iron | 0.400 | U | 0.400 | 0.0430 | mg/l | 101 | 99 | 90-112 | 2 | 20 |
| Lead | 0.0300 | U | 0.0300 | 0.0047 | mg/l | 104 | 101 | 88-110 | 2 | 20 |
| Lithium | 0.0400 | U | 0.0400 | 0.0047 | mg/l | 102 | 101 | 90-110 | 1 | 20 |
| Magnesium | 0.200 | U | 0.200 | 0.0167 | mg/l | 100 | 98 | 89-110 | 2 | 20 |
| Manganese | 0.0100 | U | 0.0100 | 0.00083 | mg/l | 103 | 102 | 90-110 | 1 | 20 |
| Molybdenum | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 106 | 106 | 90-110 | 0 | 20 |
| Nickel | 0.0200 | U | 0.0200 | 0.0015 | mg/l | 105 | 104 | 90-111 | 1 | 20 |
| Phosphorus | 0.0547 | J | 0.200 | 0.0418 | mg/l | 106 | 104 | 90-110 | 2 | 20 |
| Potassium | 0.203 | J | 1.00 | 0.0980 | mg/l | 100 | 99 | 90-110 | 2 | 20 |
| Sodium | 2.00 | U | 2.00 | 0.167 | mg/l | 100 | 99 | 87-114 | 1 | 20 |
| Tin | 0.0400 | U | 0.0400 | 0.0029 | mg/l | 99 | 99 | 90-110 | 0 | 20 |
| Titanium | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 103 | 102 | 90-113 | 1 | 20 |
| Vanadium | 0.0100 | U | 0.0100 | 0.0020 | mg/l | 102 | 101 | 90-110 | 1 | 20 |
| Zinc | 0.0059 | J | 0.0400 | 0.0020 | mg/l | 101 | 100 | 90-110 | 1 | 20 |
| Zirconium | 0.100 | U | 0.100 | 0.0084 | mg/l | 103 | 102 | 90-110 | 1 | 20 |
| Batch number: 132810637001 | Sample number(s): 7222778-7222779 | | | | | | | | | |
| Aluminum | 9.86 | J | 40.0 | 7.21 | mg/kg | 104 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 101 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 99 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 100 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 91 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 100 | | 80-120 | | |
| Calcium | 12.9 | J | 20.0 | 3.34 | mg/kg | 103 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 101 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 103 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 108 | | 80-120 | | |
| Iron | 3.84 | J | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 102 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 105 | | 80-120 | | |
| Magnesium | 2.49 | J | 10.0 | 1.67 | mg/kg | 103 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 103 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 105 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 101 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 102 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1423512
Reported: 10/17/13 at 03:05 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Tin | 1.41 | J | 10.0 | 0.220 | mg/kg | 100 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 102 | | 80-120 | | |
| Zinc | 0.656 | J | 4.00 | 0.200 | mg/kg | 101 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 102 | | 80-120 | | |
| Batch number: 132810637001A | Sample number(s): 7222778-7222779 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 107 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 102 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 102 | | 80-120 | | |
| Batch number: 132810637001B | Sample number(s): 7222778-7222779 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 111 | | 80-120 | | |
| Batch number: 132810638001 | Sample number(s): 7222778-7222779 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 106 | | 85-120 | | |
| Batch number: 132810639001A | Sample number(s): 7222777 | | | | | | | | | |
| Silver | 0.0010 | U | 0.0010 | 0.00011 | mg/l | 102 | 104 | 90-115 | 2 | 20 |
| Strontium | 0.0020 | U | 0.0020 | 0.00034 | mg/l | 101 | 102 | 90-110 | 1 | 20 |
| Thallium | 0.0010 | U | 0.0010 | 0.00015 | mg/l | 104 | 106 | 90-115 | 2 | 20 |
| Batch number: 132810639001B | Sample number(s): 7222777 | | | | | | | | | |
| Selenium | 0.0040 | U | 0.0040 | 0.00050 | mg/l | 104 | 104 | 90-120 | 0 | 20 |
| Batch number: 132845713016 | Sample number(s): 7222777 | | | | | | | | | |
| 3b Mercury 7470A | 0.00020 | U | 0.00020 | 0.00006 0 | mg/l | 102 | 101 | 90-115 | 1 | 20 |
| Batch number: 13276003101A | Sample number(s): 7222777 | | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 99 | | 99-103 | | |
| Batch number: 13276039404B | Sample number(s): 7222778-7222779 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 13283162401B | Sample number(s): 7222778-7222779 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13281001 | Sample number(s): 7222777 | | | | | | | | | |
| 2378-TCDD | 2.00 | U | 2.00 | 0.338 | pg/l | 94 | | 60-150 | | |
| 12378-PeCDD | 0.427 | J | 10.0 | 0.280 | pg/l | 99 | | 60-150 | | |
| 123478-HxCDD | 10.0 | U | 10.0 | 0.266 | pg/l | 99 | | 60-150 | | |
| 123678-HxCDD | 0.572 | J | 10.0 | 0.281 | pg/l | 102 | | 60-150 | | |
| 123789-HxCDD | 0.348 | J | 10.0 | 0.258 | pg/l | 97 | | 60-150 | | |
| 1234678-HpCDD | 0.614 | J | 10.0 | 0.281 | pg/l | 97 | | 60-150 | | |
| OCDD | 1.53 | J | 20.0 | 0.593 | pg/l | 96 | | 60-150 | | |
| 2378-TCDF | 2.00 | U | 2.00 | 0.230 | pg/l | 92 | | 60-150 | | |
| 12378-PeCDF | 0.502 | J | 10.0 | 0.124 | pg/l | 96 | | 60-150 | | |
| 23478-PeCDF | 0.364 | J | 10.0 | 0.116 | pg/l | 95 | | 60-150 | | |
| 123478-HxCDF | 0.571 | J | 10.0 | 0.181 | pg/l | 95 | | 60-150 | | |
| 123678-HxCDF | 0.559 | J | 10.0 | 0.178 | pg/l | 98 | | 60-150 | | |
| 123789-HxCDF | 0.600 | J | 10.0 | 0.186 | pg/l | 99 | | 60-150 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1423512
Reported: 10/17/13 at 03:05 PM

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 234678-HxCDF | 0.387 | J | 10.0 | 0.171 | pg/l | 98 | | 60-150 | | |
| 1234678-HpCDF | 0.745 | J | 10.0 | 0.144 | pg/l | 99 | | 60-150 | | |
| 1234789-HpCDF | 0.694 | J | 10.0 | 0.156 | pg/l | 98 | | 60-150 | | |
| OCDF | 2.35 | J | 20.0 | 0.424 | pg/l | 99 | | 60-150 | | |
| Batch number: 13283005 | Sample number(s): 7222778-7222779 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.140 | ng/kg | 87 | | 67-158 | | |
| 12378-PeCDD | 5.00 | U | 5.00 | 0.115 | ng/kg | 96 | | 70-142 | | |
| 123478-HxCDD | 5.00 | U | 5.00 | 0.0593 | ng/kg | 101 | | 70-164 | | |
| 123678-HxCDD | 5.00 | U | 5.00 | 0.0617 | ng/kg | 99 | | 76-134 | | |
| 123789-HxCDD | 5.00 | U | 5.00 | 0.0661 | ng/kg | 93 | | 64-162 | | |
| 1234678-HpCDD | 0.0753 | J | 5.00 | 0.0723 | ng/kg | 93 | | 70-140 | | |
| OCDD | 0.215 | J | 10.0 | 0.0473 | ng/kg | 97 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.137 | ng/kg | 94 | | 75-158 | | |
| 12378-PeCDF | 0.0800 | J | 5.00 | 0.0711 | ng/kg | 95 | | 80-134 | | |
| 23478-PeCDF | 5.00 | U | 5.00 | 0.0701 | ng/kg | 95 | | 68-160 | | |
| 123478-HxCDF | 5.00 | U | 5.00 | 0.0561 | ng/kg | 98 | | 72-134 | | |
| 123678-HxCDF | 0.0948 | J | 5.00 | 0.0516 | ng/kg | 98 | | 84-130 | | |
| 123789-HxCDF | 5.00 | U | 5.00 | 0.0600 | ng/kg | 84 | | 78-130 | | |
| 234678-HxCDF | 5.00 | U | 5.00 | 0.0489 | ng/kg | 95 | | 70-156 | | |
| 1234678-HpCDF | 0.0423 | J | 5.00 | 0.0263 | ng/kg | 93 | | 82-122 | | |
| 1234789-HpCDF | 5.00 | U | 5.00 | 0.0422 | ng/kg | 96 | | 78-138 | | |
| OCDF | 0.137 | J | 10.0 | 0.0908 | ng/kg | 98 | | 63-170 | | |
| Batch number: 13281001 | Sample number(s): 7222777 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.164 | | | | pg/l | | | | | |
| Batch number: 13283005 | Sample number(s): 7222778-7222779 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | U | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13280SLE026 | Sample number(s): 7222778-7222779 UNSPK: P222763 | | | | | | | | |
| Acenaphthene | 96 | 96 | 48-127 | 0 | 30 | | | | |
| Acenaphthylene | 104 | 103 | 49-121 | 1 | 30 | | | | |
| Anthracene | 99 | 97 | 52-126 | 3 | 30 | | | | |
| Benzo(a)anthracene | 97 | 94 | 44-143 | 2 | 30 | | | | |
| Benzo(a)pyrene | 97 | 97 | 44-140 | 0 | 30 | | | | |
| Benzo(b)fluoranthene | 113 | 117 | 26-142 | 4 | 30 | | | | |
| Benzo(e)pyrene | 89 | 89 | 70-130 | 0 | 30 | | | | |
| Benzo(g,h,i)perylene | 101 | 101 | 33-141 | 0 | 30 | | | | |
| Benzo(k)fluoranthene | 102 | 100 | 54-142 | 1 | 30 | | | | |
| Butylbenzylphthalate | 107 | 105 | 49-151 | 2 | 30 | | | | |
| Di-n-butylphthalate | 108 | 106 | 52-147 | 2 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1423512
Reported: 10/17/13 at 03:05 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Chrysene | 96 | 94 | 29-148 | 2 | 30 | | | | |
| Dibenz(a,h)anthracene | 104 | 104 | 20-137 | 0 | 30 | | | | |
| Diethylphthalate | 105 | 102 | 43-145 | 2 | 30 | | | | |
| Dimethylphthalate | 101 | 101 | 58-129 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 103 | 101 | 39-167 | 2 | 30 | | | | |
| Fluoranthene | 100 | 98 | 40-148 | 2 | 30 | | | | |
| Fluorene | 101 | 98 | 51-137 | 4 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 103 | 103 | 17-136 | 0 | 30 | | | | |
| 1-Methylnaphthalene | 103 | 100 | 50-131 | 2 | 30 | | | | |
| 2-Methylnaphthalene | 97 | 94 | 35-152 | 3 | 30 | | | | |
| Naphthalene | 100 | 97 | 31-148 | 2 | 30 | | | | |
| N-Nitrosodimethylamine | 61 | 60 | 48-113 | 2 | 30 | | | | |
| Di-n-octylphthalate | 109 | 109 | 52-162 | 0 | 30 | | | | |
| Phenanthrene | 96 | 93 | 29-142 | 2 | 30 | | | | |
| Pyrene | 95 | 93 | 26-143 | 2 | 30 | | | | |
| Batch number: 13281A16A | Sample number(s): 7222779 UNSPK: P218895 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 87 | 94 | 69-123 | 9 | 30 | | | | |
| Batch number: 132780008A | Sample number(s): 7222778-7222779 UNSPK: P218895 | | | | | | | | |
| PCB-1016 | 88 | 90 | 41-135 | 4 | 50 | | | | |
| PCB-1260 | 99 | 111 | 40-134 | 12 | 50 | | | | |
| Batch number: 132800038A | Sample number(s): 7222778-7222779 UNSPK: P220653 | | | | | | | | |
| EFH (C12-C14) | 83 | 74 | 49-123 | 12 | 20 | | | | |
| EFH (C15-C20) | 98 | 93 | 49-123 | 6 | 20 | | | | |
| EFH (C21-C30) | 83 | 71 | 49-123 | 15 | 20 | | | | |
| EFH (C30-C40) | 59 | 56 | 49-123 | 5 | 20 | | | | |
| EFH (C8-C11) | 71 | 67 | 49-123 | 6 | 20 | | | | |
| Batch number: 132810637001 | Sample number(s): 7222778-7222779 UNSPK: 7222779 BKG: 7222779 | | | | | | | | |
| Aluminum | 2134 (2) | 1672 (2) | 75-125 | 8 | 20 | 8,800 | 9,900 | 12 | 20 |
| Antimony | 58* | 50* | 75-125 | 17 | 20 | 4.00 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 103 | 95 | 75-125 | 7 | 20 | 3.94 J | 4.24 | 7 (1) | 20 |
| Barium | 105 | 97 | 75-125 | 7 | 20 | 60.6 | 66.6 | 9 | 20 |
| Beryllium | 101 | 96 | 75-125 | 6 | 20 | 0.403 J | 0.413 J | 2 (1) | 20 |
| Boron | 91 | 88 | 75-125 | 6 | 20 | 6.15 J | 6.11 J | 1 (1) | 20 |
| Cadmium | 96 | 93 | 75-125 | 5 | 20 | 0.212 J | 0.254 J | 18 (1) | 20 |
| Calcium | -7 (2) | -181 (2) | 75-125 | 10 | 20 | 7,360 | 7,550 | 3 | 20 |
| Chromium | 119 | 104 | 75-125 | 9 | 20 | 14.2 | 17.3 | 19 (1) | 20 |
| Cobalt | 97 | 93 | 75-125 | 6 | 20 | 3.83 | 4.41 | 14 (1) | 20 |
| Copper | 111 | 104 | 75-125 | 6 | 20 | 9.16 | 10.1 | 10 (1) | 20 |
| Iron | 2130 (2) | 574 (2) | 75-125 | 9 | 20 | 15,500 | 17,200 | 10 | 20 |
| Lead | 99 | 95 | 75-125 | 5 | 20 | 3.29 | 3.91 | 17 (1) | 20 |
| Lithium | 106 | 100 | 75-125 | 6 | 20 | 26.9 | 30.2 | 11 | 20 |
| Magnesium | 560 (2) | 327 (2) | 75-125 | 9 | 20 | 4,340 | 4,900 | 12 | 20 |
| Manganese | 158 (2) | 105 (2) | 75-125 | 10 | 20 | 221 | 250 | 12 | 20 |
| Molybdenum | 99 | 96 | 75-125 | 5 | 20 | 0.267 J | 0.290 J | 8 (1) | 20 |
| Nickel | 99 | 94 | 75-125 | 6 | 20 | 7.11 | 8.40 | 17 (1) | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1423512
Reported: 10/17/13 at 03:05 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Phosphorus | 298* | 38* | 75-125 | 48* | 20 | 371 | 362 | 3 | 20 |
| Potassium | 136* | 105 | 75-125 | 9 | 20 | 2,500 | 2,760 | 10 | 20 |
| Sodium | 102 | 98 | 75-125 | 5 | 20 | 108 | 126 | 16 (1) | 20 |
| Tin | 91 | 89 | 75-125 | 5 | 20 | 2.56 J | 2.58 J | 1 (1) | 20 |
| Titanium | 525 (2) | 340 (2) | 75-125 | 15 | 20 | 808 | 896 | 10 | 20 |
| Vanadium | 116 | 104 | 75-125 | 8 | 20 | 26.8 | 29.8 | 10 | 20 |
| Zinc | 105 | 93 | 75-125 | 7 | 20 | 47.4 | 51.2 | 8 | 20 |
| Zirconium | 102 | 99 | 75-125 | 5 | 20 | 2.30 J | 3.36 J | 37* (1) | 20 |
| Batch number: 132810637001A | Sample number(s): 7222778-7222779 UNSPK: 7222779 BKG: 7222779 | | | | | | | | |
| Silver | 111 | 110 | 75-125 | 3 | 20 | 0.200 U | 0.194 U | 0 (1) | 20 |
| Strontium | 42* | 263* | 75-125 | 57* | 20 | 18.0 | 18.2 | 1 | 20 |
| Thallium | 107 | 102 | 75-125 | 4 | 20 | 0.241 | 0.257 | 7 (1) | 20 |
| Batch number: 132810637001B | Sample number(s): 7222778-7222779 UNSPK: 7222779 BKG: 7222779 | | | | | | | | |
| Selenium | 109 | 111 | 75-125 | 0 | 20 | 0.400 U | 0.388 U | 0 (1) | 20 |
| Batch number: 132810638001 | Sample number(s): 7222778-7222779 UNSPK: 7222779 BKG: 7222779 | | | | | | | | |
| 3a Mercury 7471A | 111 | 106 | 65-135 | 4 | 20 | 0.0158 U | 0.0160 U | 0 (1) | 20 |
| Batch number: 13276003101A | Sample number(s): 7222777 BKG: P220584 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 7.5 | 7.5 | 1 | 3 |
| Batch number: 13276039404B | Sample number(s): 7222778-7222779 BKG: 7222779 | | | | | | | | |
| 15a pH by 9045D | | | | | | 8.27 | 8.27 | 0 | 3 |
| Batch number: 13283162401B | Sample number(s): 7222778-7222779 BKG: P220658 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 15.5 | 16.1 | 4 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13280SLE026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7222778 | 98 | 92 | 103 |
| 7222779 | 92 | 97 | 100 |
| Blank | 88 | 94 | 102 |
| LCS | 91 | 99 | 104 |
| MS | 90 | 95 | 101 |
| MSD | 89 | 97 | 102 |
| Limits: | 54-129 | 59-125 | 61-125 |

Analysis Name: 7b SVOC SIM EPA 8270D

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1423512
Reported: 10/17/13 at 03:05 PM

## Surrogate Quality Control

Batch number: 13282WAI026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7222777 | 87 | 89 | 84 |
| Blank | 96 | 106 | 97 |
| LCS | 57 | 69 | 57 |
| LCSD | 97 | 111 | 100 |
| Limits: | 44-137 | 62-141 | 51-136 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13277A20A

| | Trifluorotoluene-F |
|---|---|
| 7222777 | 95 |
| 7222780 | 94 |
| Blank | 94 |
| LCS | 100 |
| LCSD | 99 |
| Limits: | 63-135 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13281A16A

| | Trifluorotoluene-F |
|---|---|
| 7222779 | 91 |
| Blank | 102 |
| LCS | 86 |
| MS | 85 |
| MSD | 93 |
| Limits: | 50-142 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 132780008A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7222778 | 118 | 106 |
| 7222779 | 115 | 119 |
| Blank | 112 | 112 |
| LCS | 117 | 122* |
| LCSD | 120 | 123* |
| MS | 107 | 109 |
| MSD | 113 | 113 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 132800002A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7222777 | 99 | 83 |
| Blank | 92 | 96 |
| LCS | 94 | 100 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1423512
Reported: 10/17/13 at 03:05 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| LCSD | 103 | 97 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 132800018A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7222777 | 94 | 91 |
| Blank | 93 | 90 |
| LCS | 90 | 87 |
| LCSD | 92 | 81 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 132800038A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7222778 | 88 | 83 |
| 7222779 | 87 | 83 |
| Blank | 91 | 85 |
| LCS | 87 | 74 |
| MS | 88 | 75 |
| MSD | 82 | 74 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 13281001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7222777 | 70 | 76 | 77 | 77 | 79 | 88 |
| Blank | 73 | 83 | 80 | 80 | 81 | 82 |
| OPR | 78 | 77 | 82 | 82 | 84 | 82 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7222777 | 86 | 92 | 101 | 76 | 82 | 80 |
| Blank | 83 | 87 | 92 | 83 | 84 | 82 |
| OPR | 81 | 80 | 74 | 77 | 83 | 82 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7222777 | 81 | 91 | 101 | 70 | 75 |
| Blank | 82 | 87 | 91 | 73 | 81 |
| OPR | 83 | 79 | 75 | 78 | 78 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13283005

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1423512
Reported: 10/17/13 at 03:05 PM

## Surrogate Quality Control

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7222778 | 73 | 71 | 74 | 79 | 81 | 97 |
| 7222779 | 70 | 67 | 75 | 80 | 81 | 139 |
| Blank | 65 | 60 | 66 | 74 | 72 | 80 |
| OPR | 74 | 65 | 66 | 75 | 76 | 141 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7222778 | 89 | 88 | 97 | 75 | 77 | 83 |
| 7222779 | 93 | 81 | 87 | 70 | 78 | 86 |
| Blank | 92 | 75 | 77 | 66 | 73 | 79 |
| OPR | 97 | 81 | 78 | 70 | 75 | 80 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7222778 | 82 | 91 | 103 | 67 | 69 |
| 7222779 | 83 | 88 | 94 | 64 | 70 |
| Blank | 77 | 84 | 90 | 56 | 63 |
| OPR | 81 | 91 | 95 | 62 | 68 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

13013 1423512 7222777-80

**CDM Smith**

DateShipped: 10/2/2013
CarrierName: FedEx
AirbillNo: 796825280883

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131002-03
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-541-SA7-SB-0.0-0.5 | 10/2/13 08:45 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | |
| SL-541-SA7-SB-0.0-0.5 | 10/2/13 08:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-541-SA7-SB-2.0-3.0 | 10/2/13 08:50 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | |
| SL-541-SA7-SB-2.0-3.0 | 10/2/13 08:50 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| TB2-100213 | 10/2/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |

Special Instructions:

Sampler: V. Cortez

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stay Mupello | 10/02/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 10-3-13 | 1003 |

Subarea 7

13013 1423512 7222777-80

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 10/2/2013

CarrierName: FedEx

AirbillNo: 796825280883

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20131002-02

Cooler #: 2

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB2-100213 | 10/2/13 14:30 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-100213 | 10/2/13 14:30 | WQ | None | 2 - 250 mL Amber | 10 day | | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | | | | |
| EB2-100213 | 10/2/13 14:30 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-100213 | 10/2/13 14:30 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB2-100213 | 10/2/13 14:30 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| EB2-100213 | 10/2/13 14:30 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |

Special Instructions:

**Sampler:** Pa Hart

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 10/02/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 10-3-13 | 1005 |

Subarea 7

eurofins | Lancaster Laboratories

# Environmental Sample Administration Receipt Documentation Log

1423512

**Client/Project:** CBM Smith

**Date of Receipt:** 10-3-13

**Time of Receipt:** 1005

**Source Code:** 5

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT131 | 1.3 | TB | WI | Y | B | |
| 2 | ↓ | 1.2 | ↓ | ↓ | ↓ | ↓ | |
| 3 | ↓ | 1.6 | ↓ | ↓ | ↓ | ↓ | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** Ø

**Paperwork Discrepancy/Unpacking Problems:**

SL-900-SA5D-SB-0.0-0.5 has collection time on label @ 1320

SL-900-SA5D-SB-0.0-0.5 Sleeve has collection time on label @ 1330

**Unpacker Signature/Emp#:** [signature] 5200 **Date/Time:** 10-3-13 1105

Issued by Dept. 6042 Management

2174.06

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

December 30, 2013

Project: SSFL Phase 3 Sampling

Submittal Date: 12/04/2013
Group Number: 1438204
SDG: PH138
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-502-NBZ-SB-0.0-0.5 Soil | 7300094 |
| SL-502-NBZ-SB-4.0-5.0 Soil | 7300095 |
| SL-503-NBZ-SB-0.0-0.5 Soil | 7300096 |
| SL-503-NBZ-SB-2.0-3.0 Soil | 7300097 |
| SL-504-NBZ-SB-0.0-0.5 Soil | 7300098 |
| SL-504-NBZ-SB-0.0-0.5MS Soil | 7300099 |
| SL-504-NBZ-SB-0.0-0.5MSD Soil | 7300100 |
| SL-804-NBZ-SB-0.0-0.5 Soil | 7300101 |
| SL-530-NBZ-SB-0.0-0.5 Soil | 7300102 |
| SL-531-NBZ-SB-0.0-0.5 Soil | 7300103 |
| SL-532-NBZ-SB-0.0-0.5 Soil | 7300104 |
| SL-533-NBZ-SB-0.0-0.5 Soil | 7300105 |
| TB-120313 Water | 7300106 |
| SL-509-NBZ-SB-0.0-0.5 Soil | 7300107 |
| SL-509-NBZ-SB-2.5-3.5 Soil | 7300108 |
| SL-509-NBZ-SB-2.5-3.5MS Soil | 7300109 |
| SL-509-NBZ-SB-2.5-3.5MSD Soil | 7300110 |
| SL-509-NBZ-SB-2.5-3.5DUP Soil | 7300111 |
| SL-809-NBZ-SB-2.5-3.5 Soil | 7300112 |
| SL-510-NBZ-SB-0.0-0.5 Soil | 7300113 |
| SL-510-NBZ-SB-4.0-5.0 Soil | 7300114 |
| EB-120313 Water | 7300115 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-502-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300094**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 09:20 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50200 SDG#: PH138-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.3 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.38 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.89 | U | 0.89 | 0.48 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.89 | U | 0.89 | 0.24 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.65 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.2 | U | 7.2 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.38 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 36 | U | 36 | 15 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-502-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300094**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 09:20 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50200 SDG#: PH138-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 12:28 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 00:48 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-502-NBZ-SB-4.0-5.0 Soil
SSFL NBZ

**LL Sample # SW 7300095**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 09:35 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50245 SDG#: PH138-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.25 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.92 | U | 0.92 | 0.19 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.92 | U | 0.92 | 0.19 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.1 | U | 2.1 | 1.1 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.92 | U | 0.92 | 0.19 | 1 |
| 10590 | Chlordane | 57-74-9 | 19 | U | 19 | 4.4 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.9 | U | 1.9 | 0.39 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.92 | U | 0.92 | 0.50 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.92 | U | 0.92 | 0.24 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin | 72-20-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 2.0 | U | 2.0 | 0.66 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.92 | U | 0.92 | 0.19 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.92 | U | 0.92 | 0.19 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.4 | U | 7.4 | 1.9 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.9 | U | 1.9 | 0.39 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 36 | U | 36 | 15 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.4 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-502-NBZ-SB-4.0-5.0 Soil**
**SSFL NBZ**

**LL Sample # SW 7300095**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 09:35 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50245 SDG#: PH138-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13339A16A | 12/06/2013 02:12 | Laura M Krieger | 25.25 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201333833331 | 12/04/2013 14:25 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201333833331 | 12/04/2013 14:26 | Mitchell R Washel | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 12:44 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 01:10 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-503-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300096**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:00 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50300 SDG#: PH138-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.37 | J | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 6.5 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 24 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 3.8 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-503-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300096**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:00 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50300 SDG#: PH138-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 12:59 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 01:31 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-503-NBZ-SB-2.0-3.0 Soil
SSFL NBZ

**LL Sample # SW 7300097**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:20 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50323 SDG#: PH138-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 25 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.0 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-503-NBZ-SB-2.0-3.0 Soil**
**SSFL NBZ**

**LL Sample # SW 7300097**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:20 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50323 SDG#: PH138-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13339A16A | 12/06/2013 02:49 | Laura M Krieger | 25 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201333833331 | 12/04/2013 14:27 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201333833331 | 12/04/2013 14:27 | Mitchell R Washel | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 13:14 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 01:53 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-504-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300098**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:45 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH138-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.97 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.0 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.35 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.84 | U | 0.84 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.84 | U | 0.84 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.35 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 33 | U | 33 | 14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-504-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300098**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:45 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH138-05BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 13:29 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 02:15 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-504-NBZ-SB-0.0-0.5MS Soil
SSFL NBZ

**LL Sample # SW 7300099**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:45 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH138-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 3.3 | | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.5 | | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 3.4 | | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 3.6 | | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 7.3 | | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 7.6 | | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 10 | | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.6 | | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 7.3 | | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 3.0 | | 0.85 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 7.0 | | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 7.0 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 7.5 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 6.1 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 6.5 | | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.2 | | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.8 | | 0.85 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 36 | | 6.9 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 12 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 44 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 86 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.4 | J | 5.1 | 2.0 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 2.2 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 13:44 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-504-NBZ-SB-0.0-0.5MS Soil**
**SSFL NBZ**

**LL Sample # SW 7300099**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:45 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH138-05MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 02:36 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-504-NBZ-SB-0.0-0.5MSD Soil
SSFL NBZ

**LL Sample # SW 7300100**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:45 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH138-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 3.4 | | 0.84 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.6 | | 0.84 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 3.5 | | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 3.7 | | 0.84 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 7.7 | | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 8.1 | | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 11 | | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.9 | | 0.84 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 7.4 | | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 3.1 | | 0.84 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 7.4 | | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 7.2 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 7.7 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 6.4 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 6.7 | | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.4 | | 0.84 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.9 | | 0.84 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 38 | | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 8.8 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 14 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 16 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.6 | J | 5.1 | 2.0 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 2.2 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 2.2 | | 0.10 | 0.10 | 1 |

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|

*=This limit was used in the evaluation of the final result

**Sample Description: SL-504-NBZ-SB-0.0-0.5MSD Soil**
**SSFL NBZ**

**LL Sample # SW 7300100**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:45 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50400 SDG#: PH138-05MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 14:00 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 02:58 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-804-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300101**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:55 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

80400 SDG#: PH138-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.83 | U | 0.83 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.83 | U | 0.83 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.97 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.83 | U | 0.83 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.0 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.94 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.83 | U | 0.83 | 0.45 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.83 | U | 0.83 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.60 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.83 | U | 0.83 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.83 | U | 0.83 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.7 | U | 6.7 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.35 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 33 | U | 33 | 14 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.9 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|

*=This limit was used in the evaluation of the final result

**Sample Description: SL-804-NBZ-SB-0.0-0.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300101**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:55 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

80400 SDG#: PH138-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 14:15 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 03:20 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-530-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300102**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 09:40 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53000 SDG#: PH138-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.97 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.35 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.84 | U | 0.84 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.84 | U | 0.84 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.35 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 33 | U | 33 | 14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 4.2 | J | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 2.6 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|

*=This limit was used in the evaluation of the final result

**Sample Description: SL-530-NBZ-SB-0.0-0.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300102**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 09:40 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53000 SDG#: PH138-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 14:30 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 03:41 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-531-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300103**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:50 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53100 SDG#: PH138-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.97 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.84 | U | 0.84 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.84 | U | 0.84 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 33 | U | 33 | 14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 7.9 | J | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 2.1 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-531-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300103**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:50 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53100 SDG#: PH138-08

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 14:45 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 04:03 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-532-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300104**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:20 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53200 SDG#: PH138-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.0 | J | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 2.7 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-532-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300104**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 10:20 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53200 SDG#: PH138-09

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 16:02 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 04:25 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-533-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300105**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:05 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53300 SDG#: PH138-10

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 91 | U | 91 | 45 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 27 | U | 27 | 27 | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 24 | U | 24 | 9.1 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.1 | 1 |
| 10401 | MCPA | 94-74-6 | 2,500 | U | 2,500 | 770 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,500 | U | 2,500 | 760 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.83 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.76 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 2.8 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 6.4 | J | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.1 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133450034A | 12/15/2013 22:10 | Melissa McDermott | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133450034A | 12/12/2013 06:45 | Kerrie A Freeburn | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 04:46 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-533-NBZ-SB-0.0-0.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300105**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:05 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53300 SDG#: PH138-10

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-120313 Water**
**SSFL NBZ**

**LL Sample # WW 7300106**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 08:00

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB138 SDG#: PH138-11TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13339A94A | 12/06/2013 12:39 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13339A94A | 12/06/2013 12:39 | Catherine J Schwarz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300107**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:15 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50900 SDG#: PH138-12

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-509-NBZ-SB-0.0-0.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300107**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:15 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50900 SDG#: PH138-12

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 20.3 C. | n.a. | 7.23 | | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 2.4 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300107**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:15 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50900 SDG#: PH138-12

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0771 JBQ | 0.996 | 0.0712 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 4.98 U | 4.98 | 0.0436 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 4.98 U | 4.98 | 0.0397 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0801 JBQ | 4.98 | 0.0410 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0603 JBQ | 4.98 | 0.0377 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.626 JBQ | 4.98 | 0.0662 | 1 |
| 11031 | OCDD | 3268-87-9 | 2.95 JB | 9.96 | 0.0537 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.996 U | 0.996 | 0.0555 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0635 JBQ | 4.98 | 0.0322 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 4.98 U | 4.98 | 0.0329 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.831 JB | 4.98 | 0.0586 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.139 JBQ | 4.98 | 0.0527 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0851 JB | 4.98 | 0.0589 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0564 JBQ | 4.98 | 0.0505 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.196 JBQ | 4.98 | 0.0511 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.155 JBQ | 4.98 | 0.0795 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.390 JBQ | 9.96 | 0.0790 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0925 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 62 | 25 - 164 |
| 13C12-12378-PeCDD | 72 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 79 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 89 | 23 - 140 |
| 13C12-OCDD | 96 | 17 - 157 |
| 13C12-2378-TCDF | 55 | 24 - 169 |
| 13C12-12378-PeCDF | 65 | 24 - 185 |
| 13C12-23478-PeCDF | 62 | 21 - 178 |
| 13C12-123478-HxCDF | 65 | 26 - 152 |
| 13C12-123678-HxCDF | 72 | 26 - 123 |
| 13C12-234678-HxCDF | 70 | 28 - 136 |
| 13C12-123789-HxCDF | 67 | 29 - 147 |
| 13C12-1234678-HpCDF | 98 | 28 - 143 |
| 13C12-1234789-HpCDF | 72 | 26 - 138 |
| 13C12-OCDF | 75 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-509-NBZ-SB-0.0-0.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300107**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:15 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50900 SDG#: PH138-12

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-509-NBZ-SB-0.0-0.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300107**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:15 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50900 SDG#: PH138-12

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLD026 | 12/27/2013 07:51 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLD026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 20:37 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440006A | 12/11/2013 10:36 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440006A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440024A | 12/12/2013 05:08 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440024A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13346001 | 12/14/2013 04:48 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13346001 | 12/12/2013 10:30 | Chin F Ly | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13338039402A | 12/04/2013 11:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401A | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-NBZ-SB-2.5-3.5 Soil
SSFL NBZ

**LL Sample # SW 7300108**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.87 | U | 0.87 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.87 | U | 0.87 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.87 | U | 0.87 | 0.18 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-509-NBZ-SB-2.5-3.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300108**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.60 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 20.7 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-NBZ-SB-2.5-3.5 Soil
SSFL NBZ

**LL Sample # SW 7300108**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0557 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.18 | U | 5.18 | 0.0416 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0880 | JBQ | 5.18 | 0.0468 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.114 | JBQ | 5.18 | 0.0503 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0645 | JBQ | 5.18 | 0.0452 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.526 | JB | 5.18 | 0.0719 | 1 |
| 11031 | OCDD | 3268-87-9 | 2.21 | JB | 10.4 | 0.0442 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 | U | 1.04 | 0.0460 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0572 | JBQ | 5.18 | 0.0215 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0346 | JBQ | 5.18 | 0.0217 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0618 | JBQ | 5.18 | 0.0383 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.18 | U | 5.18 | 0.0347 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.18 | U | 5.18 | 0.0400 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 5.18 | U | 5.18 | 0.0342 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.192 | JB | 5.18 | 0.0466 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.444 | JBQ | 5.18 | 0.0702 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.292 | JBQ | 10.4 | 0.0749 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00775 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 63 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 88 | 23 - 140 |
| 13C12-OCDD | 95 | 17 - 157 |
| 13C12-2378-TCDF | 56 | 24 - 169 |
| 13C12-12378-PeCDF | 66 | 24 - 185 |
| 13C12-23478-PeCDF | 63 | 21 - 178 |
| 13C12-123478-HxCDF | 71 | 26 - 152 |
| 13C12-123678-HxCDF | 76 | 26 - 123 |
| 13C12-234678-HxCDF | 72 | 28 - 136 |
| 13C12-123789-HxCDF | 68 | 29 - 147 |
| 13C12-1234678-HpCDF | 98 | 28 - 143 |
| 13C12-1234789-HpCDF | 72 | 26 - 138 |
| 13C12-OCDF | 75 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-509-NBZ-SB-2.5-3.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300108**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-509-NBZ-SB-2.5-3.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300108**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLD026 | 12/27/2013 06:14 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLD026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13339A16A | 12/05/2013 23:41 | Laura M Krieger | 25.1 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201333833331 | 12/04/2013 14:28 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201333833331 | 12/04/2013 14:29 | Mitchell R Washel | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 20:52 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440006A | 12/11/2013 10:54 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440006A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440025A | 12/12/2013 02:36 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440025A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13346001 | 12/14/2013 05:45 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13346001 | 12/12/2013 10:30 | Chin F Ly | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13338039402A | 12/04/2013 11:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401B | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-NBZ-SB-2.5-3.5MS Soil
SSFL NBZ

**LL Sample # SW 7300109**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 35 | | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 35 | | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 35 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 39 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 38 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 39 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 35 | | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 39 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 40 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 39 | | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 36 | | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 39 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 37 | | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 36 | | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 37 | | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 41 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 36 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 36 | | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 39 | | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 39 | | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 40 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 36 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 35 | | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 40 | | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 35 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 41 | | 1.7 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 10 | | 1.1 | 0.2 | 25.72 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 3.6 | | 0.87 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.9 | | 0.87 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 3.8 | | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 4.1 | | 0.87 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 8.4 | | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 8.0 | | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 8.6 | | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.9 | | 0.87 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 7.7 | | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 3.2 | | 0.87 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 6.6 | | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 7.8 | | 1.8 | 0.35 | 1 |
| 10590 | Endrin | 72-20-8 | 7.8 | | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 7.0 | | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 7.3 | | 1.9 | 0.63 | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.7 | | 0.87 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.7 | | 0.87 | 0.18 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-NBZ-SB-2.5-3.5MS Soil
SSFL NBZ

**LL Sample # SW 7300109**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Methoxychlor | 72-43-5 | 41 | | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 190 | | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 200 | | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since this sample is the matrix spike, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.4 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 6.8 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 11 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 12 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 3.7 | J | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.5 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-NBZ-SB-2.5-3.5MS Soil
SSFL NBZ

**LL Sample # SW 7300109**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 20.0 | B | 1.03 | 0.0593 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 101 | | 5.15 | 0.0570 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 103 | B | 5.15 | 0.0852 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 105 | B | 5.15 | 0.0908 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 102 | B | 5.15 | 0.0842 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 103 | B | 5.15 | 0.0894 | 1 |
| 11031 | OCDD | 3268-87-9 | 202 | B | 10.3 | 0.0557 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.6 | | 1.03 | 0.0547 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 101 | B | 5.15 | 0.0384 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 103 | B | 5.15 | 0.0380 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 103 | B | 5.15 | 0.0598 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 106 | B | 5.15 | 0.0574 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 104 | B | 5.15 | 0.0711 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 106 | B | 5.15 | 0.0595 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 103 | B | 5.15 | 0.0580 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 107 | B | 5.15 | 0.0904 | 1 |
| 11031 | OCDF | 39001-02-0 | 202 | B | 10.3 | 0.0681 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 60 | 25 - 164 |
| 13C12-12378-PeCDD | 62 | 25 - 181 |
| 13C12-123478-HxCDD | 75 | 32 - 141 |
| 13C12-123678-HxCDD | 74 | 28 - 130 |
| 13C12-123789-HxCDD | 74 | 28 - 130 |
| 13C12-1234678-HpCDD | 78 | 23 - 140 |
| 13C12-OCDD | 82 | 17 - 157 |
| 13C12-2378-TCDF | 54 | 24 - 169 |
| 13C12-12378-PeCDF | 60 | 24 - 185 |
| 13C12-23478-PeCDF | 57 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 71 | 26 - 123 |
| 13C12-234678-HxCDF | 67 | 28 - 136 |
| 13C12-123789-HxCDF | 64 | 29 - 147 |
| 13C12-1234678-HpCDF | 87 | 28 - 143 |
| 13C12-1234789-HpCDF | 65 | 26 - 138 |
| 13C12-OCDF | 66 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-509-NBZ-SB-2.5-3.5MS Soil**
**SSFL NBZ**

**LL Sample # SW 7300109**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLD026 | 12/27/2013 06:47 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLD026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13339A16A | 12/06/2013 00:18 | Laura M Krieger | 25.72 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201333833331 | 12/04/2013 14:30 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201333833331 | 12/04/2013 14:30 | Mitchell R Washel | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 21:07 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440006A | 12/11/2013 11:13 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440006A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440025A | 12/12/2013 02:58 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440025A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13346001 | 12/14/2013 06:41 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13346001 | 12/12/2013 10:30 | Chin F Ly | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401B | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-NBZ-SB-2.5-3.5MSD Soil
SSFL NBZ

**LL Sample # SW 7300110**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 34 | | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 35 | | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 35 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 39 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 37 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 38 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 35 | | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 39 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 40 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 40 | | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 36 | | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 39 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 37 | | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 36 | | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 36 | | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 39 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 36 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 35 | | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 38 | | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 39 | | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 40 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 35 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 35 | | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 40 | | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 34 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 40 | | 1.7 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 10 | | 1.0 | 0.2 | 24.41 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 3.6 | | 0.87 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 4.0 | | 0.87 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 3.8 | | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 4.2 | | 0.87 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 8.5 | | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 8.2 | | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 8.7 | | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 4.0 | | 0.87 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 7.9 | | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 3.3 | | 0.87 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 6.8 | | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 7.8 | | 1.8 | 0.35 | 1 |
| 10590 | Endrin | 72-20-8 | 7.9 | | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 7.1 | | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 7.3 | | 1.9 | 0.63 | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.7 | | 0.87 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.8 | | 0.87 | 0.18 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-509-NBZ-SB-2.5-3.5MSD Soil**
**SSFL NBZ**

**LL Sample # SW 7300110**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Methoxychlor | 72-43-5 | 41 | | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 170 | | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 180 | | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.4 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 6.9 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 11 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | J | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 3.7 | J | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.5 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-NBZ-SB-2.5-3.5MSD Soil
SSFL NBZ

**LL Sample # SW 7300110**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 20.3 | B | 1.04 | 0.0806 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 102 | | 5.20 | 0.0561 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 103 | B | 5.20 | 0.0598 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 106 | B | 5.20 | 0.0649 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 103 | B | 5.20 | 0.0597 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 104 | B | 5.20 | 0.0779 | 1 |
| 11031 | OCDD | 3268-87-9 | 207 | B | 10.4 | 0.0553 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.6 | | 1.04 | 0.0664 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 102 | B | 5.20 | 0.0359 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 103 | B | 5.20 | 0.0333 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 104 | B | 5.20 | 0.0427 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 109 | B | 5.20 | 0.0400 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 107 | B | 5.20 | 0.0454 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 106 | B | 5.20 | 0.0405 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 105 | B | 5.20 | 0.0469 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 108 | B | 5.20 | 0.0658 | 1 |
| 11031 | OCDF | 39001-02-0 | 205 | B | 10.4 | 0.0489 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 60 | 25 - 164 |
| 13C12-12378-PeCDD | 71 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 90 | 23 - 140 |
| 13C12-OCDD | 95 | 17 - 157 |
| 13C12-2378-TCDF | 53 | 24 - 169 |
| 13C12-12378-PeCDF | 66 | 24 - 185 |
| 13C12-23478-PeCDF | 65 | 21 - 178 |
| 13C12-123478-HxCDF | 71 | 26 - 152 |
| 13C12-123678-HxCDF | 74 | 26 - 123 |
| 13C12-234678-HxCDF | 73 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 95 | 28 - 143 |
| 13C12-1234789-HpCDF | 78 | 26 - 138 |
| 13C12-OCDF | 81 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-509-NBZ-SB-2.5-3.5MSD Soil**
**SSFL NBZ**

**LL Sample # SW 7300110**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLD026 | 12/27/2013 07:19 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLD026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13339A16A | 12/06/2013 00:56 | Laura M Krieger | 24.41 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201333833331 | 12/04/2013 14:31 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201333833331 | 12/04/2013 14:32 | Mitchell R Washel | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 21:22 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440006A | 12/11/2013 11:31 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440006A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440025A | 12/12/2013 03:20 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440025A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13346001 | 12/14/2013 07:38 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13346001 | 12/12/2013 10:30 | Chin F Ly | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401B | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-509-NBZ-SB-2.5-3.5DUP Soil
SSFL NBZ

**LL Sample # SW 7300111**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50925 SDG#: PH138-13DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 20 C. | n.a. | 7.53 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.5 | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3<br>The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | n.a. | 4.4 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13338039402A | 12/04/2013 11:00 | Carolyn M Mastropietro | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401B | 12/11/2013 22:37 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401B | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-809-NBZ-SB-2.5-3.5 Soil
SSFL NBZ

**LL Sample # SW 7300112**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:40 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S0925 SDG#: PH138-14

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.88 | U | 0.88 | 0.48 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.88 | U | 0.88 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.88 | U | 0.88 | 0.18 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-809-NBZ-SB-2.5-3.5 Soil
SSFL NBZ

**LL Sample # SW 7300112**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:40 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S0925 SDG#: PH138-14

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Methoxychlor | 72-43-5 | 7.1 | U | 7.1 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.65 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 20 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-809-NBZ-SB-2.5-3.5 Soil
SSFL NBZ

**LL Sample # SW 7300112**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:40 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S0925 SDG#: PH138-14

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0508 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.107 | JQ | 5.17 | 0.0340 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0335 | JBQ | 5.17 | 0.0248 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0613 | JBQ | 5.17 | 0.0260 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0623 | JBQ | 5.17 | 0.0242 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.235 | JBQ | 5.17 | 0.0319 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.870 | JBQ | 10.3 | 0.0316 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.03 | U | 1.03 | 0.0393 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0539 | JBQ | 5.17 | 0.0190 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0469 | JBQ | 5.17 | 0.0186 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0616 | JB | 5.17 | 0.0223 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0491 | JB | 5.17 | 0.0205 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0762 | JBQ | 5.17 | 0.0240 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0373 | JB | 5.17 | 0.0205 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0628 | JBQ | 5.17 | 0.0140 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0419 | JBQ | 5.17 | 0.0195 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.278 | JBQ | 10.3 | 0.0334 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0147 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 75 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 87 | 23 - 140 |
| 13C12-OCDD | 88 | 17 - 157 |
| 13C12-2378-TCDF | 67 | 24 - 169 |
| 13C12-12378-PeCDF | 73 | 24 - 185 |
| 13C12-23478-PeCDF | 70 | 21 - 178 |
| 13C12-123478-HxCDF | 77 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 74 | 29 - 147 |
| 13C12-1234678-HpCDF | 92 | 28 - 143 |
| 13C12-1234789-HpCDF | 75 | 26 - 138 |
| 13C12-OCDF | 74 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-809-NBZ-SB-2.5-3.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300112**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:40 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S0925 SDG#: PH138-14

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-809-NBZ-SB-2.5-3.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300112**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 13:40 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

S0925 SDG#: PH138-14

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLD026 | 12/27/2013 08:24 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLD026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13339A16A | 12/06/2013 03:27 | Laura M Krieger | 25 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201333833331 | 12/04/2013 14:33 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201333833331 | 12/04/2013 14:33 | Mitchell R Washel | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 21:38 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440006A | 12/11/2013 11:50 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440006A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440025A | 12/12/2013 03:41 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440025A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13346001 | 12/14/2013 11:32 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13346001 | 12/12/2013 10:30 | Chin F Ly | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13338039402A | 12/04/2013 11:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401B | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-510-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300113**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 14:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH138-15

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.87 | U | 0.87 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.87 | U | 0.87 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-NBZ-SB-0.0-0.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300113**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 14:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH138-15

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 19.9 C. | n.a. | 7.93 | | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 4.6 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-510-NBZ-SB-0.0-0.5 Soil
SSFL NBZ

**LL Sample # SW 7300113**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 14:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH138-15

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0636 JB | 1.03 | 0.0589 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0784 JQ | 5.17 | 0.0373 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.17 U | 5.17 | 0.0286 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0681 JBQ | 5.17 | 0.0305 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0595 JBQ | 5.17 | 0.0282 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.539 JBQ | 5.17 | 0.0355 | 1 |
| 11031 | OCDD | 3268-87-9 | 3.04 JB | 10.3 | 0.0301 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0810 JQ | 1.03 | 0.0393 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0446 JB | 5.17 | 0.0199 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0316 JBQ | 5.17 | 0.0192 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0756 JB | 5.17 | 0.0198 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.17 U | 5.17 | 0.0183 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0883 JBQ | 5.17 | 0.0230 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0301 JBQ | 5.17 | 0.0192 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.110 JBQ | 5.17 | 0.0128 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0570 JBQ | 5.17 | 0.0191 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.280 JBQ | 10.3 | 0.0360 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0735 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 62 | 25 - 164 |
| 13C12-12378-PeCDD | 65 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 79 | 17 - 157 |
| 13C12-2378-TCDF | 56 | 24 - 169 |
| 13C12-12378-PeCDF | 63 | 24 - 185 |
| 13C12-23478-PeCDF | 60 | 21 - 178 |
| 13C12-123478-HxCDF | 68 | 26 - 152 |
| 13C12-123678-HxCDF | 72 | 26 - 123 |
| 13C12-234678-HxCDF | 70 | 28 - 136 |
| 13C12-123789-HxCDF | 66 | 29 - 147 |
| 13C12-1234678-HpCDF | 84 | 28 - 143 |
| 13C12-1234789-HpCDF | 67 | 26 - 138 |
| 13C12-OCDF | 66 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-NBZ-SB-0.0-0.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300113**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 14:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH138-15

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-NBZ-SB-0.0-0.5 Soil**
**SSFL NBZ**

**LL Sample # SW 7300113**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 14:30 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51000 SDG#: PH138-15

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLD026 | 12/27/2013 08:56 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLD026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 21:53 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440006A | 12/11/2013 12:08 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440006A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440025A | 12/12/2013 04:03 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440025A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13346001 | 12/14/2013 12:29 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13346001 | 12/12/2013 10:30 | Chin F Ly | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13338039402A | 12/04/2013 11:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401B | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-510-NBZ-SB-4.0-5.0 Soil
SSFL NBZ

**LL Sample # SW 7300114**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 14:45 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51045 SDG#: PH138-16

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.73 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.35 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.1 | U | 2.1 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Chlordane | 57-74-9 | 19 | U | 19 | 4.4 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.9 | U | 1.9 | 0.38 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.91 | U | 0.91 | 0.49 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.91 | U | 0.91 | 0.24 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin | 72-20-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 2.0 | U | 2.0 | 0.65 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.91 | U | 0.91 | 0.19 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-510-NBZ-SB-4.0-5.0 Soil
SSFL NBZ

**LL Sample # SW 7300114**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 14:45 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51045 SDG#: PH138-16

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Methoxychlor | 72-43-5 | 7.3 | U | 7.3 | 1.9 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.9 | U | 1.9 | 0.38 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 36 | U | 36 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.04 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 20.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 8.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-510-NBZ-SB-4.0-5.0 Soil
SSFL NBZ

**LL Sample # SW 7300114**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 14:45 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51045 SDG#: PH138-16

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.06 U | 1.06 | 0.0605 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.31 U | 5.31 | 0.0395 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0542 JBQ | 5.31 | 0.0317 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0635 JBQ | 5.31 | 0.0356 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 5.31 U | 5.31 | 0.0294 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.283 JB | 5.31 | 0.0327 | 1 |
| 11031 | OCDD | 3268-87-9 | 1.28 JB | 10.6 | 0.0333 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.06 U | 1.06 | 0.0419 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0805 JBQ | 5.31 | 0.0229 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0357 JBQ | 5.31 | 0.0214 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0598 JBQ | 5.31 | 0.0249 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.31 U | 5.31 | 0.0226 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0810 JBQ | 5.31 | 0.0280 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0507 JB | 5.31 | 0.0237 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0670 JBQ | 5.31 | 0.0123 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0591 JB | 5.31 | 0.0176 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.242 JBQ | 10.6 | 0.0413 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00883 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 58 | 25 - 164 |
| 13C12-12378-PeCDD | 56 | 25 - 181 |
| 13C12-123478-HxCDD | 71 | 32 - 141 |
| 13C12-123678-HxCDD | 66 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 55 | 24 - 169 |
| 13C12-12378-PeCDF | 55 | 24 - 185 |
| 13C12-23478-PeCDF | 54 | 21 - 178 |
| 13C12-123478-HxCDF | 63 | 26 - 152 |
| 13C12-123678-HxCDF | 68 | 26 - 123 |
| 13C12-234678-HxCDF | 65 | 28 - 136 |
| 13C12-123789-HxCDF | 62 | 29 - 147 |
| 13C12-1234678-HpCDF | 84 | 28 - 143 |
| 13C12-1234789-HpCDF | 67 | 26 - 138 |
| 13C12-OCDF | 65 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-NBZ-SB-4.0-5.0 Soil**
**SSFL NBZ**

**LL Sample # SW 7300114**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 14:45 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51045 SDG#: PH138-16

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-510-NBZ-SB-4.0-5.0 Soil**
**SSFL NBZ**

**LL Sample # SW 7300114**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 14:45 by KL

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51045 SDG#: PH138-16

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLD026 | 12/27/2013 09:28 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLD026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13339A16A | 12/06/2013 04:05 | Laura M Krieger | 25.35 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201333833331 | 12/04/2013 14:34 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201333833331 | 12/04/2013 14:34 | Mitchell R Washel | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 22:08 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440006A | 12/11/2013 12:27 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440006A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133440025A | 12/12/2013 04:25 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133440025A | 12/11/2013 08:30 | Olivia Arosemena | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13346001 | 12/14/2013 13:26 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13346001 | 12/12/2013 10:30 | Chin F Ly | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13338039402A | 12/04/2013 11:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13345162401B | 12/11/2013 22:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-120313 Water**
**SSFL NBZ**

**LL Sample # WW 7300115**
**LL Group # 1438204**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/03/2013 15:00 by PH

Submitted: 12/04/2013 09:35
Reported: 12/30/2013 09:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB138 SDG#: PH138-17EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.012 | J | 0.050 | 0.010 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.059 | | 0.050 | 0.010 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.011 | J | 0.050 | 0.010 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.050 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.18 | J | 1.0 | 0.050 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.059 | | 0.050 | 0.010 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.49 | J | 1.0 | 0.050 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.050 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.13 | J | 1.0 | 0.050 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.054 | | 0.050 | 0.010 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.050 | U | 0.050 | 0.030 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.050 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.050 | U | 0.050 | 0.030 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.050 | U | 0.050 | 0.010 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13340WAI026 | 12/10/2013 17:03 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13340WAI026 | 12/08/2013 07:30 | Nicholas W Shroyer | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438204
Reported: 12/30/13 at 09:52 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13340WAI026 | Sample number(s): 7300115 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 107 | 77-118 | 1 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 113 | 114 | 80-123 | 1 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 108 | 78-123 | 0 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 115 | 111 | 73-127 | 3 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 106 | 72-120 | 2 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 118 | 117 | 79-136 | 1 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 101 | 70-130 | 2 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 112 | 106 | 64-130 | 6 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 107 | 73-131 | 3 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 106 | 110 | 40-138 | 4 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 113 | 115 | 64-141 | 2 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 105 | 76-125 | 9 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 108 | 58-131 | 1 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 113 | 114 | 64-128 | 1 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 108 | 112 | 23-139 | 4 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.079 | J | 1.0 | 0.050 | ug/l | 238* | 110 | 70-143 | 74* | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 104 | 79-124 | 1 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 106 | 74-115 | 1 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 106 | 62-130 | 4 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 108 | 80-126 | 0 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 106 | 107 | 81-124 | 1 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 106 | 106 | 75-120 | 0 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 66 | 67 | 36-120 | 1 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 87 | 96 | 57-145 | 10 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 102 | 104 | 75-120 | 2 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 109 | 71-130 | 1 | 30 |
| Batch number: 13344SLD026 | Sample number(s): 7300107-7300110,7300112-7300114 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 99 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 112 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 124 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 99 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 112 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 111 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 102 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 104 | | 85-122 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438204
Reported: 12/30/13 at 09:52 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 111 | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 112 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 114 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 115* | | 79-112 | | |
| Batch number: 13339A16A | Sample number(s): 7300095,7300097,7300108-7300110,7300112,7300114 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 99 | | 67-119 | | |
| Batch number: 13339A94A | Sample number(s): 7300106 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 113 | 114 | 75-135 | 1 | 30 |
| Batch number: 133450034A | Sample number(s): 7300105 | | | | | | | | | |
| 2,4-D | 36 | U | 36. | 12 | ug/kg | 136* | | 59-122 | | |
| Dalapon | 90 | U | 90. | 44 | ug/kg | 71 | | 25-100 | | |
| 2,4-DB | 17 | U | 17. | 6.2 | ug/kg | 135* | | 54-131 | | |
| Dicamba | 12 | U | 12. | 4.0 | ug/kg | 102 | | 55-138 | | |
| Dinoseb | 24 | U | 24. | 9.0 | ug/kg | 13 | | 10-56 | | |
| 2,4-DP (Dichlorprop) | 17 | U | 17. | 9.0 | ug/kg | 153 | | 65-158 | | |
| MCPA | 2,500 | U | 2,500. | 760 | ug/kg | 97 | | 56-133 | | |
| MCPP (Mecoprop) | 2,500 | U | 2,500. | 750 | ug/kg | 96 | | 54-134 | | |
| 2,4,5-T | 1.7 | U | 1.7 | 0.82 | ug/kg | 112 | | 58-135 | | |
| 2,4,5-TP | 1.7 | U | 1.7 | 0.75 | ug/kg | 125 | | 63-130 | | |
| Batch number: 133440006A | Sample number(s): 7300107-7300110,7300112-7300114 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 86 | 90 | 36-106 | 4 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 106 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 115 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 133440020A | Sample number(s): 7300094-7300104 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 107 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 109 | | 62-128 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 108 | | 69-121 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 117 | | 64-130 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 118 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 116 | | 51-141 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438204
Reported: 12/30/13 at 09:52 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 110 | | 73-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 93 | | 64-130 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 115 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 99 | | 60-120 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 108 | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 103 | | 62-127 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 111 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 111 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 133470015A | Sample number(s): 7300107-7300110,7300112-7300114 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 103 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 109 | | 62-128 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 107 | | 69-121 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 114 | | 64-130 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 109 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 115 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 114 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 110 | | 51-141 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 73-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 87 | | 64-130 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 109 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 60-120 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 103 | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 101 | | 62-127 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 105 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 107 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 133440024A | Sample number(s): 7300094-7300105,7300107 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 105 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 111 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 108 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 69 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 60-115 | | |
| Batch number: 133440025A | Sample number(s): 7300108-7300110,7300112-7300114 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 94 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 94 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 81 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 75 | | 60-115 | | |
| Batch number: 13338039402A | Sample number(s): 7300107-7300108,7300111-7300114 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 13345162401A | Sample number(s): 7300094-7300105,7300107 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438204
Reported: 12/30/13 at 09:52 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| Batch number: 13345162401B | Sample number(s): 7300108-7300114 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13346001 | Sample number(s): 7300107-7300110,7300112-7300114 | | | | | | | | | |
| 2378-TCDD | 0.116 | J | 1.00 | 0.0782 | ng/kg | 100 | | 67-158 | | |
| 12378-PeCDD | 5.00 | U | 5.00 | 0.0439 | ng/kg | 100 | | 70-142 | | |
| 123478-HxCDD | 0.0405 | J | 5.00 | 0.0347 | ng/kg | 101 | | 70-164 | | |
| 123678-HxCDD | 0.0758 | J | 5.00 | 0.0380 | ng/kg | 102 | | 76-134 | | |
| 123789-HxCDD | 0.0456 | J | 5.00 | 0.0353 | ng/kg | 101 | | 64-162 | | |
| 1234678-HpCDD | 0.296 | J | 5.00 | 0.0599 | ng/kg | 101 | | 70-140 | | |
| OCDD | 0.976 | J | 10.0 | 0.0361 | ng/kg | 99 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0579 | ng/kg | 99 | | 75-158 | | |
| 12378-PeCDF | 0.0841 | J | 5.00 | 0.0240 | ng/kg | 102 | | 80-134 | | |
| 23478-PeCDF | 0.0874 | J | 5.00 | 0.0248 | ng/kg | 101 | | 68-160 | | |
| 123478-HxCDF | 0.0878 | J | 5.00 | 0.0326 | ng/kg | 103 | | 72-134 | | |
| 123678-HxCDF | 0.0448 | J | 5.00 | 0.0295 | ng/kg | 104 | | 84-130 | | |
| 123789-HxCDF | 0.0998 | J | 5.00 | 0.0343 | ng/kg | 103 | | 78-130 | | |
| 234678-HxCDF | 0.0919 | J | 5.00 | 0.0296 | ng/kg | 103 | | 70-156 | | |
| 1234678-HpCDF | 0.121 | J | 5.00 | 0.0235 | ng/kg | 101 | | 82-122 | | |
| 1234789-HpCDF | 0.413 | J | 5.00 | 0.0369 | ng/kg | 105 | | 78-138 | | |
| OCDF | 0.225 | J | 10.0 | 0.0449 | ng/kg | 100 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0408 | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13344SLD026 | Sample number(s): 7300107-7300110,7300112-7300114 UNSPK: 7300108 | | | | | | | | |
| Acenaphthene | 99 | 96 | 48-127 | 3 | 30 | | | | |
| Acenaphthylene | 101 | 99 | 49-121 | 2 | 30 | | | | |
| Anthracene | 101 | 100 | 52-126 | 1 | 30 | | | | |
| Benzo(a)anthracene | 113 | 111 | 44-143 | 1 | 30 | | | | |
| Benzo(a)pyrene | 108 | 107 | 44-140 | 1 | 30 | | | | |
| Benzo(b)fluoranthene | 112 | 110 | 26-142 | 2 | 30 | | | | |
| Benzo(e)pyrene | 101 | 100 | 70-130 | 1 | 30 | | | | |
| Benzo(g,h,i)perylene | 111 | 110 | 33-141 | 1 | 30 | | | | |
| Benzo(k)fluoranthene | 114 | 115 | 54-142 | 1 | 30 | | | | |
| Butylbenzylphthalate | 113 | 114 | 49-151 | 1 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438204
Reported: 12/30/13 at 09:52 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Di-n-butylphthalate | 103 | 102 | 52-147 | 1 | 30 | | | | |
| Chrysene | 111 | 110 | 29-148 | 1 | 30 | | | | |
| Dibenz(a,h)anthracene | 106 | 105 | 20-137 | 1 | 30 | | | | |
| Diethylphthalate | 104 | 104 | 43-145 | 1 | 30 | | | | |
| Dimethylphthalate | 107 | 104 | 58-129 | 2 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 117 | 113 | 39-167 | 3 | 30 | | | | |
| Fluoranthene | 104 | 102 | 40-148 | 2 | 30 | | | | |
| Fluorene | 103 | 101 | 51-137 | 2 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 111 | 110 | 17-136 | 1 | 30 | | | | |
| 1-Methylnaphthalene | 113 | 111 | 50-131 | 2 | 30 | | | | |
| 2-Methylnaphthalene | 116 | 114 | 35-152 | 1 | 30 | | | | |
| Naphthalene | 102 | 101 | 31-148 | 1 | 30 | | | | |
| N-Nitrosodimethylamine | 100 | 101 | 48-113 | 1 | 30 | | | | |
| Di-n-octylphthalate | 115 | 116 | 52-162 | 1 | 30 | | | | |
| Phenanthrene | 101 | 99 | 29-142 | 2 | 30 | | | | |
| Pyrene | 117 | 115 | 26-143 | 2 | 30 | | | | |
| Batch number: 13339A16A | Sample number(s): 7300095,7300097,7300108-7300110,7300112,7300114 UNSPK: 7300108 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 85 | 92 | 69-123 | 3 | 30 | | | | |
| Batch number: 133450034A | Sample number(s): 7300105 UNSPK: P306302 | | | | | | | | |
| 2,4-D | 142 | 151* | 42-143 | 6 | 35 | | | | |
| Dalapon | 62 | 57 | 16-98 | 8 | 50 | | | | |
| 2,4-DB | 144 | 152 | 10-179 | 5 | 50 | | | | |
| Dicamba | 106 | 115 | 55-133 | 8 | 50 | | | | |
| Dinoseb | 25 | 28 | 10-52 | 12 | 35 | | | | |
| 2,4-DP (Dichlorprop) | 154 | 161 | 32-171 | 4 | 50 | | | | |
| MCPA | 101 | 110 | 23-169 | 9 | 50 | | | | |
| MCPP (Mecoprop) | 95 | 97 | 24-164 | 2 | 50 | | | | |
| 2,4,5-T | 124 | 177* | 12-172 | 35 | 35 | | | | |
| 2,4,5-TP | 128 | 131 | 10-142 | 2 | 35 | | | | |
| Batch number: 133440006A | Sample number(s): 7300107-7300110,7300112-7300114 UNSPK: 7300108 | | | | | | | | |
| PCB-1016 | 107 | 98 | 41-135 | 9 | 50 | | | | |
| PCB-1260 | 113 | 106 | 40-134 | 7 | 50 | | | | |
| Batch number: 133440020A | Sample number(s): 7300094-7300104 UNSPK: 7300098 | | | | | | | | |
| Aldrin | 96 | 99 | 16-126 | 3 | 50 | | | | |
| Alpha BHC | 102 | 103 | 14-140 | 1 | 50 | | | | |
| Beta BHC | 97 | 102 | 42-133 | 5 | 50 | | | | |
| Gamma BHC - Lindane | 102 | 108 | 30-137 | 5 | 50 | | | | |
| p,p-DDD | 99 | 105 | 43-149 | 5 | 50 | | | | |
| p,p-DDE | 111 | 119 | 35-152 | 7 | 50 | | | | |
| p,p-DDT | 136 | 148 | 12-193 | 8 | 50 | | | | |
| Delta BHC | 105 | 112 | 13-153 | 6 | 50 | | | | |
| Dieldrin | 101 | 103 | 41-153 | 1 | 50 | | | | |
| Endosulfan I | 83 | 86 | 26-146 | 4 | 50 | | | | |
| Endosulfan II | 102 | 109 | 34-141 | 6 | 50 | | | | |
| Endosulfan Sulfate | 102 | 106 | 10-181 | 3 | 50 | | | | |
| Endrin | 101 | 104 | 30-152 | 3 | 50 | | | | |
| Endrin Aldehyde | 86 | 91 | 23-138 | 6 | 50 | | | | |
| Endrin Ketone | 93 | 98 | 30-148 | 4 | 50 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438204
Reported: 12/30/13 at 09:52 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Heptachlor | 92 | 95 | 16-152 | 3 | 50 | | | | |
| Heptachlor Epoxide | 110 | 114 | 33-144 | 3 | 50 | | | | |
| Methoxychlor | 98 | 104 | 41-161 | 5 | 50 | | | | |
| Batch number: 133470015A | Sample number(s): 7300107-7300110,7300112-7300114 UNSPK: 7300108 | | | | | | | | |
| Aldrin | 104 | 103 | 16-126 | 1 | 50 | | | | |
| Alpha BHC | 108 | 111 | 14-140 | 3 | 50 | | | | |
| Beta BHC | 106 | 107 | 42-133 | 1 | 50 | | | | |
| Gamma BHC - Lindane | 114 | 117 | 30-137 | 2 | 50 | | | | |
| p,p-DDD | 111 | 112 | 43-149 | 1 | 50 | | | | |
| p,p-DDE | 114 | 116 | 35-152 | 2 | 50 | | | | |
| p,p-DDT | 115 | 116 | 12-193 | 1 | 50 | | | | |
| Delta BHC | 110 | 112 | 13-153 | 1 | 50 | | | | |
| Dieldrin | 104 | 106 | 41-153 | 2 | 50 | | | | |
| Endosulfan I | 88 | 90 | 26-146 | 1 | 50 | | | | |
| Endosulfan II | 94 | 96 | 34-141 | 3 | 50 | | | | |
| Endosulfan Sulfate | 111 | 111 | 10-181 | 0 | 50 | | | | |
| Endrin | 102 | 104 | 30-152 | 2 | 50 | | | | |
| Endrin Aldehyde | 96 | 98 | 23-138 | 2 | 50 | | | | |
| Endrin Ketone | 103 | 103 | 30-148 | 0 | 50 | | | | |
| Heptachlor | 101 | 101 | 16-152 | 0 | 50 | | | | |
| Heptachlor Epoxide | 103 | 107 | 33-144 | 4 | 50 | | | | |
| Methoxychlor | 108 | 109 | 41-161 | 1 | 50 | | | | |
| Batch number: 133440024A | Sample number(s): 7300094-7300105,7300107 UNSPK: 7300098 | | | | | | | | |
| EFH (C12-C14) | 104 | 106 | 49-123 | 2 | 20 | | | | |
| EFH (C15-C20) | 155* | 115 | 49-123 | 30* | 20 | | | | |
| EFH (C21-C30) | 343* | 111 | 49-123 | 102* | 20 | | | | |
| EFH (C30-C40) | 559* | 103 | 49-123 | 138* | 20 | | | | |
| EFH (C8-C11) | 86 | 89 | 49-123 | 4 | 20 | | | | |
| Batch number: 133440025A | Sample number(s): 7300108-7300110,7300112-7300114 UNSPK: 7300108 | | | | | | | | |
| EFH (C12-C14) | 83 | 84 | 49-123 | 1 | 20 | | | | |
| EFH (C15-C20) | 87 | 88 | 49-123 | 1 | 20 | | | | |
| EFH (C21-C30) | 87 | 88 | 49-123 | 1 | 20 | | | | |
| EFH (C30-C40) | 75 | 67 | 49-123 | 12 | 20 | | | | |
| EFH (C8-C11) | 70 | 70 | 49-123 | 0 | 20 | | | | |
| Batch number: 13338039402A | Sample number(s): 7300107-7300108,7300111-7300114 BKG: 7300108 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.60 | 7.53 | 1 | 3 |
| Batch number: 13345162401A | Sample number(s): 7300094-7300105,7300107 BKG: 7300098 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 2.2 | 2.2 | 3 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 2.2 | 2.2 | 3 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 2.2 | 2.2 | 3 | 20 |
| Batch number: 13345162401B | Sample number(s): 7300108-7300114 BKG: 7300108 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.5 | 4.4 | 2 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 4.5 | 4.4 | 2 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 4.5 | 4.4 | 2 | 20 |
| Batch number: 13346001 | Sample number(s): 7300107-7300110,7300112-7300114 UNSPK: 7300108 | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438204
Reported: 12/30/13 at 09:52 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 2378-TCDD | 97 | 98 | 40-135 | 2 | 20 | | | | |
| 12378-PeCDD | 98 | 98 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDD | 100 | 99 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDD | 102 | 102 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDD | 99 | 99 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDD | 100 | 100 | 40-135 | 1 | 20 | | | | |
| OCDD | 97 | 98 | 40-135 | 2 | 20 | | | | |
| 2378-TCDF | 100 | 99 | 40-135 | 0 | 20 | | | | |
| 12378-PeCDF | 98 | 98 | 40-135 | 1 | 20 | | | | |
| 23478-PeCDF | 100 | 99 | 40-135 | 0 | 20 | | | | |
| 123478-HxCDF | 100 | 100 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDF | 102 | 104 | 40-135 | 3 | 20 | | | | |
| 123789-HxCDF | 101 | 102 | 40-135 | 2 | 20 | | | | |
| 234678-HxCDF | 102 | 102 | 40-135 | 0 | 20 | | | | |
| 1234678-HpCDF | 100 | 101 | 40-135 | 2 | 20 | | | | |
| 1234789-HpCDF | 103 | 104 | 40-135 | 1 | 20 | | | | |
| OCDF | 98 | 98 | 40-135 | 2 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 13340WAI026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7300115 | 98 | 98 | 101 |
| Blank | 102 | 109 | 103 |
| LCS | 102 | 111 | 108 |
| LCSD | 101 | 108 | 106 |
| Limits: | 44-137 | 62-141 | 51-136 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13344SLD026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7300107 | 86 | 87 | 105 |
| 7300108 | 79 | 81 | 98 |
| 7300109 | 85 | 86 | 105 |
| 7300110 | 85 | 87 | 104 |
| 7300112 | 87 | 88 | 107 |
| 7300113 | 82 | 83 | 102 |
| 7300114 | 77 | 78 | 95 |
| Blank | 87 | 90 | 107 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438204
Reported: 12/30/13 at 09:52 AM

## Surrogate Quality Control

| | | | |
|---|---|---|---|
| LCS | 83 | 85 | 103 |
| MS | 85 | 86 | 105 |
| MSD | 85 | 87 | 104 |
| Limits: | 54-129 | 59-125 | 61-125 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13339A16A

| | Trifluorotoluene-F |
|---|---|
| 7300095 | 96 |
| 7300097 | 82 |
| 7300108 | 96 |
| 7300109 | 87 |
| 7300110 | 77 |
| 7300112 | 88 |
| 7300114 | 87 |
| Blank | 100 |
| LCS | 110 |
| MS | 87 |
| MSD | 77 |
| Limits: | 50-142 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13339A94A

| | Trifluorotoluene-F |
|---|---|
| 7300106 | 87 |
| Blank | 87 |
| LCS | 92 |
| LCSD | 92 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 133440006A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7300107 | 109 | 106 |
| 7300108 | 101 | 98 |
| 7300109 | 121* | 114 |
| 7300110 | 107 | 113 |
| 7300112 | 109 | 105 |
| 7300113 | 88 | 87 |
| 7300114 | 95 | 91 |
| Blank | 121* | 117 |
| LCS | 117 | 117 |
| LCSD | 116 | 115 |
| MS | 121* | 114 |
| MSD | 107 | 113 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 133440020A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438204
Reported: 12/30/13 at 09:52 AM

## Surrogate Quality Control

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7300094 | 91 | 96 |
| 7300095 | 102 | 106 |
| 7300096 | 94 | 105 |
| 7300097 | 99 | 109 |
| 7300098 | 104 | 117 |
| 7300099 | 89 | 104 |
| 7300100 | 96 | 112 |
| 7300101 | 105 | 115 |
| 7300102 | 94 | 104 |
| 7300103 | 90 | 103 |
| 7300104 | 89 | 107 |
| Blank | 101 | 112 |
| LCS | 105 | 118 |
| MS | 89 | 104 |
| MSD | 96 | 112 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 21a Herbicides by EPA 8151A
Batch number: 133450034A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7300105 | 89 |
| Blank | 82 |
| LCS | 98 |
| MS | 99 |
| MSD | 105 |
| Limits: | 50-150 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 133470015A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7300107 | 95 | 107 |
| 7300108 | 96 | 109 |
| 7300109 | 101 | 115 |
| 7300110 | 107 | 116 |
| 7300112 | 100 | 111 |
| 7300113 | 89 | 102 |
| 7300114 | 92 | 106 |
| Blank | 100 | 111 |
| LCS | 109 | 120 |
| MS | 101 | 115 |
| MSD | 107 | 116 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 133440024A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7300094 | 94 | 96 |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438204
Reported: 12/30/13 at 09:52 AM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7300095 | 89 | 87 |
| 7300096 | 93 | 94 |
| 7300097 | 105 | 105 |
| 7300098 | 96 | 97 |
| 7300099 | 99 | 75 |
| 7300100 | 103 | 97 |
| 7300101 | 92 | 94 |
| 7300102 | 94 | 96 |
| 7300103 | 90 | 91 |
| 7300104 | 97 | 97 |
| 7300105 | 96 | 97 |
| 7300107 | 99 | 99 |
| Blank | 100 | 95 |
| LCS | 103 | 98 |
| MS | 99 | 75 |
| MSD | 103 | 97 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 133440025A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7300108 | 87 | 86 |
| 7300109 | 82 | 82 |
| 7300110 | 82 | 82 |
| 7300112 | 84 | 82 |
| 7300113 | 76 | 77 |
| 7300114 | 79 | 78 |
| Blank | 83 | 82 |
| LCS | 88 | 88 |
| MS | 82 | 82 |
| MSD | 82 | 82 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13346001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7300107 | 62 | 62 | 65 | 72 | 70 | 67 |
| 7300108 | 63 | 63 | 71 | 76 | 72 | 68 |
| 7300109 | 60 | 57 | 67 | 71 | 67 | 64 |
| 7300110 | 60 | 65 | 71 | 74 | 73 | 72 |
| 7300112 | 72 | 70 | 77 | 81 | 78 | 74 |
| 7300113 | 62 | 60 | 68 | 72 | 70 | 66 |
| 7300114 | 58 | 54 | 63 | 68 | 65 | 62 |
| Blank | 72 | 72 | 74 | 81 | 76 | 72 |
| MS | 60 | 57 | 67 | 71 | 67 | 64 |
| MSD | 60 | 65 | 71 | 74 | 73 | 72 |
| OPR | 58 | 63 | 65 | 71 | 68 | 65 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438204
Reported: 12/30/13 at 09:52 AM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7300107 | 98 | 72 | 75 | 72 | 79 | 79 |
| 7300108 | 98 | 72 | 75 | 70 | 81 | 81 |
| 7300109 | 87 | 65 | 66 | 62 | 75 | 74 |
| 7300110 | 95 | 78 | 81 | 71 | 81 | 81 |
| 7300112 | 92 | 75 | 74 | 75 | 86 | 87 |
| 7300113 | 84 | 67 | 66 | 65 | 78 | 77 |
| 7300114 | 84 | 67 | 65 | 56 | 71 | 66 |
| Blank | 104 | 79 | 83 | 82 | 89 | 89 |
| MS | 87 | 65 | 66 | 62 | 75 | 74 |
| MSD | 95 | 78 | 81 | 71 | 81 | 81 |
| OPR | 94 | 71 | 75 | 70 | 77 | 78 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7300107 | 80 | 89 | 96 | 55 | 65 |
| 7300108 | 82 | 88 | 95 | 56 | 66 |
| 7300109 | 74 | 78 | 82 | 54 | 60 |
| 7300110 | 82 | 90 | 95 | 53 | 66 |
| 7300112 | 86 | 87 | 88 | 67 | 73 |
| 7300113 | 77 | 79 | 79 | 56 | 63 |
| 7300114 | 73 | 77 | 76 | 55 | 55 |
| Blank | 89 | 97 | 105 | 63 | 77 |
| MS | 74 | 78 | 82 | 54 | 60 |
| MSD | 82 | 90 | 95 | 53 | 66 |
| OPR | 77 | 86 | 96 | 53 | 63 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

13013 1438204 7300094-115

**CDM Smith**

DateShipped: 12/3/2013
CarrierName: FedEx
AirbillNo: 7973 0122 0162

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131203-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-502-NBZ-SB-0.0-0.5 | 12/3/13 09:20 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-502-NBZ-SB-4.0-5.0 | 12/3/13 09:35 | SO | None | 1 - 16 oz glass | 10 day | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-502-NBZ-SB-4.0-5.0 | 12/3/13 09:35 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-503-NBZ-SB-0.0-0.5 | 12/3/13 10:00 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-503-NBZ-SB-2.0-3.0 | 12/3/13 10:20 | SO | None | 1 - 16 oz glass | 10 day | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-503-NBZ-SB-2.0-3.0 | 12/3/13 10:20 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SL-504-NBZ-SB-0.0-0.5MS | 12/3/13 10:45 | SO | None | 2 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-804-NBZ-SB-0.0-0.5 | 12/3/13 10:55 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-530-NBZ-SB-0.0-0.5 | 12/3/13 09:40 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-531-NBZ-SB-0.0-0.5 | 12/3/13 13:50 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-532-NBZ-SB-0.0-0.5 | 12/3/13 10:20 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-533-NBZ-SB-0.0-0.5 | 12/3/13 13:05 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | X | | | | | X | | | | | | | | | | | | | | |
| SL-509-NBZ-SB-2.5-3.5MS | 12/3/13 13:30 | SO | None | 6 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-809-NBZ-SB-2.5-3.5 | 12/3/13 13:40 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-510-NBZ-SB-4.0-5.0 | 12/3/13 14:45 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| TB-120313 | 12/3/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** [signature]

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 12/3/13 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Branch 12.4.13 935
Barch

COC Rev 3

COC: 20131203-01, Page 1 of 1

# SSFL Phase 3 Chain of Custody

13013 1438204 7300094-115

**CDM Smith**

DateShipped: 12/3/2013
CarrierName: FedEx
AirbillNo: 7973 0122 0162

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131203-03
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-509-NBZ-SB-0.0-0.5 | 12/3/13 13:15 | SO | None | 2 - SS-Sleeve | 10 day | | | | | | | X | | X | X | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-509-NBZ-SB-0.0-0.5 | 12/3/13 13:15 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-509-NBZ-SB-2.5-3.5MS | 12/3/13 13:30 | SO | None | 6 - 16 oz glass | 10 day | | | | | | | X | | X | X | | | X | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-809-NBZ-SB-2.5-3.5 | 12/3/13 13:40 | SO | None | 2 - 16 oz glass | 10 day | | | | | | | X | | X | X | | | X | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-510-NBZ-SB-0.0-0.5 | 12/3/13 14:30 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-510-NBZ-SB-0.0-0.5 | 12/3/13 14:30 | SO | None | 2 - SS-Sleeve | 10 day | | | | | | | X | | X | X | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-510-NBZ-SB-4.0-5.0 | 12/3/13 14:45 | SO | None | 2 - 16 oz glass | 10 day | | | | | | | X | | X | X | | | X | | | | X | | | | X | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12/3/13 | 1601 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Brandy Darby | 12.4.13 | 935 |

# SSFL Phase 3 Chain of Custody

13013 1438204 7300094-115

**CDM Smith**

DateShipped: 12/3/2013
CarrierName: FedEx
AirbillNo: 7973 0122 0162

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131203-02
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7470 (Water) | Mercury 7471 (Soil) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB-120313 | 12/3/13 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Pamela Hartman

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12/3/13 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Brianca Baird | 12.4.13 | 935 |

eurofins | Lancaster Laboratories

# Environmental Sample Administration Receipt Documentation Log

1438204

**Client/Project:** CDM

**Date of Receipt:** 12.4.13

**Time of Receipt:** 935

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT146 | 1.5 | TB | WI | Y | B | |
| 2 | ↓ | 3.4 | ↓ | ↓ | ↓ | ↓ | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** Brianna Barela 2299 **Date/Time:** 12.4.13 1029

Issued by Dept. 6042 Management

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

December 31, 2013

Project: SSFL Phase 3 Sampling

Submittal Date: 12/05/2013
Group Number: 1438596
SDG: PH139
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-506-NBZ-SB-0.0-0.5 Soil | 7301917 |
| SL-507-NBZ-SB-0.0-0.5 Soil | 7301918 |
| SL-507-NBZ-SB-3.5-4.5 Soil | 7301919 |
| SL-508-NBZ-SB-0.0-0.5 Soil | 7301920 |
| SL-508-NBZ-SB-4.0-5.0 Soil | 7301921 |
| SL-546-NBZ-SB-0.0-0.5 Soil | 7301922 |
| SL-547-NBZ-SB-0.0-0.5 Soil | 7301923 |
| SL-549-NBZ-SB-0.0-0.5 Soil | 7301924 |
| TB-120413 Water | 7301925 |
| SL-545-NBZ-SB-0.0-0.5 Soil | 7301926 |
| SL-545-NBZ-SB-0.0-0.5MS Soil | 7301927 |
| SL-545-NBZ-SB-0.0-0.5MSD Soil | 7301928 |
| SL-545-NBZ-SB-0.0-0.5DUP Soil | 7301929 |
| SL-845-NBZ-SB-0.0-0.5 Soil | 7301930 |
| SL-511-NBZ-SB-0.0-0.5 Soil | 7301931 |
| SL-511-NBZ-SB-2.5-3.5 Soil | 7301932 |
| SL-548-NBZ-SB-0.0-0.5 Soil | 7301933 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-506-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301917**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 10:30 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50600 SDG#: PH139-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.87 | U | 0.87 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.87 | U | 0.87 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 4.3 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 13 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 4.4 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|

*=This limit was used in the evaluation of the final result

**Sample Description: SL-506-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301917**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 10:30 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50600 SDG#: PH139-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 16:17 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/12/2013 21:59 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-507-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301918**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 10:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50700 SDG#: PH139-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 0.63 | J | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.43 | J | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.7 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 13 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 4.5 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|

*=This limit was used in the evaluation of the final result

**Sample Description: SL-507-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301918**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 10:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50700 SDG#: PH139-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 16:32 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/12/2013 22:20 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-507-NBZ-SB-3.5-4.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301919**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 10:15 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50735 SDG#: PH139-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 0.6 | J | 1.0 | 0.2 | 24.18 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.88 | U | 0.88 | 0.48 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.88 | U | 0.88 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.64 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.1 | U | 7.1 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 3.3 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 8.3 | J | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.4 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-507-NBZ-SB-3.5-4.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301919**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 10:15 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50735 SDG#: PH139-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13347A16A | 12/16/2013 20:11 | Marie D Beamenderfer | 24.18 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201333933341 | 12/05/2013 14:52 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201333933341 | 12/05/2013 14:52 | Mitchell R Washel | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 16:47 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/12/2013 22:42 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-508-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301920**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 09:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50800 SDG#: PH139-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 7.6 | J | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.2 | J | 1.8 | 0.74 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.1 | U | 2.1 | 1.1 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Chlordane | 57-74-9 | 19 | U | 19 | 4.4 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.9 | U | 1.9 | 0.39 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.91 | U | 0.91 | 0.50 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.91 | U | 0.91 | 0.24 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin | 72-20-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 2.0 | U | 2.0 | 0.66 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.4 | U | 7.4 | 1.9 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.9 | U | 1.9 | 0.39 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 36 | U | 36 | 15 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-508-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301920**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 09:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50800 SDG#: PH139-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.9 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 3.2 | J | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 7.9 | J | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 20.7 C. | n.a. | 6.93 | | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 9.4 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-508-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301920**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 09:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50800 SDG#: PH139-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.112 JBQ | 1.10 | 0.0791 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.51 U | 5.51 | 0.0468 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0429 JBQ | 5.51 | 0.0343 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0747 JBQ | 5.51 | 0.0359 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0602 JBQ | 5.51 | 0.0334 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.120 JB | 5.51 | 0.0333 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.486 JB | 11.0 | 0.0398 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.122 JBQ | 1.10 | 0.0868 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.107 JB | 5.51 | 0.0348 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.131 JBQ | 5.51 | 0.0313 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0919 JBQ | 5.51 | 0.0381 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0630 JB | 5.51 | 0.0344 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.126 JBQ | 5.51 | 0.0372 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0919 JB | 5.51 | 0.0338 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.119 JB | 5.51 | 0.0187 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.106 JB | 5.51 | 0.0241 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.328 JB | 11.0 | 0.0639 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0224 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 63 | 25 - 164 |
| 13C12-12378-PeCDD | 67 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 79 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 69 | 23 - 140 |
| 13C12-OCDD | 60 | 17 - 157 |
| 13C12-2378-TCDF | 58 | 24 - 169 |
| 13C12-12378-PeCDF | 64 | 24 - 185 |
| 13C12-23478-PeCDF | 65 | 21 - 178 |
| 13C12-123478-HxCDF | 72 | 26 - 152 |
| 13C12-123678-HxCDF | 76 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 76 | 29 - 147 |
| 13C12-1234678-HpCDF | 76 | 28 - 143 |
| 13C12-1234789-HpCDF | 62 | 26 - 138 |
| 13C12-OCDF | 53 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-508-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301920**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 09:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50800 SDG#: PH139-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-508-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301920**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 09:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50800 SDG#: PH139-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLE026 | 12/24/2013 09:45 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLE026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 17:03 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440007A | 12/11/2013 15:13 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440007A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/12/2013 23:04 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/16/2013 19:19 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13339039402A | 12/05/2013 21:20 | Michelle L Lalli | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-508-NBZ-SB-4.0-5.0 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301921**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 09:15 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50845 SDG#: PH139-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | U | 1.9 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.48 | J | 1.9 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.9 | U | 1.9 | 0.74 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 22.44 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.92 | U | 0.92 | 0.19 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.92 | U | 0.92 | 0.19 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.1 | U | 2.1 | 1.1 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.92 | U | 0.92 | 0.19 | 1 |
| 10590 | Chlordane | 57-74-9 | 19 | U | 19 | 4.4 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.9 | U | 1.9 | 0.39 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.92 | U | 0.92 | 0.50 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.92 | U | 0.92 | 0.24 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin | 72-20-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 2.0 | U | 2.0 | 0.66 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.92 | U | 0.92 | 0.19 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.92 | U | 0.92 | 0.19 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-508-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301921**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 09:15 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50845 SDG#: PH139-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Methoxychlor | 72-43-5 | 7.4 | U | 7.4 | 1.9 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.9 | U | 1.9 | 0.39 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 36 | U | 36 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 37 | U | 37 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.7 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.9 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.7 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 3.2 | J | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 8.2 | J | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.06 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 20.8 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 10.0 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-508-NBZ-SB-4.0-5.0 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301921**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 09:15 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50845 SDG#: PH139-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.10 | U | 1.10 | 0.0782 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.50 | U | 5.50 | 0.0513 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.50 | U | 5.50 | 0.0376 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0656 | JB | 5.50 | 0.0397 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0377 | JBQ | 5.50 | 0.0360 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.186 | JBQ | 5.50 | 0.0341 | 1 |
| 11031 | OCDD | 3268-87-9 | 1.22 | JB | 11.0 | 0.0432 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.107 | JBQ | 1.10 | 0.0753 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0722 | JBQ | 5.50 | 0.0333 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0629 | JBQ | 5.50 | 0.0307 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0401 | JBQ | 5.50 | 0.0369 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.50 | U | 5.50 | 0.0359 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.114 | JBQ | 5.50 | 0.0373 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0565 | JBQ | 5.50 | 0.0328 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.101 | JBQ | 5.50 | 0.0186 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0765 | JBQ | 5.50 | 0.0236 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.322 | JB | 11.0 | 0.0597 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00700 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 62 | 25 - 164 |
| 13C12-12378-PeCDD | 65 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 78 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 69 | 23 - 140 |
| 13C12-OCDD | 59 | 17 - 157 |
| 13C12-2378-TCDF | 58 | 24 - 169 |
| 13C12-12378-PeCDF | 62 | 24 - 185 |
| 13C12-23478-PeCDF | 62 | 21 - 178 |
| 13C12-123478-HxCDF | 72 | 26 - 152 |
| 13C12-123678-HxCDF | 74 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 76 | 28 - 143 |
| 13C12-1234789-HpCDF | 62 | 26 - 138 |
| 13C12-OCDF | 51 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-508-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301921**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 09:15 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50845 SDG#: PH139-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-508-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301921**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 09:15 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50845 SDG#: PH139-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLE026 | 12/24/2013 10:19 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLE026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13347A16A | 12/16/2013 20:49 | Marie D Beamenderfer | 22.44 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201333933341 | 12/05/2013 14:53 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201333933341 | 12/05/2013 14:53 | Mitchell R Washel | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133440020A | 12/16/2013 17:18 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440007A | 12/11/2013 15:31 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440007A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133440020A | 12/11/2013 07:30 | Joseph S Feister | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/12/2013 23:25 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/16/2013 20:15 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13339039402A | 12/05/2013 21:20 | Michelle L Lalli | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-546-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301922**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 09:55 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54600 SDG#: PH139-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 11 | J | 26 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 76 | | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 250 | | 52 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 10 | 5 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 3.1 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 20:34 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-547-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301923**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 10:45 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54700 SDG#: PH139-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 11 | U | 11 | 4.2 | 2 |
| 12952 | EFH (C15-C20) | n.a. | 10 | J | 11 | 4.2 | 2 |
| 12952 | EFH (C21-C30) | n.a. | 62 | | 11 | 4.2 | 2 |
| 12952 | EFH (C30-C40) | n.a. | 150 | | 21 | 8.5 | 2 |
| 12952 | EFH (C8-C11) | n.a. | 11 | U | 11 | 4.2 | 2 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 5.4 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 20:55 | Heather E Williams | 2 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-549-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301924**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 08:55 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54900 SDG#: PH139-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 13 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 24 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 1.9 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 00:52 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-120413 Water**
**SSFL Phase 3 NBZ**

**LL Sample # WW 7301925**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 08:00

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB139 SDG#: PH139-09TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13339A94A | 12/06/2013 13:55 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13339A94A | 12/06/2013 13:55 | Catherine J Schwarz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-545-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301926**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 18 | U | 18 | 7.2 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 18 | U | 18 | 3.6 | 10 |
| 12969 | Anthracene | 120-12-7 | 18 | U | 18 | 3.6 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 18 | U | 18 | 7.2 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 18 | U | 18 | 7.2 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 15 | J | 18 | 7.2 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 180 | U | 180 | 36 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 18 | U | 18 | 7.2 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 18 | U | 18 | 7.2 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 190 | U | 190 | 65 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 190 | U | 190 | 65 | 10 |
| 12969 | Chrysene | 218-01-9 | 20 | | 18 | 3.6 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 18 | U | 18 | 7.2 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 190 | U | 190 | 65 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 190 | U | 190 | 65 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 190 | U | 190 | 65 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 18 | U | 18 | 7.2 | 10 |
| 12969 | Fluorene | 86-73-7 | 18 | U | 18 | 7.2 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 18 | U | 18 | 7.2 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 18 | U | 18 | 7.2 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 18 | U | 18 | 7.2 | 10 |
| 12969 | Naphthalene | 91-20-3 | 12 | J | 18 | 7.2 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 18 | U | 18 | 7.2 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 190 | U | 190 | 65 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 18 | U | 18 | 7.2 | 10 |
| 12969 | Pyrene | 129-00-0 | 18 | U | 18 | 7.2 | 10 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 27 | U | 27 | 11 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 35 | | 27 | 11 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 150 | | 27 | 11 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 370 | | 54 | 22 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 27 | U | 27 | 11 | 5 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-545-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301926**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,100 | | 42.4 | 7.64 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.24 | U | 4.24 | 0.784 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.24 | J | 4.24 | 0.742 | 1 |
| 06946 | Barium | 7440-39-3 | 71.5 | | 1.06 | 0.0350 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.477 | J | 1.06 | 0.0710 | 1 |
| 07914 | Boron | 7440-42-8 | 4.79 | J | 10.6 | 0.890 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.447 | J | 1.06 | 0.0806 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,070 | | 21.2 | 3.54 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.7 | | 3.18 | 0.170 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.80 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 4.81 | | 2.12 | 0.307 | 1 |
| 01654 | Iron | 7439-89-6 | 18,500 | | 42.4 | 3.84 | 1 |
| 06955 | Lead | 7439-92-1 | 14.8 | | 3.18 | 0.530 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.7 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,240 | | 10.6 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 283 | | 1.06 | 0.0880 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.998 | J | 2.12 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.7 | | 2.12 | 0.138 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 431 | | 10.6 | 3.06 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,490 | | 106 | 8.84 | 1 |
| 01667 | Sodium | 7440-23-5 | 78.3 | J | 106 | 17.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.85 | J | 10.6 | 0.233 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,010 | | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 31.2 | | 1.06 | 0.138 | 1 |
| 06972 | Zinc | 7440-66-6 | 57.2 | | 4.24 | 0.212 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.66 | J | 5.30 | 0.890 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.203 | J | 0.424 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.201 | J | 0.212 | 0.0276 | 2 |
| 06144 | Strontium | 7440-24-6 | 25.3 | | 0.424 | 0.0721 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.213 | | 0.212 | 0.0318 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.182 | | 0.0171 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9012B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05895 | 18a Cyanide by EPA 9012B | 57-12-5 | 0.52 | U | 0.52 | 0.19 | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.97 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-545-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301926**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|

*=This limit was used in the evaluation of the final result

**Sample Description: SL-545-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301926**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0707 | JB | 1.03 | 0.0480 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.269 | JBQ | 5.17 | 0.0631 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.441 | JB | 5.17 | 0.0592 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.04 | JB | 5.17 | 0.0604 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.790 | JB | 5.17 | 0.0584 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 17.3 | B | 5.17 | 0.0490 | 1 |
| 11031 | OCDD | 3268-87-9 | 142 | B | 10.3 | 0.0519 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.622 | JBQ | 1.03 | 0.0922 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.878 | JB | 5.17 | 0.0517 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.889 | JB | 5.17 | 0.0492 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.466 | JB | 5.17 | 0.0550 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.470 | JB | 5.17 | 0.0548 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.206 | JB | 5.17 | 0.0516 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.462 | JB | 5.17 | 0.0505 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 3.75 | JB | 5.17 | 0.0398 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.363 | JBQ | 5.17 | 0.0488 | 1 |
| 11031 | OCDF | 39001-02-0 | 8.97 | JB | 10.3 | 0.0378 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.01 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 69 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 81 | 28 - 130 |
| 13C12-1234678-HpCDD | 72 | 23 - 140 |
| 13C12-OCDD | 67 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 68 | 24 - 185 |
| 13C12-23478-PeCDF | 67 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 76 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 88 | 29 - 147 |
| 13C12-1234678-HpCDF | 74 | 28 - 143 |
| 13C12-1234789-HpCDF | 69 | 26 - 138 |
| 13C12-OCDF | 64 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-545-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301926**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-545-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301926**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLE026 | 12/24/2013 11:59 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLE026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440007A | 12/11/2013 15:50 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440007A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 18:46 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/16/2013 21:12 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:45 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133470637001B | 12/17/2013 18:12 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:12 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:12 | John P Hook | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-545-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301926**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:12 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133470638001 | 12/17/2013 07:21 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133470637001 | 12/15/2013 23:55 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133470638001 | 12/16/2013 02:30 | Annamaria Kuhns | 1 |
| 05895 | 18a Cyanide by EPA 9012B | SW-846 9012B | 1 | 13349102201A | 12/16/2013 09:29 | K Robert Caulfeild-James | 1 |
| 05896 | Cyanide Solid Distillation | SW-846 9012B | 1 | 13349102201A | 12/15/2013 15:40 | Joseph E McKenzie | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13339039402A | 12/05/2013 21:20 | Michelle L Lalli | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-545-NBZ-SB-0.0-0.5MS Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301927**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 32 | | 18 | 7.2 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 30 | | 18 | 3.6 | 10 |
| 12969 | Anthracene | 120-12-7 | 31 | | 18 | 3.6 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 38 | | 18 | 7.2 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 34 | | 18 | 7.2 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 41 | | 18 | 7.2 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 180 | U | 180 | 36 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 20 | | 18 | 7.2 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 40 | | 18 | 7.2 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 190 | U | 190 | 65 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 190 | U | 190 | 65 | 10 |
| 12969 | Chrysene | 218-01-9 | 50 | | 18 | 3.6 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 23 | | 18 | 7.2 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 190 | U | 190 | 65 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 190 | U | 190 | 65 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 190 | U | 190 | 65 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 37 | | 18 | 7.2 | 10 |
| 12969 | Fluorene | 86-73-7 | 32 | | 18 | 7.2 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 23 | | 18 | 7.2 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 37 | | 18 | 7.2 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 37 | | 18 | 7.2 | 10 |
| 12969 | Naphthalene | 91-20-3 | 36 | | 18 | 7.2 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 30 | | 18 | 7.2 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 190 | U | 190 | 65 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 34 | | 18 | 7.2 | 10 |
| 12969 | Pyrene | 129-00-0 | 38 | | 18 | 7.2 | 10 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 150 | | 18 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 170 | | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 27 | U | 27 | 11 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 27 | J | 27 | 11 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 120 | | 27 | 11 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 300 | | 54 | 22 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 27 | U | 27 | 11 | 5 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-545-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301927**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,100 | 42.4 | 7.64 | 1 |
| 06944 | Antimony | 7440-36-0 | 33.3 | 4.24 | 0.784 | 1 |
| 06935 | Arsenic | 7440-38-2 | 19.7 | 4.24 | 0.742 | 1 |
| 06946 | Barium | 7440-39-3 | 291 | 1.06 | 0.0350 | 1 |
| 06947 | Beryllium | 7440-41-7 | 6.00 | 1.06 | 0.0710 | 1 |
| 07914 | Boron | 7440-42-8 | 209 | 10.6 | 0.890 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.84 | 1.06 | 0.0806 | 1 |
| 01650 | Calcium | 7440-70-2 | 6,140 | 21.2 | 3.54 | 1 |
| 06951 | Chromium | 7440-47-3 | 38.1 | 3.18 | 0.170 | 1 |
| 06952 | Cobalt | 7440-48-4 | 57.5 | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 31.2 | 2.12 | 0.307 | 1 |
| 01654 | Iron | 7439-89-6 | 19,600 | 42.4 | 3.84 | 1 |
| 06955 | Lead | 7439-92-1 | 31.3 | 3.18 | 0.530 | 1 |
| 01656 | Lithium | 7439-93-2 | 134 | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,730 | 10.6 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 357 | 1.06 | 0.0880 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 202 | 2.12 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 65.1 | 2.12 | 0.138 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 521 | 10.6 | 3.06 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,810 | 106 | 8.84 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,140 | 106 | 17.7 | 1 |
| 06969 | Tin | 7440-31-5 | 380 | 10.6 | 0.233 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,320 | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 86.0 | 1.06 | 0.138 | 1 |
| 06972 | Zinc | 7440-66-6 | 113 | 4.24 | 0.212 | 1 |
| 10146 | Zirconium | 7440-67-7 | 96.6 | 5.30 | 0.890 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.41 | 0.424 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 11.3 | 0.212 | 0.0276 | 2 |
| 06144 | Strontium | 7440-24-6 | 35.9 | 0.424 | 0.0721 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.623 | 0.212 | 0.0318 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.348 | 0.0175 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9012B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05895 | 18a Cyanide by EPA 9012B | 57-12-5 | 5.7 | 0.53 | 0.19 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 7.5 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-545-NBZ-SB-0.0-0.5MS Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301927**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 18.8 | B | 1.08 | 0.0729 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 101 | B | 5.40 | 0.0737 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 106 | B | 5.40 | 0.0804 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 108 | B | 5.40 | 0.0855 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 108 | B | 5.40 | 0.0803 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 115 | B | 5.40 | 0.0827 | 1 |
| 11031 | OCDD | 3268-87-9 | 306 | B | 10.8 | 0.0869 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.4 | B | 1.08 | 0.103 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 107 | B | 5.40 | 0.0689 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 110 | B | 5.40 | 0.0661 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 109 | B | 5.40 | 0.0736 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 110 | B | 5.40 | 0.0701 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 109 | B | 5.40 | 0.0632 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 108 | B | 5.40 | 0.0677 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 111 | B | 5.40 | 0.0517 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 110 | B | 5.40 | 0.0671 | 1 |
| 11031 | OCDF | 39001-02-0 | 218 | B | 10.8 | 0.0794 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 82 | 25 - 164 |
| 13C12-12378-PeCDD | 75 | 25 - 181 |
| 13C12-123478-HxCDD | 88 | 32 - 141 |
| 13C12-123678-HxCDD | 88 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 66 | 17 - 157 |
| 13C12-2378-TCDF | 73 | 24 - 169 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 73 | 21 - 178 |
| 13C12-123478-HxCDF | 80 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 86 | 28 - 136 |
| 13C12-123789-HxCDF | 99 | 29 - 147 |
| 13C12-1234678-HpCDF | 80 | 28 - 143 |
| 13C12-1234789-HpCDF | 69 | 26 - 138 |
| 13C12-OCDF | 62 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-545-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301927**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLE026 | 12/24/2013 12:33 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLE026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440007A | 12/11/2013 16:08 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440007A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 19:07 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/16/2013 22:09 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:56 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133470637001B | 12/17/2013 18:19 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:19 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:19 | John P Hook | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-545-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301927**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:19 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133470638001 | 12/17/2013 07:27 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133470637001 | 12/15/2013 23:55 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133470638001 | 12/16/2013 02:30 | Annamaria Kuhns | 1 |
| 05895 | 18a Cyanide by EPA 9012B | SW-846 9012B | 1 | 13349102201A | 12/16/2013 09:31 | K Robert Caulfeild-James | 1 |
| 05896 | Cyanide Solid Distillation | SW-846 9012B | 1 | 13349102201A | 12/15/2013 15:40 | Joseph E McKenzie | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-545-NBZ-SB-0.0-0.5MSD Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301928**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 33 | | 18 | 7.2 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 32 | | 18 | 3.6 | 10 |
| 12969 | Anthracene | 120-12-7 | 33 | | 18 | 3.6 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 43 | | 18 | 7.2 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 38 | | 18 | 7.2 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 53 | | 18 | 7.2 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 43 | J | 180 | 36 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 23 | | 18 | 7.2 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 39 | | 18 | 7.2 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 190 | U | 190 | 65 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 190 | U | 190 | 65 | 10 |
| 12969 | Chrysene | 218-01-9 | 56 | | 18 | 3.6 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 24 | | 18 | 7.2 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 190 | U | 190 | 65 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 190 | U | 190 | 65 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 190 | U | 190 | 65 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 38 | | 18 | 7.2 | 10 |
| 12969 | Fluorene | 86-73-7 | 33 | | 18 | 7.2 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 25 | | 18 | 7.2 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 38 | | 18 | 7.2 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 39 | | 18 | 7.2 | 10 |
| 12969 | Naphthalene | 91-20-3 | 37 | | 18 | 7.2 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 32 | | 18 | 7.2 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 190 | U | 190 | 65 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 36 | | 18 | 7.2 | 10 |
| 12969 | Pyrene | 129-00-0 | 43 | | 18 | 7.2 | 10 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 150 | | 18 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 160 | | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 27 | U | 27 | 11 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 39 | | 27 | 11 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 140 | | 27 | 11 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 410 | | 54 | 22 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 27 | U | 27 | 11 | 5 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-545-NBZ-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301928**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,300 | 42.4 | 7.64 | 1 |
| 06944 | Antimony | 7440-36-0 | 32.9 | 4.24 | 0.784 | 1 |
| 06935 | Arsenic | 7440-38-2 | 18.9 | 4.24 | 0.742 | 1 |
| 06946 | Barium | 7440-39-3 | 285 | 1.06 | 0.0350 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.87 | 1.06 | 0.0710 | 1 |
| 07914 | Boron | 7440-42-8 | 207 | 10.6 | 0.890 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.65 | 1.06 | 0.0806 | 1 |
| 01650 | Calcium | 7440-70-2 | 6,000 | 21.2 | 3.54 | 1 |
| 06951 | Chromium | 7440-47-3 | 36.3 | 3.18 | 0.170 | 1 |
| 06952 | Cobalt | 7440-48-4 | 56.0 | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 30.5 | 2.12 | 0.307 | 1 |
| 01654 | Iron | 7439-89-6 | 18,500 | 42.4 | 3.84 | 1 |
| 06955 | Lead | 7439-92-1 | 29.7 | 3.18 | 0.530 | 1 |
| 01656 | Lithium | 7439-93-2 | 130 | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,510 | 10.6 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 343 | 1.06 | 0.0880 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 197 | 2.12 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 63.3 | 2.12 | 0.138 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 490 | 10.6 | 3.06 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,650 | 106 | 8.84 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,110 | 106 | 17.7 | 1 |
| 06969 | Tin | 7440-31-5 | 372 | 10.6 | 0.233 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,300 | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 82.8 | 1.06 | 0.138 | 1 |
| 06972 | Zinc | 7440-66-6 | 110 | 4.24 | 0.212 | 1 |
| 10146 | Zirconium | 7440-67-7 | 94.2 | 5.30 | 0.890 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.54 | 0.424 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 11.0 | 0.212 | 0.0276 | 2 |
| 06144 | Strontium | 7440-24-6 | 41.9 | 0.424 | 0.0721 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.630 | 0.212 | 0.0318 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.378 | 0.0174 | 0.0105 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 7.5 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-545-NBZ-SB-0.0-0.5MSD Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301928**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 19.0 | B | 1.07 | 0.0624 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 102 | B | 5.33 | 0.0650 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 107 | B | 5.33 | 0.0697 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 105 | B | 5.33 | 0.0717 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 105 | B | 5.33 | 0.0676 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 113 | B | 5.33 | 0.0636 | 1 |
| 11031 | OCDD | 3268-87-9 | 265 | B | 10.7 | 0.0662 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.1 | B | 1.07 | 0.0766 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 106 | B | 5.33 | 0.0526 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 107 | B | 5.33 | 0.0494 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 108 | B | 5.33 | 0.0565 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 108 | B | 5.33 | 0.0556 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 110 | B | 5.33 | 0.0591 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 108 | B | 5.33 | 0.0529 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 110 | B | 5.33 | 0.0531 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 109 | B | 5.33 | 0.0662 | 1 |
| 11031 | OCDF | 39001-02-0 | 213 | B | 10.7 | 0.0623 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 77 | 25 - 164 |
| 13C12-12378-PeCDD | 72 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 68 | 23 - 140 |
| 13C12-OCDD | 58 | 17 - 157 |
| 13C12-2378-TCDF | 72 | 24 - 169 |
| 13C12-12378-PeCDF | 71 | 24 - 185 |
| 13C12-23478-PeCDF | 70 | 21 - 178 |
| 13C12-123478-HxCDF | 79 | 26 - 152 |
| 13C12-123678-HxCDF | 79 | 26 - 123 |
| 13C12-234678-HxCDF | 82 | 28 - 136 |
| 13C12-123789-HxCDF | 81 | 29 - 147 |
| 13C12-1234678-HpCDF | 73 | 28 - 143 |
| 13C12-1234789-HpCDF | 62 | 26 - 138 |
| 13C12-OCDF | 55 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-545-NBZ-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301928**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLE026 | 12/24/2013 13:08 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLE026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440007A | 12/11/2013 16:27 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440007A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 19:29 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/16/2013 23:06 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:00 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133470637001B | 12/17/2013 18:22 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:22 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:22 | John P Hook | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-545-NBZ-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301928**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:22 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133470638001 | 12/17/2013 07:29 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133470637001 | 12/15/2013 23:55 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133470638001 | 12/16/2013 02:30 | Annamaria Kuhns | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-545-NBZ-SB-0.0-0.5DUP Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301929**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,700 | | 42.4 | 7.64 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.24 | U | 4.24 | 0.784 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.08 | J | 4.24 | 0.742 | 1 |
| 06946 | Barium | 7440-39-3 | 69.0 | | 1.06 | 0.0350 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.425 | J | 1.06 | 0.0710 | 1 |
| 07914 | Boron | 7440-42-8 | 4.69 | J | 10.6 | 0.890 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.421 | J | 1.06 | 0.0806 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,120 | | 21.2 | 3.54 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.3 | | 3.18 | 0.170 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.36 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 4.36 | | 2.12 | 0.307 | 1 |
| 01654 | Iron | 7439-89-6 | 17,200 | | 42.4 | 3.84 | 1 |
| 06955 | Lead | 7439-92-1 | 13.4 | | 3.18 | 0.530 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.7 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,020 | | 10.6 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 260 | | 1.06 | 0.0880 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.412 | J | 2.12 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.80 | | 2.12 | 0.138 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 387 | | 10.6 | 3.06 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,290 | | 106 | 8.84 | 1 |
| 01667 | Sodium | 7440-23-5 | 73.7 | J | 106 | 17.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.95 | J | 10.6 | 0.233 | 1 |
| 06970 | Titanium | 7440-32-6 | 884 | | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 28.6 | | 1.06 | 0.138 | 1 |
| 06972 | Zinc | 7440-66-6 | 53.8 | | 4.24 | 0.212 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.58 | J | 5.30 | 0.890 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.204 | J | 0.424 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.220 | | 0.212 | 0.0276 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.1 | | 0.424 | 0.0721 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.204 | J | 0.212 | 0.0318 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.164 | | 0.0174 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9012B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05895 | 18a Cyanide by EPA 9012B | 57-12-5 | 0.24 | J | 0.54 | 0.19 | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.97 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 7.5 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 7.0 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-545-NBZ-SB-0.0-0.5DUP Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301929**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 17:53 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133470637001B | 12/17/2013 18:17 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:17 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:17 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:17 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133470638001 | 12/17/2013 07:25 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133470637001 | 12/15/2013 23:55 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133470638001 | 12/16/2013 02:30 | Annamaria Kuhns | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-545-NBZ-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301929**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:25 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54500 SDG#: PH139-10DUP

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05895 | 18a Cyanide by EPA 9012B | SW-846 9012B | 1 | 13349102201A | 12/16/2013 09:32 | K Robert Caulfeild-James | 1 |
| 05896 | Cyanide Solid Distillation | SW-846 9012B | 1 | 13349102201A | 12/15/2013 15:40 | Joseph E McKenzie | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13339039402A | 12/05/2013 21:20 | Michelle L Lalli | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-845-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301930**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:30 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84500 SDG#: PH139-11

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 18 | U | 18 | 7.1 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 18 | U | 18 | 3.5 | 10 |
| 12969 | Anthracene | 120-12-7 | 18 | U | 18 | 3.5 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 18 | U | 18 | 7.1 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 18 | U | 18 | 7.1 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 18 | U | 18 | 7.1 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 180 | U | 180 | 35 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 18 | U | 18 | 7.1 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 18 | U | 18 | 7.1 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 190 | U | 190 | 64 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 190 | U | 190 | 64 | 10 |
| 12969 | Chrysene | 218-01-9 | 6.9 | J | 18 | 3.5 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 18 | U | 18 | 7.1 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 190 | U | 190 | 64 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 190 | U | 190 | 64 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 190 | U | 190 | 64 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 18 | U | 18 | 7.1 | 10 |
| 12969 | Fluorene | 86-73-7 | 18 | U | 18 | 7.1 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 18 | U | 18 | 7.1 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 18 | U | 18 | 7.1 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 18 | U | 18 | 7.1 | 10 |
| 12969 | Naphthalene | 91-20-3 | 18 | U | 18 | 7.1 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 18 | U | 18 | 7.1 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 190 | U | 190 | 64 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 18 | U | 18 | 7.1 | 10 |
| 12969 | Pyrene | 129-00-0 | 18 | U | 18 | 7.1 | 10 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 11 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 33 | | 26 | 11 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 200 | | 26 | 11 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 460 | | 53 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 11 | 5 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-845-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301930**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:30 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84500 SDG#: PH139-11

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,800 | | 41.5 | 7.49 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.15 | U | 4.15 | 0.769 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.90 | J | 4.15 | 0.727 | 1 |
| 06946 | Barium | 7440-39-3 | 77.1 | | 1.04 | 0.0343 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.466 | J | 1.04 | 0.0696 | 1 |
| 07914 | Boron | 7440-42-8 | 5.57 | J | 10.4 | 0.872 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.466 | J | 1.04 | 0.0789 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,200 | | 20.8 | 3.47 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.7 | | 3.12 | 0.166 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.62 | | 1.04 | 0.103 | 1 |
| 06953 | Copper | 7440-50-8 | 4.80 | | 2.08 | 0.301 | 1 |
| 01654 | Iron | 7439-89-6 | 18,000 | | 41.5 | 3.76 | 1 |
| 06955 | Lead | 7439-92-1 | 15.1 | | 3.12 | 0.519 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.0 | | 4.2 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,070 | | 10.4 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 273 | | 1.04 | 0.0862 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.561 | J | 2.08 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.3 | | 2.08 | 0.135 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 372 | | 10.4 | 3.00 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,070 | | 104 | 8.66 | 1 |
| 01667 | Sodium | 7440-23-5 | 92.1 | J | 104 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.85 | J | 10.4 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,010 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 29.6 | | 1.04 | 0.135 | 1 |
| 06972 | Zinc | 7440-66-6 | 63.6 | | 4.15 | 0.208 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.00 | J | 5.19 | 0.872 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.189 | J | 0.415 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.233 | | 0.208 | 0.0270 | 2 |
| 06144 | Strontium | 7440-24-6 | 29.2 | | 0.415 | 0.0706 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.204 | J | 0.208 | 0.0312 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.284 | | 0.0173 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9012B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05895 | 18a Cyanide by EPA 9012B | 57-12-5 | 0.53 | U | 0.53 | 0.19 | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.06 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-845-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301930**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:30 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84500 SDG#: PH139-11

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-845-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301930**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:30 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84500 SDG#: PH139-11

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0848 | JBQ | 1.05 | 0.0552 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.688 | JBQ | 5.27 | 0.0711 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.589 | JB | 5.27 | 0.0632 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.10 | JB | 5.27 | 0.0678 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.926 | JB | 5.27 | 0.0612 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 13.2 | B | 5.27 | 0.0463 | 1 |
| 11031 | OCDD | 3268-87-9 | 106 | B | 10.5 | 0.0552 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.487 | JBQ | 1.05 | 0.0849 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.13 | JB | 5.27 | 0.0494 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.995 | JB | 5.27 | 0.0468 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.660 | JBQ | 5.27 | 0.0565 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.682 | JB | 5.27 | 0.0536 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.466 | JB | 5.27 | 0.0558 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.727 | JB | 5.27 | 0.0503 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 4.26 | JB | 5.27 | 0.0356 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.597 | JB | 5.27 | 0.0434 | 1 |
| 11031 | OCDF | 39001-02-0 | 8.17 | JB | 10.5 | 0.0445 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.997 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 79 | 25 - 164 |
| 13C12-12378-PeCDD | 71 | 25 - 181 |
| 13C12-123478-HxCDD | 89 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 66 | 17 - 157 |
| 13C12-2378-TCDF | 74 | 24 - 169 |
| 13C12-12378-PeCDF | 71 | 24 - 185 |
| 13C12-23478-PeCDF | 70 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 86 | 28 - 136 |
| 13C12-123789-HxCDF | 84 | 29 - 147 |
| 13C12-1234678-HpCDF | 76 | 28 - 143 |
| 13C12-1234789-HpCDF | 67 | 26 - 138 |
| 13C12-OCDF | 63 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-845-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301930**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:30 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84500 SDG#: PH139-11

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-845-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301930**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:30 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84500 SDG#: PH139-11

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLE026 | 12/24/2013 13:42 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLE026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440007A | 12/11/2013 16:45 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440007A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 19:50 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/17/2013 00:02 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:08 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133470637001B | 12/17/2013 18:26 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:26 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:26 | John P Hook | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-845-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301930**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:30 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84500 SDG#: PH139-11

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:26 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133470638001 | 12/17/2013 07:31 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133470637001 | 12/15/2013 23:55 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133470638001 | 12/16/2013 02:30 | Annamaria Kuhns | 1 |
| 05895 | 18a Cyanide by EPA 9012B | SW-846 9012B | 1 | 13349102201A | 12/16/2013 09:33 | K Robert Caulfeild-James | 1 |
| 05896 | Cyanide Solid Distillation | SW-846 9012B | 1 | 13349102201A | 12/15/2013 15:40 | Joseph E McKenzie | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13339039402A | 12/05/2013 21:20 | Michelle L Lalli | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-511-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301931**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 12:40 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51100 SDG#: PH139-12

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.3 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 0.71 | J | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.7 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.4 | J | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.70 | J | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.1 | J | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.6 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.4 | J | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.4 | J | 1.7 | 0.70 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.9 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 23 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 59 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 21,300 | | 41.8 | 7.53 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.18 | U | 4.18 | 0.772 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.05 | | 4.18 | 0.731 | 1 |
| 06946 | Barium | 7440-39-3 | 129 | | 1.04 | 0.0344 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.950 | J | 1.04 | 0.0699 | 1 |
| 07914 | Boron | 7440-42-8 | 10.4 | U | 10.4 | 0.877 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.489 | J | 1.04 | 0.0793 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,400 | | 20.9 | 3.49 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.5 | | 3.13 | 0.167 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301931**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 12:40 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51100 SDG#: PH139-12

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06952 | Cobalt | 7440-48-4 | 8.18 | | 1.04 | 0.103 | 1 |
| 06953 | Copper | 7440-50-8 | 7.76 | | 2.09 | 0.303 | 1 |
| 01654 | Iron | 7439-89-6 | 29,000 | | 83.5 | 7.56 | 2 |
| 06955 | Lead | 7439-92-1 | 19.7 | | 3.13 | 0.522 | 1 |
| 01656 | Lithium | 7439-93-2 | 43.2 | | 4.2 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,580 | | 10.4 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 496 | | 1.04 | 0.0866 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.396 | J | 2.09 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 17.1 | | 2.09 | 0.136 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 557 | | 10.4 | 3.02 | 1 |
| 01662 | Potassium | 7440-09-7 | 5,660 | | 104 | 8.71 | 1 |
| 01667 | Sodium | 7440-23-5 | 99.6 | J | 104 | 17.4 | 1 |
| 06969 | Tin | 7440-31-5 | 3.49 | J | 10.4 | 0.230 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,340 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 43.3 | | 1.04 | 0.136 | 1 |
| 06972 | Zinc | 7440-66-6 | 84.5 | | 4.18 | 0.209 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.33 | J | 5.22 | 0.877 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.402 | J | 0.418 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0824 | J | 0.209 | 0.0271 | 2 |
| 06144 | Strontium | 7440-24-6 | 31.0 | | 0.418 | 0.0710 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.369 | | 0.209 | 0.0313 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0195 | | 0.0165 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.53 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 20.8 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-511-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301931**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 12:40 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51100 SDG#: PH139-12

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.00 | U | 1.00 | 0.0500 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0866 | JBQ | 5.01 | 0.0395 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0648 | JB | 5.01 | 0.0469 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.300 | JB | 5.01 | 0.0497 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.263 | JBQ | 5.01 | 0.0446 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.23 | JB | 5.01 | 0.0357 | 1 |
| 11031 | OCDD | 3268-87-9 | 12.4 | B | 10.0 | 0.0410 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.325 | JBQ | 1.00 | 0.0747 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.169 | JBQ | 5.01 | 0.0331 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.377 | JB | 5.01 | 0.0319 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.165 | JB | 5.01 | 0.0438 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.150 | JB | 5.01 | 0.0407 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.152 | JBQ | 5.01 | 0.0455 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.176 | JB | 5.01 | 0.0424 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.569 | JB | 5.01 | 0.0241 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0983 | JBQ | 5.01 | 0.0307 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.821 | JBQ | 10.0 | 0.0494 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.231 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 67 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 79 | 28 - 130 |
| 13C12-1234678-HpCDD | 67 | 23 - 140 |
| 13C12-OCDD | 57 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 66 | 24 - 185 |
| 13C12-23478-PeCDF | 63 | 21 - 178 |
| 13C12-123478-HxCDF | 74 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 73 | 28 - 143 |
| 13C12-1234789-HpCDF | 59 | 26 - 138 |
| 13C12-OCDF | 51 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301931**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 12:40 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51100 SDG#: PH139-12

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301931**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 12:40 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51100 SDG#: PH139-12

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLE026 | 12/24/2013 10:51 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLE026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 01:13 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/17/2013 00:59 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:42 | Katlin N Cataldi | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:12 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133470637001B | 12/17/2013 18:29 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:29 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:29 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:29 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133470638001 | 12/17/2013 07:33 | Damary Valentin | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301931**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 12:40 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51100 SDG#: PH139-12

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133470637001 | 12/15/2013 23:55 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133470638001 | 12/16/2013 02:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13339039402A | 12/05/2013 21:20 | Michelle L Lalli | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-511-NBZ-SB-2.5-3.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301932**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51125 SDG#: PH139-13

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 0.3 | J | 1.1 | 0.2 | 26.32 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 3.5 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 8.9 | J | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 23,500 | | 40.9 | 7.38 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.09 | U | 4.09 | 0.757 | 1 |
| 06935 | Arsenic | 7440-38-2 | 28.0 | | 4.09 | 0.716 | 1 |
| 06946 | Barium | 7440-39-3 | 106 | | 1.02 | 0.0338 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.18 | | 1.02 | 0.0685 | 1 |
| 07914 | Boron | 7440-42-8 | 10.2 | U | 10.2 | 0.859 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.354 | J | 1.02 | 0.0778 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,030 | | 20.5 | 3.42 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.1 | | 3.07 | 0.164 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-NBZ-SB-2.5-3.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301932**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51125 SDG#: PH139-13

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06952 | Cobalt | 7440-48-4 | 7.85 | | 1.02 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 8.84 | | 2.05 | 0.297 | 1 |
| 01654 | Iron | 7439-89-6 | 35,200 | | 81.8 | 7.41 | 2 |
| 06955 | Lead | 7439-92-1 | 15.5 | | 3.07 | 0.512 | 1 |
| 01656 | Lithium | 7439-93-2 | 45.9 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,680 | | 10.2 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 370 | | 1.02 | 0.0849 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.630 | J | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 15.8 | | 2.05 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 359 | | 10.2 | 2.96 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,010 | | 102 | 8.53 | 1 |
| 01667 | Sodium | 7440-23-5 | 106 | | 102 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 3.68 | J | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,330 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 47.0 | | 1.02 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 82.1 | | 4.09 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.34 | J | 5.12 | 0.859 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.402 | J | 0.409 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0769 | J | 0.205 | 0.0266 | 2 |
| 06144 | Strontium | 7440-24-6 | 23.3 | | 0.409 | 0.0696 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.378 | | 0.205 | 0.0307 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0140 | J | 0.0171 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.72 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.5 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.1 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-511-NBZ-SB-2.5-3.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301932**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51125 SDG#: PH139-13

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.01 | U | 1.01 | 0.0565 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.157 | JBQ | 5.07 | 0.0355 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0507 | JBQ | 5.07 | 0.0270 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.114 | JBQ | 5.07 | 0.0280 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.144 | JB | 5.07 | 0.0271 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.196 | JB | 5.07 | 0.0275 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.809 | JB | 10.1 | 0.0377 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.147 | JBQ | 1.01 | 0.0573 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.203 | JB | 5.07 | 0.0272 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.186 | JBQ | 5.07 | 0.0251 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.112 | JB | 5.07 | 0.0240 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0967 | JB | 5.07 | 0.0233 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.123 | JBQ | 5.07 | 0.0229 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0897 | JBQ | 5.07 | 0.0228 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.105 | JB | 5.07 | 0.0129 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0526 | JBQ | 5.07 | 0.0173 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.217 | JBQ | 10.1 | 0.0458 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0448 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 59 | 25 - 164 |
| 13C12-12378-PeCDD | 61 | 25 - 181 |
| 13C12-123478-HxCDD | 76 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 75 | 28 - 130 |
| 13C12-1234678-HpCDD | 65 | 23 - 140 |
| 13C12-OCDD | 58 | 17 - 157 |
| 13C12-2378-TCDF | 55 | 24 - 169 |
| 13C12-12378-PeCDF | 59 | 24 - 185 |
| 13C12-23478-PeCDF | 59 | 21 - 178 |
| 13C12-123478-HxCDF | 71 | 26 - 152 |
| 13C12-123678-HxCDF | 72 | 26 - 123 |
| 13C12-234678-HxCDF | 74 | 28 - 136 |
| 13C12-123789-HxCDF | 80 | 29 - 147 |
| 13C12-1234678-HpCDF | 70 | 28 - 143 |
| 13C12-1234789-HpCDF | 58 | 26 - 138 |
| 13C12-OCDF | 53 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-NBZ-SB-2.5-3.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301932**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51125 SDG#: PH139-13

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-NBZ-SB-2.5-3.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301932**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51125 SDG#: PH139-13

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344SLE026 | 12/24/2013 11:25 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13344SLE026 | 12/10/2013 17:45 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13347A16A | 12/16/2013 21:27 | Marie D Beamenderfer | 26.32 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201333933341 | 12/05/2013 14:54 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201333933341 | 12/05/2013 14:55 | Mitchell R Washel | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/12/2013 23:47 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/17/2013 01:56 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:45 | Katlin N Cataldi | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:23 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133470637001B | 12/17/2013 18:36 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:36 | John P Hook | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-511-NBZ-SB-2.5-3.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301932**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 13:00 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51125 SDG#: PH139-13

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06144 | Strontium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:36 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:36 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133470638001 | 12/17/2013 07:35 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133470637001 | 12/15/2013 23:55 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133470638001 | 12/16/2013 02:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13339039402A | 12/05/2013 21:20 | Michelle L Lalli | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401A | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301933**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 14:15 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54800 SDG#: PH139-14*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.3 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-548-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7301933**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 14:15 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54800 SDG#: PH139-14*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.115 | JBQ | 0.994 | 0.0572 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.194 | JBQ | 4.97 | 0.0385 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0513 | JBQ | 4.97 | 0.0254 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0726 | JBQ | 4.97 | 0.0269 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0822 | JBQ | 4.97 | 0.0251 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.137 | JB | 4.97 | 0.0275 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.438 | JB | 9.94 | 0.0394 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.123 | JBQ | 0.994 | 0.0553 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.249 | JB | 4.97 | 0.0262 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.202 | JBQ | 4.97 | 0.0245 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.103 | JBQ | 4.97 | 0.0279 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.102 | JBQ | 4.97 | 0.0260 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0965 | JB | 4.97 | 0.0281 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0735 | JBQ | 4.97 | 0.0259 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.109 | JB | 4.97 | 0.0152 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0269 | JBQ | 4.97 | 0.0196 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.180 | JBQ | 9.94 | 0.0491 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0196 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 58 | 25 - 164 |
| 13C12-12378-PeCDD | 60 | 25 - 181 |
| 13C12-123478-HxCDD | 73 | 32 - 141 |
| 13C12-123678-HxCDD | 75 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 62 | 23 - 140 |
| 13C12-OCDD | 50 | 17 - 157 |
| 13C12-2378-TCDF | 53 | 24 - 169 |
| 13C12-12378-PeCDF | 57 | 24 - 185 |
| 13C12-23478-PeCDF | 56 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 70 | 26 - 123 |
| 13C12-234678-HxCDF | 70 | 28 - 136 |
| 13C12-123789-HxCDF | 71 | 29 - 147 |
| 13C12-1234678-HpCDF | 67 | 28 - 143 |
| 13C12-1234789-HpCDF | 55 | 26 - 138 |
| 13C12-OCDF | 45 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301933**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 14:15 by KE

Submitted: 12/05/2013 09:50
Reported: 12/31/2013 07:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54800 SDG#: PH139-14*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7301933**
**LL Group # 1438596**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/04/2013 14:15 by KE

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54800 SDG#: PH139-14*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133440007A | 12/11/2013 17:04 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133440007A | 12/10/2013 16:00 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 00:09 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/17/2013 07:43 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13346162401B | 12/12/2013 23:37 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438596
Reported: 12/31/13 at 07:50 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13344SLE026 | Sample number(s): 7301920-7301921,7301926-7301928,7301930-7301932 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 114 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 110 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 120 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 102 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 110 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 113 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 104 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 115 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 115 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 113 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 115* | | 79-112 | | |
| Batch number: 13339A94A | Sample number(s): 7301925 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 113 | 114 | 75-135 | 1 | 30 |
| Batch number: 13347A16A | Sample number(s): 7301919,7301921,7301932 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 83 | 87 | 67-119 | 4 | 30 |
| Batch number: 133440007A | Sample number(s): 7301920-7301921,7301926-7301928,7301930,7301933 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 85 | 87 | 36-106 | 2 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 104 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438596
Reported: 12/31/13 at 07:50 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 114 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 133440020A | Sample number(s): 7301917-7301921 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 107 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 109 | | 62-128 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 108 | | 69-121 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 117 | | 64-130 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 118 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 116 | | 51-141 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 110 | | 73-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 93 | | 64-130 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 115 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 99 | | 60-120 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 108 | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 103 | | 62-127 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 111 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 111 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 133450021A | Sample number(s): 7301917-7301924,7301926-7301928,7301930-7301933 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 101 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 107 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 105 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 57 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 83 | | 60-115 | | |
| Batch number: 133470637001 | Sample number(s): 7301926-7301932 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 102 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 105 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 96 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 110 | | 80-120 | | |
| Calcium | 4.84 | J | 20.0 | 3.34 | mg/kg | 103 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 97 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 109 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 106 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 112 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 105 | | 80-120 | | |
| Magnesium | 2.30 | J | 10.0 | 1.67 | mg/kg | 104 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 106 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 114 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 110 | | 80-120 | | |
| Potassium | 100 | U | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438596
Reported: 12/31/13 at 07:50 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.63 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 100 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 99 | | 80-120 | | |
| Zinc | 0.233 | J | 4.00 | 0.200 | mg/kg | 108 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 98 | | 80-120 | | |
| Batch number: 133470637001A | Sample number(s): 7301926-7301932 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 109 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 106 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 109 | | 80-120 | | |
| Batch number: 133470637001B | Sample number(s): 7301926-7301932 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 114 | | 80-120 | | |
| Batch number: 133470638001 | Sample number(s): 7301926-7301932 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 112 | | 85-120 | | |
| Batch number: 13349102201A | Sample number(s): 7301926-7301927,7301929-7301930 | | | | | | | | | |
| 18a Cyanide by EPA 9012B | 0.50 | U | 0.50 | 0.18 | mg/kg | 99 | | 80-120 | | |
| Batch number: 13339039402A | Sample number(s): 7301920-7301921,7301926,7301929-7301932 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 13346162401A | Sample number(s): 7301917-7301924,7301926-7301932 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 99 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 99 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 99 | | 80-120 | | |
| Batch number: 13346162401B | Sample number(s): 7301933 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 99 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13347003 | Sample number(s): 7301920-7301921,7301926-7301928,7301930-7301933 | | | | | | | | | |
| 2378-TCDD | 0.0842 | J | 1.00 | 0.0450 | ng/kg | 93 | | 67-158 | | |
| 12378-PeCDD | 0.186 | J | 5.00 | 0.0305 | ng/kg | 95 | | 70-142 | | |
| 123478-HxCDD | 0.164 | J | 5.00 | 0.0285 | ng/kg | 100 | | 70-164 | | |
| 123678-HxCDD | 0.174 | J | 5.00 | 0.0294 | ng/kg | 101 | | 76-134 | | |
| 123789-HxCDD | 0.220 | J | 5.00 | 0.0273 | ng/kg | 100 | | 64-162 | | |
| 1234678-HpCDD | 0.255 | J | 5.00 | 0.0234 | ng/kg | 100 | | 70-140 | | |
| OCDD | 0.606 | J | 10.0 | 0.0277 | ng/kg | 97 | | 78-144 | | |
| 2378-TCDF | 0.0670 | J | 1.00 | 0.0481 | ng/kg | 96 | | 75-158 | | |
| 12378-PeCDF | 0.219 | J | 5.00 | 0.0214 | ng/kg | 99 | | 80-134 | | |
| 23478-PeCDF | 0.287 | J | 5.00 | 0.0200 | ng/kg | 100 | | 68-160 | | |
| 123478-HxCDF | 0.187 | J | 5.00 | 0.0280 | ng/kg | 102 | | 72-134 | | |
| 123678-HxCDF | 0.183 | J | 5.00 | 0.0270 | ng/kg | 101 | | 84-130 | | |
| 123789-HxCDF | 0.333 | J | 5.00 | 0.0260 | ng/kg | 102 | | 78-130 | | |
| 234678-HxCDF | 0.271 | J | 5.00 | 0.0256 | ng/kg | 101 | | 70-156 | | |
| 1234678-HpCDF | 0.219 | J | 5.00 | 0.0126 | ng/kg | 99 | | 82-122 | | |
| 1234789-HpCDF | 0.237 | J | 5.00 | 0.0167 | ng/kg | 103 | | 78-138 | | |
| OCDF | 0.588 | J | 10.0 | 0.0393 | ng/kg | 100 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.325 | | | | ng/kg | | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438596
Reported: 12/31/13 at 07:50 AM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13344SLE026 | Sample number(s): 7301920-7301921,7301926-7301928,7301930-7301932 UNSPK: 7301926 | | | | | | | | |
| Acenaphthene | 90 | 93 | 48-127 | 3 | 30 | | | | |
| Acenaphthylene | 84 | 88 | 49-121 | 5 | 30 | | | | |
| Anthracene | 87 | 93 | 52-126 | 7 | 30 | | | | |
| Benzo(a)anthracene | 106 | 118 | 44-143 | 11 | 30 | | | | |
| Benzo(a)pyrene | 95 | 105 | 44-140 | 10 | 30 | | | | |
| Benzo(b)fluoranthene | 74 | 108 | 26-142 | 26 | 30 | | | | |
| Benzo(e)pyrene | 0* | 118 | 70-130 | 200* | 30 | | | | |
| Benzo(g,h,i)perylene | 56 | 64 | 33-141 | 13 | 30 | | | | |
| Benzo(k)fluoranthene | 112 | 108 | 54-142 | 4 | 30 | | | | |
| Butylbenzylphthalate | 0* | 0* | 49-151 | 0 | 30 | | | | |
| Di-n-butylphthalate | 0* | 0* | 52-147 | 0 | 30 | | | | |
| Chrysene | 81 | 98 | 29-148 | 11 | 30 | | | | |
| Dibenz(a,h)anthracene | 64 | 67 | 20-137 | 5 | 30 | | | | |
| Diethylphthalate | 0* | 0* | 43-145 | 0 | 30 | | | | |
| Dimethylphthalate | 0* | 0* | 58-129 | 0 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 0* | 0* | 39-167 | 0 | 30 | | | | |
| Fluoranthene | 103 | 105 | 40-148 | 2 | 30 | | | | |
| Fluorene | 88 | 92 | 51-137 | 5 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 64 | 68 | 17-136 | 7 | 30 | | | | |
| 1-Methylnaphthalene | 103 | 106 | 50-131 | 3 | 30 | | | | |
| 2-Methylnaphthalene | 103 | 108 | 35-152 | 5 | 30 | | | | |
| Naphthalene | 66 | 68 | 31-148 | 2 | 30 | | | | |
| N-Nitrosodimethylamine | 83 | 88 | 48-113 | 5 | 30 | | | | |
| Di-n-octylphthalate | 0* | 0* | 52-162 | 0 | 30 | | | | |
| Phenanthrene | 94 | 100 | 29-142 | 6 | 30 | | | | |
| Pyrene | 106 | 118 | 26-143 | 11 | 30 | | | | |
| Batch number: 133440007A | Sample number(s): 7301920-7301921,7301926-7301928,7301930,7301933 UNSPK: 7301926 | | | | | | | | |
| PCB-1016 | 85 | 85 | 41-135 | 1 | 50 | | | | |
| PCB-1260 | 92 | 88 | 40-134 | 5 | 50 | | | | |
| Batch number: 133440020A | Sample number(s): 7301917-7301921 UNSPK: P300098 | | | | | | | | |
| Aldrin | 96 | 99 | 16-126 | 3 | 50 | | | | |
| Alpha BHC | 102 | 103 | 14-140 | 1 | 50 | | | | |
| Beta BHC | 97 | 102 | 42-133 | 5 | 50 | | | | |
| Gamma BHC - Lindane | 102 | 108 | 30-137 | 5 | 50 | | | | |
| p,p-DDD | 99 | 105 | 43-149 | 5 | 50 | | | | |
| p,p-DDE | 111 | 119 | 35-152 | 7 | 50 | | | | |
| p,p-DDT | 136 | 148 | 12-193 | 8 | 50 | | | | |
| Delta BHC | 105 | 112 | 13-153 | 6 | 50 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438596
Reported: 12/31/13 at 07:50 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Dieldrin | 101 | 103 | 41-153 | 1 | 50 | | | | |
| Endosulfan I | 83 | 86 | 26-146 | 4 | 50 | | | | |
| Endosulfan II | 102 | 109 | 34-141 | 6 | 50 | | | | |
| Endosulfan Sulfate | 102 | 106 | 10-181 | 3 | 50 | | | | |
| Endrin | 101 | 104 | 30-152 | 3 | 50 | | | | |
| Endrin Aldehyde | 86 | 91 | 23-138 | 6 | 50 | | | | |
| Endrin Ketone | 93 | 98 | 30-148 | 4 | 50 | | | | |
| Heptachlor | 92 | 95 | 16-152 | 3 | 50 | | | | |
| Heptachlor Epoxide | 110 | 114 | 33-144 | 3 | 50 | | | | |
| Methoxychlor | 98 | 104 | 41-161 | 5 | 50 | | | | |
| Batch number: 133450021A | Sample number(s): 7301917-7301924,7301926-7301928,7301930-7301933 UNSPK: 7301926 | | | | | | | | |
| EFH (C12-C14) | 0* | 0* | 49-123 | 0 | 20 | | | | |
| EFH (C15-C20) | -98 (2) | 54 (2) | 49-123 | 38* | 20 | | | | |
| EFH (C21-C30) | -219 (2) | -79 (2) | 49-123 | 14 | 20 | | | | |
| EFH (C30-C40) | -386 (2) | 248 (2) | 49-123 | 29* | 20 | | | | |
| EFH (C8-C11) | 0* | 0* | 49-123 | 0 | 20 | | | | |
| Batch number: 133470637001 | Sample number(s): 7301926-7301932 UNSPK: 7301926 BKG: 7301926 | | | | | | | | |
| Aluminum | 1409 (2) | 1052 (2) | 75-125 | 5 | 20 | 11,200 | 9,940 | 12 | 20 |
| Antimony | 63* | 62* | 75-125 | 1 | 20 | 3.92 U | 3.92 U | 0 (1) | 20 |
| Arsenic | 104 | 98 | 75-125 | 4 | 20 | 3.00 J | 2.85 J | 5 (1) | 20 |
| Barium | 104 | 101 | 75-125 | 2 | 20 | 66.1 | 63.8 | 4 | 20 |
| Beryllium | 104 | 102 | 75-125 | 2 | 20 | 0.441 J | 0.393 J | 12 (1) | 20 |
| Boron | 97 | 95 | 75-125 | 1 | 20 | 4.43 J | 4.34 J | 2 (1) | 20 |
| Cadmium | 102 | 98 | 75-125 | 3 | 20 | 0.414 J | 0.389 J | 6 (1) | 20 |
| Calcium | 252 (2) | 220 (2) | 75-125 | 2 | 20 | 4,690 | 4,740 | 1 | 20 |
| Chromium | 101 | 92 | 75-125 | 5 | 20 | 15.5 | 15.0 | 3 | 20 |
| Cobalt | 100 | 97 | 75-125 | 3 | 20 | 4.44 | 4.03 | 10 (1) | 20 |
| Copper | 100 | 97 | 75-125 | 2 | 20 | 4.45 | 4.03 | 10 (1) | 20 |
| Iron | 1112 (2) | 38 (2) | 75-125 | 6 | 20 | 17,100 | 15,900 | 7 | 20 |
| Lead | 104 | 94 | 75-125 | 5 | 20 | 13.7 | 12.4 | 10 (1) | 20 |
| Lithium | 105 | 101 | 75-125 | 3 | 20 | 21.0 | 19.2 | 9 (1) | 20 |
| Magnesium | 233 (2) | 129 (2) | 75-125 | 5 | 20 | 3,920 | 3,720 | 5 | 20 |
| Manganese | 141 (2) | 114 (2) | 75-125 | 4 | 20 | 262 | 240 | 8 | 20 |
| Molybdenum | 95 | 93 | 75-125 | 2 | 20 | 0.924 J | 0.381 J | 83* (1) | 20 |
| Nickel | 103 | 99 | 75-125 | 3 | 20 | 9.93 | 9.06 | 9 (1) | 20 |
| Phosphorus | 85 (2) | 56 (2) | 75-125 | 6 | 20 | 399 | 358 | 11 | 20 |
| Potassium | 124 | 109 | 75-125 | 3 | 20 | 3,230 | 3,040 | 6 | 20 |
| Sodium | 100 | 97 | 75-125 | 3 | 20 | 72.5 J | 68.1 J | 6 (1) | 20 |
| Tin | 89 | 87 | 75-125 | 2 | 20 | 2.63 J | 2.73 J | 4 (1) | 20 |
| Titanium | 293 (2) | 271 (2) | 75-125 | 2 | 20 | 934 | 817 | 13 | 20 |
| Vanadium | 103 | 97 | 75-125 | 4 | 20 | 28.8 | 26.5 | 9 | 20 |
| Zinc | 106 | 100 | 75-125 | 3 | 20 | 52.9 | 49.8 | 6 | 20 |
| Zirconium | 90 | 87 | 75-125 | 3 | 20 | 1.54 J | 1.46 J | 5 (1) | 20 |
| Batch number: 133470637001A | Sample number(s): 7301926-7301932 UNSPK: 7301926 BKG: 7301926 | | | | | | | | |
| Silver | 105 | 102 | 75-125 | 2 | 20 | 0.186 J | 0.204 | 9 (1) | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438596
Reported: 12/31/13 at 07:50 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Strontium | 124 | 196* | 75-125 | 16 | 20 | 23.4 | 24.1 | 3 | 20 |
| Thallium | 97 | 98 | 75-125 | 1 | 20 | 0.197 | 0.188 J | 4 (1) | 20 |
| Batch number: 133470637001B | Sample number(s): 7301926-7301932 UNSPK: 7301926 BKG: 7301926 | | | | | | | | |
| Selenium | 104 | 110 | 75-125 | 5 | 20 | 0.188 J | 0.188 J | 0 (1) | 20 |
| Batch number: 133470638001 | Sample number(s): 7301926-7301932 UNSPK: 7301926 BKG: 7301926 | | | | | | | | |
| 3a Mercury 7471A | 95 | 112 | 65-135 | 8 | 20 | 0.169 | 0.151 | 11 | 20 |
| Batch number: 13349102201A | Sample number(s): 7301926-7301927,7301929-7301930 UNSPK: 7301926 BKG: 7301926 | | | | | | | | |
| 18a Cyanide by EPA 9012B | 108 | | 75-125 | | | 0.49 U | 0.23 J | 200* (1) | 20 |
| Batch number: 13339039402A | Sample number(s): 7301920-7301921,7301926,7301929-7301932 BKG: 7301926 | | | | | | | | |
| 15a pH by 9045D | | | | | | 6.97 | 6.97 | 0 | 3 |
| Batch number: 13346162401A | Sample number(s): 7301917-7301924,7301926-7301932 BKG: 7301926 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 7.5 | 7.0 | 7 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 7.5 | 7.0 | 7 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 7.5 | 7.0 | 7 | 20 |
| Batch number: 13346162401B | Sample number(s): 7301933 BKG: 7301933 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.3 | 3.3 | 0 | 20 |
| Batch number: 13347003 | Sample number(s): 7301920-7301921,7301926-7301928,7301930-7301933 UNSPK: 7301926 | | | | | | | | |
| 2378-TCDD | 87 | 89 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDD | 93 | 95 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDD | 98 | 100 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDD | 99 | 98 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDD | 99 | 97 | 40-135 | 3 | 20 | | | | |
| 1234678-HpCDD | 91 | 90 | 40-135 | 2 | 20 | | | | |
| OCDD | 76 | 58 | 40-135 | 14 | 20 | | | | |
| 2378-TCDF | 92 | 92 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDF | 98 | 99 | 40-135 | 0 | 20 | | | | |
| 23478-PeCDF | 101 | 99 | 40-135 | 3 | 20 | | | | |
| 123478-HxCDF | 101 | 101 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDF | 102 | 101 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 101 | 103 | 40-135 | 1 | 20 | | | | |
| 234678-HxCDF | 99 | 101 | 40-135 | 0 | 20 | | | | |
| 1234678-HpCDF | 99 | 99 | 40-135 | 1 | 20 | | | | |
| 1234789-HpCDF | 101 | 102 | 40-135 | 0 | 20 | | | | |
| OCDF | 97 | 96 | 40-135 | 2 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13344SLE026

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438596
Reported: 12/31/13 at 07:50 AM

## Surrogate Quality Control

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7301920 | 87 | 87 | 105 |
| 7301921 | 82 | 85 | 100 |
| 7301926 | 75 | 78 | 92 |
| 7301927 | 77 | 76 | 93 |
| 7301928 | 78 | 80 | 95 |
| 7301930 | 72 | 68 | 85 |
| 7301931 | 73 | 72 | 92 |
| 7301932 | 58 | 59 | 70 |
| Blank | 87 | 90 | 106 |
| LCS | 88 | 89 | 106 |
| MS | 77 | 76 | 93 |
| MSD | 78 | 80 | 95 |
| Limits: | 54-129 | 59-125 | 61-125 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13339A94A

| | Trifluorotoluene-F |
|---|---|
| 7301925 | 88 |
| Blank | 87 |
| LCS | 92 |
| LCSD | 92 |
| Limits: | 63-135 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13347A16A

| | Trifluorotoluene-F |
|---|---|
| 7301919 | 81 |
| 7301921 | 86 |
| 7301932 | 84 |
| Blank | 90 |
| LCS | 96 |
| LCSD | 99 |
| Limits: | 50-142 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 133440007A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7301920 | 105 | 102 |
| 7301921 | 108 | 105 |
| 7301926 | 87 | 75 |
| 7301927 | 101 | 89 |
| 7301928 | 94 | 91 |
| 7301930 | 91 | 85 |
| 7301933 | 106 | 103 |
| Blank | 111 | 108 |
| LCS | 117 | 116 |
| LCSD | 112 | 114 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438596
Reported: 12/31/13 at 07:50 AM

## Surrogate Quality Control

| | | |
|---|---|---|
| MS | 101 | 89 |
| MSD | 94 | 91 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 133440020A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7301917 | 97 | 110 |
| 7301918 | 101 | 110 |
| 7301919 | 95 | 109 |
| 7301920 | 104 | 112 |
| 7301921 | 97 | 108 |
| Blank | 101 | 112 |
| LCS | 105 | 118 |
| MS | 89 | 104 |
| MSD | 96 | 112 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 133450021A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7301917 | 102 | 103 |
| 7301918 | 100 | 99 |
| 7301919 | 100 | 102 |
| 7301920 | 95 | 93 |
| 7301921 | 103 | 105 |
| 7301922 | 100 | 112 |
| 7301923 | 95 | 95 |
| 7301924 | 100 | 95 |
| 7301926 | 108 | 113 |
| 7301927 | 103 | 111 |
| 7301928 | 105 | 109 |
| 7301930 | 98 | 112 |
| 7301931 | 90 | 83 |
| 7301932 | 94 | 96 |
| 7301933 | 106 | 110 |
| Blank | 105 | 100 |
| LCS | 97 | 96 |
| MS | 103 | 111 |
| MSD | 105 | 109 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13347003

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7301920 | 63 | 65 | 72 | 76 | 76 | 76 |
| 7301921 | 62 | 62 | 72 | 74 | 76 | 72 |
| 7301926 | 73 | 67 | 75 | 76 | 81 | 88 |
| 7301927 | 82 | 73 | 80 | 82 | 86 | 99 |
| 7301928 | 77 | 70 | 79 | 79 | 82 | 81 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1438596
Reported: 12/31/13 at 07:50 AM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7301930 | 79 | 70 | 81 | 82 | 86 | 84 |
| 7301931 | 70 | 63 | 74 | 77 | 77 | 77 |
| 7301932 | 59 | 59 | 71 | 72 | 74 | 80 |
| 7301933 | 58 | 56 | 67 | 70 | 70 | 71 |
| Blank | 74 | 75 | 84 | 87 | 88 | 96 |
| MS | 82 | 73 | 80 | 82 | 86 | 99 |
| MSD | 77 | 70 | 79 | 79 | 82 | 81 |
| OPR | 68 | 68 | 75 | 79 | 81 | 84 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |
| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
| 7301920 | 76 | 62 | 53 | 67 | 80 | 79 |
| 7301921 | 76 | 62 | 51 | 65 | 80 | 78 |
| 7301926 | 74 | 69 | 64 | 69 | 80 | 81 |
| 7301927 | 80 | 69 | 62 | 75 | 88 | 88 |
| 7301928 | 73 | 62 | 55 | 72 | 83 | 84 |
| 7301930 | 76 | 67 | 63 | 71 | 89 | 87 |
| 7301931 | 73 | 59 | 51 | 67 | 81 | 80 |
| 7301932 | 70 | 58 | 53 | 61 | 76 | 77 |
| 7301933 | 67 | 55 | 45 | 60 | 73 | 75 |
| Blank | 85 | 69 | 60 | 78 | 91 | 92 |
| MS | 80 | 69 | 62 | 75 | 88 | 88 |
| MSD | 73 | 62 | 55 | 72 | 83 | 84 |
| OPR | 80 | 62 | 54 | 71 | 83 | 82 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |
| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
| 7301920 | 77 | 69 | 60 | 58 | 64 | |
| 7301921 | 78 | 69 | 59 | 58 | 62 | |
| 7301926 | 81 | 72 | 67 | 69 | 68 | |
| 7301927 | 87 | 76 | 66 | 73 | 75 | |
| 7301928 | 83 | 68 | 58 | 72 | 71 | |
| 7301930 | 86 | 74 | 66 | 74 | 71 | |
| 7301931 | 79 | 67 | 57 | 64 | 66 | |
| 7301932 | 75 | 65 | 58 | 55 | 59 | |
| 7301933 | 73 | 62 | 50 | 53 | 57 | |
| Blank | 89 | 77 | 66 | 69 | 75 | |
| MS | 87 | 76 | 66 | 73 | 75 | |
| MSD | 83 | 68 | 58 | 72 | 71 | |
| OPR | 82 | 71 | 61 | 60 | 70 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

13013 1438596 7301917-33

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 12/4/2013
CarrierName: FedEx
AirbillNo: 797314998950

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131204-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-506-NBZ-SB-0.0-0.5 | 12/4/13 10:30 | SO | None | 1 - 16 oz glass | 10 day | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-507-NBZ-SB-0.0-0.5 | 12/4/13 10:00 | SO | None | 1 - 16 oz glass | 10 day | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-507-NBZ-SB-3.5-4.5 | 12/4/13 10:15 | SO | None | 1 - 16 oz glass | 10 day | | | | | | | | | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-507-NBZ-SB-3.5-4.5 | 12/4/13 10:15 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-508-NBZ-SB-0.0-0.5 | 12/4/13 09:00 | SO | None | 2 - SS-Sleeve | 10 day | | | | | | | X | | X | X | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-508-NBZ-SB-0.0-0.5 | 12/4/13 09:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-508-NBZ-SB-4.0-5.0 | 12/4/13 09:15 | SO | None | 2 - 16 oz glass | 10 day | | | | | | | X | | X | X | | | X | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-508-NBZ-SB-4.0-5.0 | 12/4/13 09:15 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-546-NBZ-SB-0.0-0.5 | 12/4/13 09:55 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-547-NBZ-SB-0.0-0.5 | 12/4/13 10:45 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-549-NBZ-SB-0.0-0.5 | 12/4/13 08:55 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| TB-120413 | 12/4/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-545-NBZ-SB-0.0-0.5MS | 12/4/13 13:25 | SO | None | 6 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | X | | | | | | | | | MS/MSD |
| SL-545-NBZ-SB-0.0-0.5MS | 12/4/13 13:25 | SO | None | 1 - 8 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | MS/MSD |
| SL-845-NBZ-SB-0.0-0.5 | 12/4/13 13:30 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | X | | | | | | | | | |
| SL-845-NBZ-SB-0.0-0.5 | 12/4/13 13:30 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| SL-511-NBZ-SB-0.0-0.5 | 12/4/13 12:40 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-511-NBZ-SB-0.0-0.5 | 12/4/13 12:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| SL-511-NBZ-SB-2.5-3.5 | 12/4/13 13:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-511-NBZ-SB-2.5-3.5 | 12/4/13 13:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| SL-511-NBZ-SB-2.5-3.5 | 12/4/13 13:00 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-548-NBZ-SB-0.0-0.5 | 12/4/13 14:15 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | X | X | | | | | | | | | | | X | | | | | | | | | | | | | | |

13013 14385961 7301917-33

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 12/4/2013
CarrierName: FedEx
AirbillNo: 797314998950

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131204-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12/04/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 12/5/13 | 0850 |

COC Rev 3

COC 20131204-01, Page 1 of 2

eurofins | Lancaster Laboratories

# Environmental Sample Administration Receipt Documentation Log

1438596

**Client/Project:** CDM Smith

**Date of Receipt:** 12/5/13

**Time of Receipt:** 0800

**Source Code:** 5.

**Shipping Container Sealed:** YES NO

**Custody Seal Present * :** YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** Chilled Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT131 | 0.9 | TB | WI | Y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** 52∞ **Date/Time:** 12/5/13 1045

Issued by Dept. 6042 Management

2174.06

eurofins | Lancaster Laboratories Environmental

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

January 09, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 12/09/2013
Group Number: 1439434
SDG: PH140
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| EB1-120513 Water | 7306298 |
| EB2-120513 Water | 7306299 |
| EB3-120513 Water | 7306300 |
| SL-525-NBZ-SB-0.0-0.5 Soil | 7306301 |
| SL-525-NBZ-SB-4.0-5.0 Soil | 7306302 |
| SL-525-NBZ-SB-4.0-5.0MS Soil | 7306303 |
| SL-525-NBZ-SB-4.0-5.0MSD Soil | 7306304 |
| SL-825-NBZ-SB-4.0-5.0 Soil | 7306305 |
| SL-526-NBZ-SB-0.0-0.5 Soil | 7306306 |
| SL-526-NBZ-SB-2.5-3.5 Soil | 7306307 |
| SL-527-NBZ-SB-0.0-0.5 Soil | 7306308 |
| SL-528-NBZ-SB-0.0-0.5 Soil | 7306309 |
| SL-529-NBZ-SB-0.0-0.5 Soil | 7306310 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: EB1-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306298**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 14:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB1D5 SDG#: PH140-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 U | 1.1 | 0.053 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.21 J | 1.1 | 0.053 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.50 J | 1.1 | 0.053 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 U | 1.1 | 0.053 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.11 J | 1.1 | 0.053 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.053 U | 0.053 | 0.032 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.053 U | 0.053 | 0.011 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.1 U | 1.1 | 0.053 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.053 U | 0.053 | 0.032 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.053 U | 0.053 | 0.011 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside the method required holding time and the QC is again outside of the acceptance limits. All results are reported from the first trial. Similar results were obtained in both trials.

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | |
|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/l | ug/l | ug/l | |
| 10589 | Aldrin | 309-00-2 | 0.0083 U | 0.0083 | 0.0017 | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0083 U | 0.0083 | 0.0025 | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0083 U | 0.0083 | 0.0028 | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0083 U | 0.0083 | 0.0017 | 1 |
| 10589 | Chlordane | 57-74-9 | 0.41 U | 0.41 | 0.13 | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.017 U | 0.017 | 0.0041 | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.017 U | 0.017 | 0.0041 | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.017 U | 0.017 | 0.0043 | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0083 U | 0.0083 | 0.0028 | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.017 U | 0.017 | 0.0044 | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0083 U | 0.0083 | 0.0036 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306298**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 14:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB1D5 SDG#: PH140-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10589 | Endosulfan II | 33213-65-9 | 0.017 | U | 0.017 | 0.012 | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.017 | U | 0.017 | 0.0048 | 1 |
| 10589 | Endrin | 72-20-8 | 0.017 | U | 0.017 | 0.0067 | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.083 | U | 0.083 | 0.017 | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.017 | U | 0.017 | 0.0041 | 1 |
| 10589 | Heptachlor | 76-44-8 | 0.0083 | U | 0.0083 | 0.0017 | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0083 | U | 0.0083 | 0.0019 | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.083 | U | 0.083 | 0.025 | 1 |
| 10589 | Mirex | 2385-85-5 | 0.041 | U | 0.041 | 0.0083 | 1 |
| 10589 | Toxaphene | 8001-35-2 | 0.83 | U | 0.83 | 0.25 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.41 | U | 0.41 | 0.091 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.41 | U | 0.41 | 0.17 | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.41 | U | 0.41 | 0.12 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.41 | U | 0.41 | 0.17 | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.41 | U | 0.41 | 0.13 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.10 | U | 0.10 | 0.051 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.10 | U | 0.10 | 0.051 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.10 | U | 0.10 | 0.051 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.51 | U | 0.51 | 0.10 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.10 | U | 0.10 | 0.051 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 6.0 | | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306298**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 14:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB1D5 SDG#: PH140-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.98 | U | 1.98 | 0.916 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 9.91 | U | 9.91 | 0.857 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 9.91 | U | 9.91 | 0.517 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.91 | U | 9.91 | 0.535 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.91 | U | 9.91 | 0.545 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 9.91 | U | 9.91 | 0.762 | 1 |
| 10915 | OCDD | 3268-87-9 | 1.48 | JB | 19.8 | 1.05 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.98 | U | 1.98 | 0.601 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.646 | JQ | 9.91 | 0.499 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 9.91 | U | 9.91 | 0.459 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 9.91 | U | 9.91 | 0.391 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.488 | JBQ | 9.91 | 0.395 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 9.91 | U | 9.91 | 0.481 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 9.91 | U | 9.91 | 0.386 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.815 | JBQ | 9.91 | 0.279 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.583 | JBQ | 9.91 | 0.401 | 1 |
| 10915 | OCDF | 39001-02-0 | 19.8 | U | 19.8 | 1.62 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.000400 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 63 | 25 - 164 |
| 13C12-12378-PeCDD | 55 | 25 - 181 |
| 13C12-123478-HxCDD | 75 | 32 - 141 |
| 13C12-123678-HxCDD | 76 | 28 - 130 |
| 13C12-123789-HxCDD | 71 | 28 - 130 |
| 13C12-1234678-HpCDD | 56 | 23 - 140 |
| 13C12-OCDD | 43 | 17 - 157 |
| 13C12-2378-TCDF | 65 | 24 - 169 |
| 13C12-12378-PeCDF | 61 | 24 - 185 |
| 13C12-23478-PeCDF | 59 | 21 - 178 |
| 13C12-123478-HxCDF | 77 | 26 - 152 |
| 13C12-123678-HxCDF | 78 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 70 | 29 - 147 |
| 13C12-1234678-HpCDF | 63 | 28 - 143 |
| 13C12-1234789-HpCDF | 52 | 26 - 138 |
| 13C12-OCDF | 42 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306298**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 14:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB1D5 SDG#: PH140-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306298**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 14:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB1D5 SDG#: PH140-01EB

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344WAL026 | 12/26/2013 20:09 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13344WAL026 | 12/11/2013 09:40 | Anna E Stager | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 133450006A | 12/17/2013 00:04 | Lisa A Reinert | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 133450007A | 12/12/2013 11:03 | Monica M Souders | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 133450007A | 12/11/2013 16:45 | JoElla L Rice | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 133450006A | 12/11/2013 16:45 | JoElla L Rice | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450013A | 12/12/2013 19:49 | Heather E Williams | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 133450013A | 12/11/2013 22:00 | Elaine F Stoltzfus | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13350003 | 12/17/2013 22:31 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13350003 | 12/16/2013 11:50 | Brett M Weidman | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 13343002204A | 12/09/2013 19:21 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306299**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:00

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB2D5 SDG#: PH140-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.052 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.20 | J | 1.0 | 0.052 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.50 | J | 1.0 | 0.052 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.052 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.095 | J | 1.0 | 0.052 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.052 | U | 0.052 | 0.031 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.052 | U | 0.052 | 0.010 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.052 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.052 | U | 0.052 | 0.031 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.052 | U | 0.052 | 0.010 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside the method required holding time and the QC is again outside of the acceptance limits. All results are reported from the first trial. Similar results were obtained in both trials.

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | ug/l | | ug/l | ug/l | |
| 10407 | 2,4-D | 94-75-7 | 0.49 | U | 0.49 | 0.16 | 1 |
| 10407 | Dalapon | 75-99-0 | 1.2 | U | 1.2 | 0.24 | 1 |
| 10407 | 2,4-DB | 94-82-6 | 0.98 | U | 0.98 | 0.29 | 1 |
| 10407 | Dicamba | 1918-00-9 | 0.29 | U | 0.29 | 0.078 | 1 |
| 10407 | Dinoseb | 88-85-7 | 0.49 | U | 0.49 | 0.12 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10407 | 2,4-DP (Dichlorprop) | 120-36-5 | 0.49 | U | 0.49 | 0.16 | 1 |
| 10407 | MCPA | 94-74-6 | 200 | U | 200 | 49 | 1 |
| 10407 | MCPP | 93-65-2 | 200 | U | 200 | 49 | 1 |
| 10407 | 2,4,5-T | 93-76-5 | 0.049 | U | 0.049 | 0.015 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306299**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:00

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB2D5 SDG#: PH140-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/l** | **ug/l** | **ug/l** | |
| 10407 | 2,4,5-TP | 93-72-1 | 0.049 U | 0.049 | 0.0098 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | **ug/l** | **ug/l** | |
| 10589 | Aldrin | 309-00-2 | 0.0081 U | 0.0081 | 0.0016 | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0081 U | 0.0081 | 0.0024 | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0081 U | 0.0081 | 0.0028 | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0081 U | 0.0081 | 0.0016 | 1 |
| 10589 | Chlordane | 57-74-9 | 0.41 U | 0.41 | 0.13 | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.016 U | 0.016 | 0.0041 | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.016 U | 0.016 | 0.0041 | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.016 U | 0.016 | 0.0042 | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0081 U | 0.0081 | 0.0028 | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.016 U | 0.016 | 0.0043 | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0081 U | 0.0081 | 0.0035 | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.016 U | 0.016 | 0.012 | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.016 U | 0.016 | 0.0047 | 1 |
| 10589 | Endrin | 72-20-8 | 0.016 U | 0.016 | 0.0066 | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.081 U | 0.081 | 0.016 | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.016 U | 0.016 | 0.0041 | 1 |
| 10589 | Heptachlor | 76-44-8 | 0.0081 U | 0.0081 | 0.0016 | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0081 U | 0.0081 | 0.0019 | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.081 U | 0.081 | 0.024 | 1 |
| 10589 | Mirex | 2385-85-5 | 0.041 U | 0.041 | 0.0081 | 1 |
| 10589 | Toxaphene | 8001-35-2 | 0.81 U | 0.81 | 0.24 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.097 U | 0.097 | 0.049 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.097 U | 0.097 | 0.049 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.097 U | 0.097 | 0.049 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.49 U | 0.49 | 0.097 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.097 U | 0.097 | 0.049 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 U | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306299**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:00

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB2D5 SDG#: PH140-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0048 J | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 5.7 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306299**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:00

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB2D5 SDG#: PH140-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.95 | U | 1.95 | 1.11 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 9.74 | U | 9.74 | 0.990 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 9.74 | U | 9.74 | 0.575 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.74 | U | 9.74 | 0.589 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.74 | U | 9.74 | 0.593 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 9.74 | U | 9.74 | 0.935 | 1 |
| 10915 | OCDD | 3268-87-9 | 1.88 | JBQ | 19.5 | 1.66 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.95 | U | 1.95 | 0.724 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 9.74 | U | 9.74 | 0.618 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.627 | JBQ | 9.74 | 0.538 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 9.74 | U | 9.74 | 0.501 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 9.74 | U | 9.74 | 0.508 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 9.74 | U | 9.74 | 0.694 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 9.74 | U | 9.74 | 0.511 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 9.74 | U | 9.74 | 0.361 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 9.74 | U | 9.74 | 0.561 | 1 |
| 10915 | OCDF | 39001-02-0 | 19.5 | U | 19.5 | 2.21 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | U | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 77 | 25 - 164 |
| 13C12-12378-PeCDD | 64 | 25 - 181 |
| 13C12-123478-HxCDD | 89 | 32 - 141 |
| 13C12-123678-HxCDD | 92 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 65 | 23 - 140 |
| 13C12-OCDD | 45 | 17 - 157 |
| 13C12-2378-TCDF | 78 | 24 - 169 |
| 13C12-12378-PeCDF | 68 | 24 - 185 |
| 13C12-23478-PeCDF | 68 | 21 - 178 |
| 13C12-123478-HxCDF | 96 | 26 - 152 |
| 13C12-123678-HxCDF | 98 | 26 - 123 |
| 13C12-234678-HxCDF | 90 | 28 - 136 |
| 13C12-123789-HxCDF | 79 | 29 - 147 |
| 13C12-1234678-HpCDF | 73 | 28 - 143 |
| 13C12-1234789-HpCDF | 58 | 26 - 138 |
| 13C12-OCDF | 45 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306299**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:00

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB2D5 SDG#: PH140-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306299**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:00

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB2D5 SDG#: PH140-02EB

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344WAL026 | 12/26/2013 20:37 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13344WAL026 | 12/11/2013 09:40 | Anna E Stager | 1 |
| 10407 | 24b Herbicides by EPA 8151A | SW-846 8151A | 1 | 133450017A | 12/16/2013 11:35 | Melissa McDermott | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 133450006A | 12/17/2013 00:16 | Lisa A Reinert | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 133450006A | 12/11/2013 16:45 | JoElla L Rice | 1 |
| 00816 | Water Sample Herbicide Extract | SW-846 8151A | 1 | 133450017A | 12/11/2013 20:35 | Karen L Beyer | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450013A | 12/12/2013 20:11 | Heather E Williams | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 133450013A | 12/11/2013 22:00 | Elaine F Stoltzfus | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13350003 | 12/17/2013 23:28 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13350003 | 12/16/2013 11:50 | Brett M Weidman | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306299**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:00

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB2D5 SDG#: PH140-02EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07072 | Zinc | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:41 | Tara L Snyder | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 133430639002B | 12/11/2013 15:33 | Parker D Lindstrom | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 133430639002A | 12/11/2013 13:37 | Parker D Lindstrom | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 133430639002A | 12/11/2013 13:37 | Parker D Lindstrom | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 133430639002A | 12/11/2013 13:37 | Parker D Lindstrom | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 133515713003 | 12/18/2013 07:30 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 133430635002 | 12/10/2013 12:48 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 133430639002 | 12/10/2013 11:24 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 3 | 133515713003 | 12/17/2013 15:00 | Nelli S Markaryan | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 13343002204A | 12/09/2013 19:24 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306300**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB3D5 SDG#: PH140-03EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.050 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.20 | J | 1.0 | 0.050 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.51 | J | 1.0 | 0.050 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.050 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.063 | J | 1.0 | 0.050 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.050 | U | 0.050 | 0.030 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.050 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.050 | U | 0.050 | 0.030 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.050 | U | 0.050 | 0.010 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside the method required holding time and the QC is again outside of the acceptance limits. All results are reported from the first trial. Similar results were obtained in both trials.

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | ug/l | | ug/l | ug/l | |
| 10407 | 2,4-D | 94-75-7 | 0.49 | U | 0.49 | 0.16 | 1 |
| 10407 | Dalapon | 75-99-0 | 1.2 | U | 1.2 | 0.24 | 1 |
| 10407 | 2,4-DB | 94-82-6 | 0.97 | U | 0.97 | 0.29 | 1 |
| 10407 | Dicamba | 1918-00-9 | 0.29 | U | 0.29 | 0.078 | 1 |
| 10407 | Dinoseb | 88-85-7 | 0.49 | U | 0.49 | 0.12 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10407 | 2,4-DP (Dichlorprop) | 120-36-5 | 0.49 | U | 0.49 | 0.16 | 1 |
| 10407 | MCPA | 94-74-6 | 190 | U | 190 | 49 | 1 |
| 10407 | MCPP | 93-65-2 | 190 | U | 190 | 49 | 1 |
| 10407 | 2,4,5-T | 93-76-5 | 0.049 | U | 0.049 | 0.015 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306300**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB3D5 SDG#: PH140-03EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10407 | 2,4,5-TP | 93-72-1 | 0.049 | U | 0.049 | 0.0097 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10589 | Aldrin | 309-00-2 | 0.0080 | U | 0.0080 | 0.0016 | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0080 | U | 0.0080 | 0.0024 | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0080 | U | 0.0080 | 0.0027 | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0080 | U | 0.0080 | 0.0016 | 1 |
| 10589 | Chlordane | 57-74-9 | 0.40 | U | 0.40 | 0.13 | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.016 | U | 0.016 | 0.0040 | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.016 | U | 0.016 | 0.0040 | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.016 | U | 0.016 | 0.0042 | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0080 | U | 0.0080 | 0.0027 | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.016 | U | 0.016 | 0.0043 | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0080 | U | 0.0080 | 0.0035 | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.016 | U | 0.016 | 0.012 | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.016 | U | 0.016 | 0.0047 | 1 |
| 10589 | Endrin | 72-20-8 | 0.016 | U | 0.016 | 0.0065 | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.080 | U | 0.080 | 0.016 | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.016 | U | 0.016 | 0.0040 | 1 |
| 10589 | Heptachlor | 76-44-8 | 0.0080 | U | 0.0080 | 0.0016 | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0080 | U | 0.0080 | 0.0018 | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.080 | U | 0.080 | 0.024 | 1 |
| 10589 | Mirex | 2385-85-5 | 0.040 | U | 0.040 | 0.0080 | 1 |
| 10589 | Toxaphene | 8001-35-2 | 0.80 | U | 0.80 | 0.24 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.40 | U | 0.40 | 0.088 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.40 | U | 0.40 | 0.16 | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.40 | U | 0.40 | 0.12 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.40 | U | 0.40 | 0.16 | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.40 | U | 0.40 | 0.13 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.10 | U | 0.10 | 0.052 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.10 | U | 0.10 | 0.052 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.10 | U | 0.10 | 0.052 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.52 | U | 0.52 | 0.10 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.10 | U | 0.10 | 0.052 | 1 |

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | |

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306300**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB3D5 SDG#: PH140-03EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 U | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0062 J | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9012B** | | **mg/l** | **mg/l** | **mg/l** | |
| 08255 | 16b Cyanide by EPA 9012B | 57-12-5 | 0.010 U | 0.010 | 0.0050 | 1 |
| | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 5.6 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306300**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB3D5 SDG#: PH140-03EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.96 | U | 1.96 | 0.372 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 0.635 | JQ | 9.80 | 0.285 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 9.80 | U | 9.80 | 0.174 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.80 | U | 9.80 | 0.181 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 0.353 | JBQ | 9.80 | 0.175 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.436 | JQ | 9.80 | 0.207 | 1 |
| 10915 | OCDD | 3268-87-9 | 1.64 | JBQ | 19.6 | 0.236 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.96 | U | 1.96 | 0.252 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.499 | JQ | 9.80 | 0.160 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.244 | JBQ | 9.80 | 0.151 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.225 | JQ | 9.80 | 0.105 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.118 | JBQ | 9.80 | 0.106 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.390 | J | 9.80 | 0.118 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 9.80 | U | 9.80 | 0.104 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.380 | JBQ | 9.80 | 0.0657 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.446 | JBQ | 9.80 | 0.0796 | 1 |
| 10915 | OCDF | 39001-02-0 | 1.02 | JBQ | 19.6 | 0.257 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0390 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 77 | 25 - 164 |
| 13C12-12378-PeCDD | 75 | 25 - 181 |
| 13C12-123478-HxCDD | 87 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 80 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 77 | 24 - 169 |
| 13C12-12378-PeCDF | 84 | 24 - 185 |
| 13C12-23478-PeCDF | 81 | 21 - 178 |
| 13C12-123478-HxCDF | 96 | 26 - 152 |
| 13C12-123678-HxCDF | 94 | 26 - 123 |
| 13C12-234678-HxCDF | 92 | 28 - 136 |
| 13C12-123789-HxCDF | 92 | 29 - 147 |
| 13C12-1234678-HpCDF | 90 | 28 - 143 |
| 13C12-1234789-HpCDF | 82 | 26 - 138 |
| 13C12-OCDF | 83 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306300**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB3D5 SDG#: PH140-03EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306300**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB3D5 SDG#: PH140-03EB

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13344WAL026 | 12/26/2013 21:05 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13344WAL026 | 12/11/2013 09:40 | Anna E Stager | 1 |
| 10407 | 24b Herbicides by EPA 8151A | SW-846 8151A | 1 | 133450017A | 12/16/2013 12:02 | Melissa McDermott | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 133450006A | 12/17/2013 00:28 | Lisa A Reinert | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 133450007A | 12/12/2013 11:39 | Monica M Souders | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 133450007A | 12/11/2013 16:45 | JoElla L Rice | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 133450006A | 12/11/2013 16:45 | JoElla L Rice | 1 |
| 00816 | Water Sample Herbicide Extract | SW-846 8151A | 1 | 133450017A | 12/11/2013 20:35 | Karen L Beyer | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450013A | 12/12/2013 20:33 | Heather E Williams | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 133450013A | 12/11/2013 22:00 | Elaine F Stoltzfus | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13350003 | 12/19/2013 03:04 | Nelson H Risser | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13350003 | 12/16/2013 11:50 | Brett M Weidman | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-120513 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7306300**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 15:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB3D5 SDG#: PH140-03EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07069 | Tin | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 133430635002 | 12/11/2013 03:44 | Tara L Snyder | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 133430639002B | 12/11/2013 15:36 | Parker D Lindstrom | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 133430639002A | 12/11/2013 13:39 | Parker D Lindstrom | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 133430639002A | 12/11/2013 13:39 | Parker D Lindstrom | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 133430639002A | 12/11/2013 13:39 | Parker D Lindstrom | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 133515713003 | 12/18/2013 07:32 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 133430635002 | 12/10/2013 12:48 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 133430639002 | 12/10/2013 11:24 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 3 | 133515713003 | 12/17/2013 15:00 | Nelli S Markaryan | 1 |
| 08255 | 16b Cyanide by EPA 9012B | SW-846 9012B | 1 | 13346117102A | 12/13/2013 09:31 | K Robert Caulfeild-James | 1 |
| 08256 | Cyanide Water Distillation | SW-846 9012B | 1 | 13346117102A | 12/12/2013 09:05 | Nancy J Shoop | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 13343002204A | 12/09/2013 19:27 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306301**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 09:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

525B0 SDG#: PH140-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 110 | U | 110 | 110 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 30 | U | 30 | 30 | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 24 | U | 24 | 9.2 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.2 | 1 |
| 10401 | MCPA | 94-74-6 | 2,500 | U | 2,500 | 770 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,500 | U | 2,500 | 760 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | J | 1.7 | 0.83 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.4 | J | 1.7 | 0.76 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.5 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 18 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 20 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.0 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133450034A | 12/16/2013 00:24 | Melissa McDermott | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133450034A | 12/12/2013 06:45 | Kerrie A Freeburn | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500018A | 12/18/2013 02:57 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500018A | 12/17/2013 04:00 | David V Hershey Jr | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306301**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 09:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

525B0 SDG#: PH140-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306302**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

525B4 SDG#: PH140-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 200 | U | 200 | 200 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 17 | U | 17 | 6.3 | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 24 | U | 24 | 9.2 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.2 | 1 |
| 10401 | MCPA | 94-74-6 | 2,500 | U | 2,500 | 780 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,500 | U | 2,500 | 760 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.84 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.76 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133450034A | 12/16/2013 00:51 | Melissa McDermott | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133450034A | 12/12/2013 06:45 | Kerrie A Freeburn | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500018A | 12/18/2013 01:10 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500018A | 12/17/2013 04:00 | David V Hershey Jr | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306302**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

525B4 SDG#: PH140-05BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-NBZ-SB-4.0-5.0MS Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306303**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

525B4 SDG#: PH140-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 120 | | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 130 | | 92 | 45 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 120 | | 17 | 6.3 | 1 |
| 10401 | Dicamba | 1918-00-9 | 9.0 | J | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 36 | | 25 | 9.2 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 130 | | 17 | 9.2 | 1 |
| 10401 | MCPA | 94-74-6 | 8,600 | | 2,600 | 780 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 8,100 | | 2,600 | 770 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 11 | | 1.7 | 0.84 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 11 | | 1.7 | 0.77 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | J | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 8.0 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 14 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 13 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 6.8 | | 5.1 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133450034A | 12/16/2013 01:18 | Melissa McDermott | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133450034A | 12/12/2013 06:45 | Kerrie A Freeburn | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500018A | 12/18/2013 01:31 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500018A | 12/17/2013 04:00 | David V Hershey Jr | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-NBZ-SB-4.0-5.0MSD Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306304**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

525B4 SDG#: PH140-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 130 | | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 120 | | 92 | 45 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 130 | | 17 | 6.3 | 1 |
| 10401 | Dicamba | 1918-00-9 | 9.8 | J | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 41 | | 24 | 9.2 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 140 | | 17 | 9.2 | 1 |
| 10401 | MCPA | 94-74-6 | 9,400 | | 2,500 | 780 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 8,300 | | 2,500 | 760 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 15 | | 1.7 | 0.84 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 11 | | 1.7 | 0.76 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.9 | J | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 7.7 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 13 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 13 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | | 5.1 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 2.5 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133450034A | 12/16/2013 01:44 | Melissa McDermott | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133450034A | 12/12/2013 06:45 | Kerrie A Freeburn | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500018A | 12/18/2013 01:53 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500018A | 12/17/2013 04:00 | David V Hershey Jr | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-525-NBZ-SB-4.0-5.0MSD Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306304**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

525B4 SDG#: PH140-05MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-825-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306305**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 11:00

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

825B4 SDG#: PH140-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 92 | U | 92 | 45 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 17 | U | 17 | 10 | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.2 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.2 | 1 |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 780 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 770 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.84 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.77 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133450034A | 12/16/2013 02:11 | Melissa McDermott | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133450034A | 12/12/2013 06:45 | Kerrie A Freeburn | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500018A | 12/18/2013 02:14 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500018A | 12/17/2013 04:00 | David V Hershey Jr | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-825-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306305**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 11:00

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

825B4 SDG#: PH140-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306306**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 11:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

526B0 SDG#: PH140-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 91 | U | 91 | 45 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 24 | | 17 | 6.3 | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 24 | U | 24 | 9.1 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.1 | 1 |
| 10401 | MCPA | 94-74-6 | 2,500 | U | 2,500 | 770 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,500 | U | 2,500 | 760 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.83 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.76 | 1 |
| | The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted and the QC is again outside of the acceptance limits. The data is reported from the initial trial. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 0.65 | J | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.78 | J | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 13 | J | 26 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 110 | | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 210 | | 52 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 10 | 5 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306306**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 11:30

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

526B0 SDG#: PH140-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 3.2 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133450034A | 12/16/2013 02:38 | Melissa McDermott | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 23:25 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133450034A | 12/12/2013 06:45 | Kerrie A Freeburn | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500018A | 12/19/2013 01:26 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500018A | 12/17/2013 04:00 | David V Hershey Jr | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-NBZ-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306307**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 12:00

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

B2625 SDG#: PH140-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 92 | U | 92 | 45 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 22 | | 17 | 6.3 | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 24 | U | 24 | 9.2 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.2 | 1 |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 780 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 770 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.84 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.77 | 1 |
| | The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted and the QC is again outside of the acceptance limits. The data is reported from the initial trial. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 8.4 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 14 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-526-NBZ-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306307**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 12:00

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

B2625 SDG#: PH140-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.3 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133450034A | 12/16/2013 03:05 | Melissa McDermott | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 23:40 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133450034A | 12/12/2013 06:45 | Kerrie A Freeburn | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500018A | 12/18/2013 02:36 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500018A | 12/17/2013 04:00 | David V Hershey Jr | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306308**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52700 SDG#: PH140-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 9.3 | U | 9.3 | 3.7 | 5 |
| 12969 | Acenaphthylene | 208-96-8 | 9.3 | U | 9.3 | 1.9 | 5 |
| 12969 | Anthracene | 120-12-7 | 9.3 | U | 9.3 | 1.9 | 5 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 9.3 | U | 9.3 | 3.7 | 5 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 9.3 | U | 9.3 | 3.7 | 5 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 4.2 | J | 9.3 | 3.7 | 5 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 95 | U | 95 | 19 | 5 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 9.3 | U | 9.3 | 3.7 | 5 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 9.3 | U | 9.3 | 3.7 | 5 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 100 | U | 100 | 33 | 5 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 100 | U | 100 | 33 | 5 |
| 12969 | Chrysene | 218-01-9 | 5.6 | J | 9.3 | 1.9 | 5 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 9.3 | U | 9.3 | 3.7 | 5 |
| 12969 | Diethylphthalate | 84-66-2 | 100 | U | 100 | 33 | 5 |
| 12969 | Dimethylphthalate | 131-11-3 | 100 | U | 100 | 33 | 5 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 64 | J | 100 | 33 | 5 |
| 12969 | Fluoranthene | 206-44-0 | 6.9 | J | 9.3 | 3.7 | 5 |
| 12969 | Fluorene | 86-73-7 | 9.3 | U | 9.3 | 3.7 | 5 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 9.3 | U | 9.3 | 3.7 | 5 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 9.3 | U | 9.3 | 3.7 | 5 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 4.7 | J | 9.3 | 3.7 | 5 |
| 12969 | Naphthalene | 91-20-3 | 13 | | 9.3 | 3.7 | 5 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 9.3 | U | 9.3 | 3.7 | 5 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 100 | U | 100 | 33 | 5 |
| 12969 | Phenanthrene | 85-01-8 | 9.6 | | 9.3 | 3.7 | 5 |
| 12969 | Pyrene | 129-00-0 | 6.0 | J | 9.3 | 3.7 | 5 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.93 | U | 0.93 | 0.19 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.93 | U | 0.93 | 0.19 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.1 | U | 2.1 | 1.1 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.93 | U | 0.93 | 0.19 | 1 |
| 10590 | Chlordane | 57-74-9 | 19 | U | 19 | 4.5 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 2.0 | U | 2.0 | 2.0 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.1 | J | 1.9 | 0.37 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.0 | J | 1.9 | 0.39 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.93 | U | 0.93 | 0.51 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.9 | U | 1.9 | 0.37 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.92 | J | 0.93 | 0.25 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.9 | U | 1.9 | 0.37 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.9 | U | 1.9 | 0.56 | 1 |
| 10590 | Endrin | 72-20-8 | 1.9 | U | 1.9 | 1.1 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 0.98 | J | 1.9 | 0.37 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 2.0 | U | 2.0 | 0.67 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.93 | U | 0.93 | 0.19 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.93 | U | 0.93 | 0.19 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.5 | U | 7.5 | 1.9 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.9 | U | 1.9 | 0.39 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 39 | U | 39 | 39 | 1 |

Reporting limits were raised due to interference from the sample matrix.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306308**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52700 SDG#: PH140-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 37 | U | 37 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.7 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.9 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.7 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 11.1 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306308**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52700 SDG#: PH140-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.115 | JBQ | 1.12 | 0.0840 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.709 | JBQ | 5.61 | 0.0976 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.531 | JB | 5.61 | 0.0726 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.27 | JB | 5.61 | 0.0763 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.05 | JB | 5.61 | 0.0736 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 20.1 | B | 5.61 | 0.0565 | 1 |
| 11031 | OCDD | 3268-87-9 | 157 | B | 11.2 | 0.0517 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.347 | JB | 1.12 | 0.0900 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.352 | JB | 5.61 | 0.0456 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.468 | JB | 5.61 | 0.0435 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.353 | JB | 5.61 | 0.0594 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.414 | JB | 5.61 | 0.0542 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.138 | JB | 5.61 | 0.0636 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.321 | JB | 5.61 | 0.0571 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 3.33 | JB | 5.61 | 0.0415 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.299 | JB | 5.61 | 0.0520 | 1 |
| 11031 | OCDF | 39001-02-0 | 5.93 | JB | 11.2 | 0.0661 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.880 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 76 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 70 | 23 - 140 |
| 13C12-OCDD | 60 | 17 - 157 |
| 13C12-2378-TCDF | 71 | 24 - 169 |
| 13C12-12378-PeCDF | 69 | 24 - 185 |
| 13C12-23478-PeCDF | 68 | 21 - 178 |
| 13C12-123478-HxCDF | 78 | 26 - 152 |
| 13C12-123678-HxCDF | 83 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 81 | 29 - 147 |
| 13C12-1234678-HpCDF | 72 | 28 - 143 |
| 13C12-1234789-HpCDF | 65 | 26 - 138 |
| 13C12-OCDF | 57 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306308**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52700 SDG#: PH140-09

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-527-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306308**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52700 SDG#: PH140-09

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/29/2013 11:43 | Mark A Clark | 5 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 23:55 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133480008A | 12/16/2013 10:40 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133480008A | 12/15/2013 20:30 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/17/2013 11:30 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-528-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306309**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 12:05

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52800 SDG#: PH140-10

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 0.82 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.6 | J | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 21 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.2 | J | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.71 | J | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.86 | J | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.92 | J | 1.7 | 0.70 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.32 | J | 0.88 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.52 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 2.1 | | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.3 | J | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.88 | U | 0.88 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 0.52 | J | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.88 | U | 0.88 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin | 72-20-8 | 0.41 | J | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 0.71 | J | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.1 | U | 7.1 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 38 | U | 38 | 38 | 1 |

Reporting limits were raised due to interference from the sample matrix.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-528-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306309**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 12:05

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52800 SDG#: PH140-10

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-528-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306309**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 12:05

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52800 SDG#: PH140-10

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0850 JBQ | 1.01 | 0.0572 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.123 JBQ | 5.04 | 0.0422 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0766 JBQ | 5.04 | 0.0437 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.128 JB | 5.04 | 0.0454 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.135 JB | 5.04 | 0.0442 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.55 JB | 5.04 | 0.0450 | 1 |
| 11031 | OCDD | 3268-87-9 | 22.5 B | 10.1 | 0.0368 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.114 JBQ | 1.01 | 0.0615 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0794 JBQ | 5.04 | 0.0297 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0939 JBQ | 5.04 | 0.0276 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0904 JB | 5.04 | 0.0377 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0527 JBQ | 5.04 | 0.0351 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.04 U | 5.04 | 0.0389 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0951 JBQ | 5.04 | 0.0365 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.479 JBQ | 5.04 | 0.0275 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0499 JBQ | 5.04 | 0.0360 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.11 JB | 10.1 | 0.0633 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0679 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 68 | 25 - 164 |
| 13C12-12378-PeCDD | 69 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 82 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 69 | 23 - 140 |
| 13C12-OCDD | 61 | 17 - 157 |
| 13C12-2378-TCDF | 63 | 24 - 169 |
| 13C12-12378-PeCDF | 65 | 24 - 185 |
| 13C12-23478-PeCDF | 64 | 21 - 178 |
| 13C12-123478-HxCDF | 73 | 26 - 152 |
| 13C12-123678-HxCDF | 78 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 74 | 28 - 143 |
| 13C12-1234789-HpCDF | 60 | 26 - 138 |
| 13C12-OCDF | 53 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-528-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306309**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 12:05

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52800 SDG#: PH140-10

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-528-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306309**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 12:05

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52800 SDG#: PH140-10

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/29/2013 08:25 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/17/2013 00:11 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133480008A | 12/16/2013 11:35 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133480008A | 12/15/2013 20:30 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/17/2013 12:27 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306310**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52900 SDG#: PH140-11*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.6 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.9 | | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | J | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.2 | J | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | J | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 5.4 | | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.4 | | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.4 | J | 1.8 | 0.71 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.3 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.6 | J | 1.8 | 0.36 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.91 | J | 1.8 | 0.38 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.89 | U | 0.89 | 0.48 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.89 | U | 0.89 | 0.24 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 0.36 | J | 1.8 | 0.36 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.65 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.2 | U | 7.2 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.38 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 36 | U | 36 | 15 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306310**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52900 SDG#: PH140-11*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306310**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52900 SDG#: PH140-11*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0736 JBQ | 1.05 | 0.0530 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.214 JBQ | 5.27 | 0.0514 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.263 JBQ | 5.27 | 0.0619 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.453 JB | 5.27 | 0.0638 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.405 JB | 5.27 | 0.0597 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 8.87 B | 5.27 | 0.0523 | 1 |
| 11031 | OCDD | 3268-87-9 | 51.8 B | 10.5 | 0.0412 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.115 JB | 1.05 | 0.0675 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.206 JBQ | 5.27 | 0.0329 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.235 JB | 5.27 | 0.0305 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.130 JBQ | 5.27 | 0.0458 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.158 JB | 5.27 | 0.0412 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0681 JB | 5.27 | 0.0453 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.207 JBQ | 5.27 | 0.0434 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.04 JB | 5.27 | 0.0319 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.109 JBQ | 5.27 | 0.0435 | 1 |
| 11031 | OCDF | 39001-02-0 | 2.09 JB | 10.5 | 0.0559 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.306 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 67 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 67 | 23 - 140 |
| 13C12-OCDD | 56 | 17 - 157 |
| 13C12-2378-TCDF | 67 | 24 - 169 |
| 13C12-12378-PeCDF | 65 | 24 - 185 |
| 13C12-23478-PeCDF | 64 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 80 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 80 | 29 - 147 |
| 13C12-1234678-HpCDF | 75 | 28 - 143 |
| 13C12-1234789-HpCDF | 60 | 26 - 138 |
| 13C12-OCDF | 50 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306310**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52900 SDG#: PH140-11*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7306310**
**LL Group # 1439434**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/05/2013 10:45

Submitted: 12/09/2013 09:10
Reported: 01/09/2014 13:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52900 SDG#: PH140-11*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/29/2013 08:57 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/17/2013 00:26 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133480008A | 12/16/2013 11:54 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133480008A | 12/15/2013 20:30 | Karen L Beyer | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/17/2013 13:24 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439434
Reported: 01/09/14 at 01:32 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13344WAL026 | Sample number(s): 7306298-7306300 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 106 | 77-118 | 1 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 112 | 109 | 80-123 | 3 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 109 | 104 | 78-123 | 4 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 105 | 73-127 | 0 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 100 | 72-120 | 5 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 110 | 79-136 | 0 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 95 | 97 | 70-130 | 1 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 104 | 64-130 | 0 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 110 | 73-131 | 2 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 102 | 109 | 40-138 | 7 | 30 |
| Di-n-butylphthalate | 0.057 | J | 1.0 | 0.050 | ug/l | 117 | 136 | 64-141 | 15 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 106 | 105 | 76-125 | 0 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 105 | 58-131 | 2 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 113 | 120 | 64-128 | 6 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 111 | 113 | 23-139 | 2 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.059 | J | 1.0 | 0.050 | ug/l | 105 | 365* | 70-143 | 110* | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 109 | 79-124 | 1 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 109 | 109 | 74-115 | 1 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 104 | 62-130 | 1 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 112 | 116 | 80-126 | 3 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 120 | 139* | 81-124 | 14 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 108 | 131* | 75-120 | 19 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 86 | 86 | 36-120 | 0 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 99 | 119 | 57-145 | 18 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 108 | 107 | 75-120 | 1 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 107 | 71-130 | 0 | 30 |
| Batch number: 13348SLG026 | Sample number(s): 7306308-7306310 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 126 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 101 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 110 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 85-122 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439434
Reported: 01/09/14 at 01:32 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 109 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 112 | | 79-112 | | |
| Batch number: 133450017A | Sample number(s): 7306299-7306300 | | | | | | | | | |
| 2,4-D | 0.50 | U | 0.50 | 0.16 | ug/l | 221* | 223* | 68-155 | 1 | 30 |
| Dalapon | 1.3 | U | 1.3 | 0.25 | ug/l | 124* | 119 | 25-119 | 4 | 30 |
| 2,4-DB | 1.0 | U | 1.0 | 0.30 | ug/l | 205* | 208* | 50-163 | 1 | 30 |
| Dicamba | 0.30 | U | 0.30 | 0.080 | ug/l | 150 | 152 | 64-163 | 2 | 30 |
| Dinoseb | 0.68 | | 0.50 | 0.12 | ug/l | 235* | 288* | 16-163 | 20 | 30 |
| 2,4-DP (Dichlorprop) | 0.50 | U | 0.50 | 0.16 | ug/l | 215* | 217* | 89-162 | 1 | 30 |
| MCPA | 200 U | | 200. | 50 | ug/l | 139 | 142 | 68-154 | 3 | 30 |
| MCPP | 200 U | | 200. | 50 | ug/l | 152 | 155 | 46-173 | 2 | 30 |
| 2,4,5-T | 0.050 | U | 0.050 | 0.015 | ug/l | 192* | 191* | 71-174 | 1 | 30 |
| 2,4,5-TP | 0.050 | U | 0.050 | 0.010 | ug/l | 189* | 200* | 58-155 | 6 | 30 |
| Batch number: 133450034A | Sample number(s): 7306301-7306307 | | | | | | | | | |
| 2,4-D | 36 | U | 36. | 12 | ug/kg | 136* | | 59-122 | | |
| Dalapon | 90 | U | 90. | 44 | ug/kg | 71 | | 25-100 | | |
| 2,4-DB | 17 | U | 17. | 6.2 | ug/kg | 135* | | 54-131 | | |
| Dicamba | 12 | U | 12. | 4.0 | ug/kg | 102 | | 55-138 | | |
| Dinoseb | 24 | U | 24. | 9.0 | ug/kg | 13 | | 10-56 | | |
| 2,4-DP (Dichlorprop) | 17 | U | 17. | 9.0 | ug/kg | 153 | | 65-158 | | |
| MCPA | 2,500 U | | 2,500. | 760 | ug/kg | 97 | | 56-133 | | |
| MCPP (Mecoprop) | 2,500 U | | 2,500. | 750 | ug/kg | 96 | | 54-134 | | |
| 2,4,5-T | 1.7 | U | 1.7 | 0.82 | ug/kg | 112 | | 58-135 | | |
| 2,4,5-TP | 1.7 | U | 1.7 | 0.75 | ug/kg | 125 | | 63-130 | | |
| Batch number: 133450006A | Sample number(s): 7306298-7306300 | | | | | | | | | |
| Aldrin | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 85 | 86 | 45-125 | 0 | 30 |
| Alpha BHC | 0.0080 | U | 0.0080 | 0.0024 | ug/l | 95 | 95 | 51-139 | 0 | 30 |
| Beta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 98 | 103 | 57-127 | 5 | 30 |
| Gamma BHC - Lindane | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 92 | 93 | 57-133 | 1 | 30 |
| Chlordane | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| p,p-DDD | 0.016 | U | 0.016 | 0.0040 | ug/l | 98 | 94 | 55-145 | 4 | 30 |
| p,p-DDE | 0.016 | U | 0.016 | 0.0040 | ug/l | 93 | 95 | 58-130 | 2 | 30 |
| p,p-DDT | 0.016 | U | 0.016 | 0.0042 | ug/l | 95 | 103 | 45-140 | 8 | 30 |
| Delta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 95 | 100 | 52-133 | 5 | 30 |
| Dieldrin | 0.016 | U | 0.016 | 0.0042 | ug/l | 88 | 90 | 60-135 | 2 | 30 |
| Endosulfan I | 0.0080 | U | 0.0080 | 0.0034 | ug/l | 80 | 84 | 56-128 | 5 | 30 |
| Endosulfan II | 0.016 | U | 0.016 | 0.012 | ug/l | 82 | 87 | 53-123 | 6 | 30 |
| Endosulfan Sulfate | 0.016 | U | 0.016 | 0.0046 | ug/l | 78 | 93 | 51-130 | 17 | 30 |
| Endrin | 0.016 | U | 0.016 | 0.0065 | ug/l | 83 | 84 | 43-139 | 1 | 30 |
| Endrin Aldehyde | 0.080 | U | 0.080 | 0.016 | ug/l | 69 | 81 | 50-122 | 16 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439434
Reported: 01/09/14 at 01:32 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Endrin Ketone | 0.016 | U | 0.016 | 0.0040 | ug/l | 81 | 94 | 51-133 | 15 | 30 |
| Heptachlor | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 88 | 90 | 48-130 | 2 | 30 |
| Heptachlor Epoxide | 0.0080 | U | 0.0080 | 0.0018 | ug/l | 91 | 95 | 65-128 | 5 | 30 |
| Methoxychlor | 0.080 | U | 0.080 | 0.024 | ug/l | 80 | 96 | 40-150 | 18 | 30 |
| Mirex | 0.040 | U | 0.040 | 0.0080 | ug/l | | | | | |
| Toxaphene | 0.80 | U | 0.80 | 0.24 | ug/l | | | | | |
| Batch number: 133450007A | Sample number(s): 7306298,7306300 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 42 | 63 | 35-84 | 40* | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 91 | 89 | 67-117 | 3 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 99 | 86 | 67-128 | 14 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 133470015A | Sample number(s): 7306306-7306310 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 103 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 109 | | 62-128 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 107 | | 69-121 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 114 | | 64-130 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 109 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 115 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 114 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 110 | | 51-141 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 73-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 87 | | 64-130 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 109 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 60-120 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 103 | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 101 | | 62-127 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 105 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 107 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 133480008A | Sample number(s): 7306308-7306310 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 67 | 86 | 36-106 | 24 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 105 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 114 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439434
Reported: 01/09/14 at 01:32 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 133450013A | Sample number(s): 7306298-7306300 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 100 | 99 | 70-130 | 1 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 111 | 111 | 70-130 | 0 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 107 | 105 | 70-130 | 2 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 83 | 87 | 70-130 | 5 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 75 | 74 | 70-130 | 2 | 30 |
| Batch number: 133500018A | Sample number(s): 7306301-7306307 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 74 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 74 | | 60-115 | | |
| Batch number: 133430635002 | Sample number(s): 7306299-7306300 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0828 | mg/l | 105 | 106 | 90-112 | 1 | 20 |
| Antimony | 0.0400 | U | 0.0400 | 0.0053 | mg/l | 103 | 103 | 88-111 | 0 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 99 | 99 | 90-113 | 0 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 102 | 102 | 90-110 | 0 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 98 | 98 | 90-111 | 1 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0084 | mg/l | 96 | 97 | 90-110 | 0 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00076 | mg/l | 100 | 101 | 90-112 | 1 | 20 |
| Calcium | 0.400 | U | 0.400 | 0.0334 | mg/l | 102 | 103 | 90-112 | 1 | 20 |
| Chromium | 0.0300 | U | 0.0300 | 0.0016 | mg/l | 100 | 101 | 90-110 | 1 | 20 |
| Cobalt | 0.0100 | U | 0.0100 | 0.0013 | mg/l | 100 | 101 | 90-110 | 1 | 20 |
| Copper | 0.0200 | U | 0.0200 | 0.0027 | mg/l | 103 | 104 | 90-112 | 1 | 20 |
| Iron | 0.400 | U | 0.400 | 0.0430 | mg/l | 106 | 104 | 90-112 | 1 | 20 |
| Lead | 0.0300 | U | 0.0300 | 0.0047 | mg/l | 102 | 102 | 88-110 | 0 | 20 |
| Lithium | 0.0400 | U | 0.0400 | 0.0047 | mg/l | 101 | 101 | 90-110 | 0 | 20 |
| Magnesium | 0.200 | U | 0.200 | 0.0167 | mg/l | 102 | 103 | 89-110 | 1 | 20 |
| Manganese | 0.0100 | U | 0.0100 | 0.00083 | mg/l | 101 | 102 | 90-110 | 1 | 20 |
| Molybdenum | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 101 | 102 | 90-110 | 1 | 20 |
| Nickel | 0.0200 | U | 0.0200 | 0.0015 | mg/l | 104 | 104 | 90-111 | 0 | 20 |
| Phosphorus | 0.200 | U | 0.200 | 0.0418 | mg/l | 98 | 98 | 90-110 | 1 | 20 |
| Potassium | 1.00 | U | 1.00 | 0.0980 | mg/l | 97 | 98 | 90-110 | 1 | 20 |
| Sodium | 2.00 | U | 2.00 | 0.167 | mg/l | 99 | 100 | 87-114 | 1 | 20 |
| Tin | 0.0400 | U | 0.0400 | 0.0029 | mg/l | 99 | 100 | 90-110 | 0 | 20 |
| Titanium | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 103 | 103 | 90-113 | 0 | 20 |
| Vanadium | 0.0100 | U | 0.0100 | 0.0020 | mg/l | 103 | 103 | 90-110 | 0 | 20 |
| Zinc | 0.0040 | J | 0.0400 | 0.0020 | mg/l | 99 | 100 | 90-110 | 0 | 20 |
| Zirconium | 0.100 | U | 0.100 | 0.0084 | mg/l | 101 | 101 | 90-110 | 0 | 20 |
| Batch number: 133430639002A | Sample number(s): 7306299-7306300 | | | | | | | | | |
| Silver | 0.0010 | U | 0.0010 | 0.00011 | mg/l | 106 | 97 | 90-115 | 10 | 20 |
| Strontium | 0.0020 | U | 0.0020 | 0.00034 | mg/l | 99 | 108 | 90-110 | 9 | 20 |
| Thallium | 0.0010 | U | 0.0010 | 0.00015 | mg/l | 103 | 107 | 90-115 | 4 | 20 |
| Batch number: 133430639002B | Sample number(s): 7306299-7306300 | | | | | | | | | |
| Selenium | 0.0040 | U | 0.0040 | 0.00050 | mg/l | 106 | 103 | 90-120 | 2 | 20 |
| Batch number: 133515713003 | Sample number(s): 7306299-7306300 | | | | | | | | | |
| 3b Mercury 7470A | 0.00020 | U | 0.00020 | 0.00006 0 | mg/l | 96 | 98 | 90-115 | 3 | 20 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439434
Reported: 01/09/14 at 01:32 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13346117102A | Sample number(s): 7306300 | | | | | | | | |
| 16b Cyanide by EPA 9012B | 0.010 U | 0.010 | 0.0050 | mg/l | 98 | 102 | 90-110 | 4 | 20 |
| Batch number: 13343002204A | Sample number(s): 7306298-7306300 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | 100 | | 90-110 | | |
| Batch number: 13347162401A | Sample number(s): 7306301-7306310 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13347003 | Sample number(s): 7306308-7306310 | | | | | | | | |
| 2378-TCDD | 0.0842 J | 1.00 | 0.0450 | ng/kg | 93 | | 67-158 | | |
| 12378-PeCDD | 0.186 J | 5.00 | 0.0305 | ng/kg | 95 | | 70-142 | | |
| 123478-HxCDD | 0.164 J | 5.00 | 0.0285 | ng/kg | 100 | | 70-164 | | |
| 123678-HxCDD | 0.174 J | 5.00 | 0.0294 | ng/kg | 101 | | 76-134 | | |
| 123789-HxCDD | 0.220 J | 5.00 | 0.0273 | ng/kg | 100 | | 64-162 | | |
| 1234678-HpCDD | 0.255 J | 5.00 | 0.0234 | ng/kg | 100 | | 70-140 | | |
| OCDD | 0.606 J | 10.0 | 0.0277 | ng/kg | 97 | | 78-144 | | |
| 2378-TCDF | 0.0670 J | 1.00 | 0.0481 | ng/kg | 96 | | 75-158 | | |
| 12378-PeCDF | 0.219 J | 5.00 | 0.0214 | ng/kg | 99 | | 80-134 | | |
| 23478-PeCDF | 0.287 J | 5.00 | 0.0200 | ng/kg | 100 | | 68-160 | | |
| 123478-HxCDF | 0.187 J | 5.00 | 0.0280 | ng/kg | 102 | | 72-134 | | |
| 123678-HxCDF | 0.183 J | 5.00 | 0.0270 | ng/kg | 101 | | 84-130 | | |
| 123789-HxCDF | 0.333 J | 5.00 | 0.0260 | ng/kg | 102 | | 78-130 | | |
| 234678-HxCDF | 0.271 J | 5.00 | 0.0256 | ng/kg | 101 | | 70-156 | | |
| 1234678-HpCDF | 0.219 J | 5.00 | 0.0126 | ng/kg | 99 | | 82-122 | | |
| 1234789-HpCDF | 0.237 J | 5.00 | 0.0167 | ng/kg | 103 | | 78-138 | | |
| OCDF | 0.588 J | 10.0 | 0.0393 | ng/kg | 100 | | 63-170 | | |
| Batch number: 13350003 | Sample number(s): 7306298-7306300 | | | | | | | | |
| 2378-TCDD | 2.00 U | 2.00 | 0.761 | pg/l | 92 | | 60-150 | | |
| 12378-PeCDD | 10.0 U | 10.0 | 0.745 | pg/l | 94 | | 60-150 | | |
| 123478-HxCDD | 10.0 U | 10.0 | 0.382 | pg/l | 98 | | 60-150 | | |
| 123678-HxCDD | 10.0 U | 10.0 | 0.409 | pg/l | 99 | | 60-150 | | |
| 123789-HxCDD | 0.473 J | 10.0 | 0.393 | pg/l | 93 | | 60-150 | | |
| 1234678-HpCDD | 10.0 U | 10.0 | 0.608 | pg/l | 94 | | 60-150 | | |
| OCDD | 1.85 J | 20.0 | 0.931 | pg/l | 94 | | 60-150 | | |
| 2378-TCDF | 2.00 U | 2.00 | 0.487 | pg/l | 94 | | 60-150 | | |
| 12378-PeCDF | 10.0 U | 10.0 | 0.416 | pg/l | 94 | | 60-150 | | |
| 23478-PeCDF | 0.680 J | 10.0 | 0.377 | pg/l | 96 | | 60-150 | | |
| 123478-HxCDF | 10.0 U | 10.0 | 0.321 | pg/l | 92 | | 60-150 | | |
| 123678-HxCDF | 0.377 J | 10.0 | 0.339 | pg/l | 92 | | 60-150 | | |
| 123789-HxCDF | 10.0 U | 10.0 | 0.406 | pg/l | 94 | | 60-150 | | |
| 234678-HxCDF | 0.467 J | 10.0 | 0.332 | pg/l | 94 | | 60-150 | | |
| 1234678-HpCDF | 0.319 J | 10.0 | 0.216 | pg/l | 94 | | 60-150 | | |
| 1234789-HpCDF | 0.418 J | 10.0 | 0.303 | pg/l | 95 | | 60-150 | | |
| OCDF | 1.61 J | 20.0 | 1.12 | pg/l | 89 | | 60-150 | | |
| Batch number: 13347003 | Sample number(s): 7306308-7306310 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.325 | | | ng/kg | | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439434
Reported: 01/09/14 at 01:32 PM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13350003 | Sample number(s): 7306298-7306300 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0467 | | | pg/l | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13348SLG026 | Sample number(s): 7306308-7306310 UNSPK: P307349 | | | | | | | | |
| Acenaphthene | 84 | 90 | 48-127 | 7 | 30 | | | | |
| Acenaphthylene | 84 | 90 | 49-121 | 7 | 30 | | | | |
| Anthracene | 84 | 94 | 52-126 | 11 | 30 | | | | |
| Benzo(a)anthracene | 90 | 99 | 44-143 | 10 | 30 | | | | |
| Benzo(a)pyrene | 80 | 101 | 44-140 | 23 | 30 | | | | |
| Benzo(b)fluoranthene | 99 | 134 | 26-142 | 29 | 30 | | | | |
| Benzo(e)pyrene | 81 | 101 | 70-130 | 23 | 30 | | | | |
| Benzo(g,h,i)perylene | 40 | 48 | 33-141 | 18 | 30 | | | | |
| Benzo(k)fluoranthene | 94 | 114 | 54-142 | 20 | 30 | | | | |
| Butylbenzylphthalate | 98 | 115 | 49-151 | 16 | 30 | | | | |
| Di-n-butylphthalate | 89 | 98 | 52-147 | 9 | 30 | | | | |
| Chrysene | 88 | 106 | 29-148 | 18 | 30 | | | | |
| Dibenz(a,h)anthracene | 50 | 57 | 20-137 | 13 | 30 | | | | |
| Diethylphthalate | 90 | 99 | 43-145 | 10 | 30 | | | | |
| Dimethylphthalate | 93 | 104 | 58-129 | 12 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 101 | 124 | 39-167 | 21 | 30 | | | | |
| Fluoranthene | 84 | 101 | 40-148 | 18 | 30 | | | | |
| Fluorene | 87 | 95 | 51-137 | 10 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 48 | 57 | 17-136 | 18 | 30 | | | | |
| 1-Methylnaphthalene | 100 | 115 | 50-131 | 14 | 30 | | | | |
| 2-Methylnaphthalene | 96 | 112 | 35-152 | 15 | 30 | | | | |
| Naphthalene | 87 | 112 | 31-148 | 24 | 30 | | | | |
| N-Nitrosodimethylamine | 82 | 95 | 48-113 | 15 | 30 | | | | |
| Di-n-octylphthalate | 134 | 171* | 52-162 | 25 | 30 | | | | |
| Phenanthrene | 84 | 106 | 29-142 | 23 | 30 | | | | |
| Pyrene | 90 | 111 | 26-143 | 21 | 30 | | | | |
| Batch number: 133450034A | Sample number(s): 7306301-7306307 UNSPK: 7306302 | | | | | | | | |
| 2,4-D | 142 | 151* | 42-143 | 6 | 35 | | | | |
| Dalapon | 62 | 57 | 16-98 | 8 | 50 | | | | |
| 2,4-DB | 144 | 152 | 10-179 | 5 | 50 | | | | |
| Dicamba | 106 | 115 | 55-133 | 8 | 50 | | | | |
| Dinoseb | 25 | 28 | 10-52 | 12 | 35 | | | | |
| 2,4-DP (Dichlorprop) | 154 | 161 | 32-171 | 4 | 50 | | | | |
| MCPA | 101 | 110 | 23-169 | 9 | 50 | | | | |
| MCPP (Mecoprop) | 95 | 97 | 24-164 | 2 | 50 | | | | |
| 2,4,5-T | 124 | 177* | 12-172 | 35 | 35 | | | | |
| 2,4,5-TP | 128 | 131 | 10-142 | 2 | 35 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439434
Reported: 01/09/14 at 01:32 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 133470015A | Sample number(s): 7306306-7306310 UNSPK: P300108 | | | | | | | | |
| Aldrin | 104 | 103 | 16-126 | 1 | 50 | | | | |
| Alpha BHC | 108 | 111 | 14-140 | 3 | 50 | | | | |
| Beta BHC | 106 | 107 | 42-133 | 1 | 50 | | | | |
| Gamma BHC - Lindane | 114 | 117 | 30-137 | 2 | 50 | | | | |
| p,p-DDD | 111 | 112 | 43-149 | 1 | 50 | | | | |
| p,p-DDE | 114 | 116 | 35-152 | 2 | 50 | | | | |
| p,p-DDT | 115 | 116 | 12-193 | 1 | 50 | | | | |
| Delta BHC | 110 | 112 | 13-153 | 1 | 50 | | | | |
| Dieldrin | 104 | 106 | 41-153 | 2 | 50 | | | | |
| Endosulfan I | 88 | 90 | 26-146 | 1 | 50 | | | | |
| Endosulfan II | 94 | 96 | 34-141 | 3 | 50 | | | | |
| Endosulfan Sulfate | 111 | 111 | 10-181 | 0 | 50 | | | | |
| Endrin | 102 | 104 | 30-152 | 2 | 50 | | | | |
| Endrin Aldehyde | 96 | 98 | 23-138 | 2 | 50 | | | | |
| Endrin Ketone | 103 | 103 | 30-148 | 0 | 50 | | | | |
| Heptachlor | 101 | 101 | 16-152 | 0 | 50 | | | | |
| Heptachlor Epoxide | 103 | 107 | 33-144 | 4 | 50 | | | | |
| Methoxychlor | 108 | 109 | 41-161 | 1 | 50 | | | | |
| Batch number: 133480008A | Sample number(s): 7306308-7306310 UNSPK: 7306308 | | | | | | | | |
| PCB-1016 | 95 | 95 | 41-135 | 0 | 50 | | | | |
| PCB-1260 | 100 | 97 | 40-134 | 2 | 50 | | | | |
| Batch number: 133500018A | Sample number(s): 7306301-7306307 UNSPK: 7306302 | | | | | | | | |
| EFH (C12-C14) | 99 | 94 | 49-123 | 5 | 20 | | | | |
| EFH (C15-C20) | 103 | 100 | 49-123 | 3 | 20 | | | | |
| EFH (C21-C30) | 107 | 101 | 49-123 | 6 | 20 | | | | |
| EFH (C30-C40) | 83 | 87 | 49-123 | 4 | 20 | | | | |
| EFH (C8-C11) | 131* | 107 | 49-123 | 20 | 20 | | | | |
| Batch number: 13343002204A | Sample number(s): 7306298-7306300 BKG: P304244 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 8.4 | 8.4 | 0 | 3 |
| Batch number: 13347162401A | Sample number(s): 7306301-7306310 BKG: 7306302 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 2.6 | 2.5 | 4 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 2.6 | 2.5 | 4 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 2.6 | 2.5 | 4 | 20 |
| Batch number: 13347003 | Sample number(s): 7306308-7306310 UNSPK: P301926 | | | | | | | | |
| 2378-TCDD | 87 | 89 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDD | 93 | 95 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDD | 98 | 100 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDD | 99 | 98 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDD | 99 | 97 | 40-135 | 3 | 20 | | | | |
| 1234678-HpCDD | 91 | 90 | 40-135 | 2 | 20 | | | | |
| OCDD | 76 | 58 | 40-135 | 14 | 20 | | | | |
| 2378-TCDF | 92 | 92 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDF | 98 | 99 | 40-135 | 0 | 20 | | | | |
| 23478-PeCDF | 101 | 99 | 40-135 | 3 | 20 | | | | |
| 123478-HxCDF | 101 | 101 | 40-135 | 1 | 20 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439434
Reported: 01/09/14 at 01:32 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 123678-HxCDF | 102 | 101 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 101 | 103 | 40-135 | 1 | 20 | | | | |
| 234678-HxCDF | 99 | 101 | 40-135 | 0 | 20 | | | | |
| 1234678-HpCDF | 99 | 99 | 40-135 | 1 | 20 | | | | |
| 1234789-HpCDF | 101 | 102 | 40-135 | 0 | 20 | | | | |
| OCDF | 97 | 96 | 40-135 | 2 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 13344WAL026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7306298 | 106 | 102 | 106 |
| 7306299 | 106 | 101 | 106 |
| 7306300 | 104 | 98 | 103 |
| Blank | 112 | 104 | 111 |
| LCS | 108 | 103 | 109 |
| LCSD | 107 | 98 | 110 |
| Limits: | 44-137 | 62-141 | 51-136 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13348SLG026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7306308 | 84 | 88 | 109 |
| 7306309 | 79 | 83 | 100 |
| 7306310 | 75 | 76 | 96 |
| Blank | 82 | 88 | 101 |
| LCS | 84 | 86 | 101 |
| MS | 74 | 68 | 93 |
| MSD | 81 | 81 | 102 |
| Limits: | 54-129 | 59-125 | 61-125 |

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 133450006A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7306298 | 76 | 60 |
| 7306299 | 74 | 72 |
| 7306300 | 74 | 37 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439434
Reported: 01/09/14 at 01:32 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| Blank | 72 | 69 |
| LCS | 82 | 54 |
| LCSD | 81 | 63 |
| Limits: | 60-140 | 20-120 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 133450007A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7306298 | 97 | 66 |
| 7306300 | 98 | 44* |
| Blank | 96 | 80 |
| LCS | 101 | 57 |
| LCSD | 96 | 47 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 24b Herbicides by EPA 8151A
Batch number: 133450017A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7306299 | 90 |
| 7306300 | 100 |
| Blank | 131 |
| LCS | 141 |
| LCSD | 141 |
| Limits: | 50-150 |

Analysis Name: 21a Herbicides by EPA 8151A
Batch number: 133450034A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7306301 | 83 |
| 7306302 | 66 |
| 7306303 | 99 |
| 7306304 | 105 |
| 7306305 | 92 |
| 7306306 | 86 |
| 7306307 | 87 |
| Blank | 82 |
| LCS | 98 |
| MS | 99 |
| MSD | 105 |
| Limits: | 50-150 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 133470015A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7306306 | 93 | 91 |
| 7306307 | 93 | 94 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439434
Reported: 01/09/14 at 01:32 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7306308 | 79 | 85 |
| 7306309 | 85 | 102 |
| 7306310 | 92 | 99 |
| Blank | 100 | 111 |
| LCS | 109 | 120 |
| MS | 101 | 115 |
| MSD | 107 | 116 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 133480008A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7306308 | 114 | 97 |
| 7306309 | 107 | 96 |
| 7306310 | 113 | 104 |
| Blank | 124* | 118 |
| LCS | 122* | 114 |
| LCSD | 123* | 118 |
| MS | 113 | 101 |
| MSD | 111 | 96 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 133450013A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7306298 | 103 | 93 |
| 7306299 | 100 | 89 |
| 7306300 | 102 | 93 |
| Blank | 101 | 88 |
| LCS | 104 | 86 |
| LCSD | 99 | 88 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 133500018A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7306301 | 89 | 91 |
| 7306302 | 87 | 88 |
| 7306303 | 93 | 98 |
| 7306304 | 92 | 92 |
| 7306305 | 88 | 86 |
| 7306306 | 94 | 91 |
| 7306307 | 91 | 86 |
| Blank | 86 | 79 |
| LCS | 88 | 92 |
| MS | 93 | 98 |
| MSD | 92 | 92 |
| Limits: | 37-125 | 66-123 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439434
Reported: 01/09/14 at 01:32 PM

## Surrogate Quality Control

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13347003

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7306308 | 76 | 68 | 78 | 83 | 81 | 81 |
| 7306309 | 68 | 64 | 73 | 78 | 77 | 77 |
| 7306310 | 73 | 64 | 75 | 80 | 78 | 80 |
| Blank | 74 | 75 | 84 | 87 | 88 | 96 |
| MS | 82 | 73 | 80 | 82 | 86 | 99 |
| MSD | 77 | 70 | 79 | 79 | 82 | 81 |
| OPR | 68 | 68 | 75 | 79 | 81 | 84 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7306308 | 72 | 65 | 57 | 70 | 85 | 84 |
| 7306309 | 74 | 60 | 53 | 69 | 83 | 82 |
| 7306310 | 75 | 60 | 50 | 67 | 83 | 83 |
| Blank | 85 | 69 | 60 | 78 | 91 | 92 |
| MS | 80 | 69 | 62 | 75 | 88 | 88 |
| MSD | 73 | 62 | 55 | 72 | 83 | 84 |
| OPR | 80 | 62 | 54 | 71 | 83 | 82 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7306308 | 84 | 70 | 60 | 71 | 69 |
| 7306309 | 80 | 69 | 61 | 63 | 65 |
| 7306310 | 85 | 67 | 56 | 67 | 65 |
| Blank | 89 | 77 | 66 | 69 | 75 |
| MS | 87 | 76 | 66 | 73 | 75 |
| MSD | 83 | 68 | 58 | 72 | 71 |
| OPR | 82 | 71 | 61 | 60 | 70 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 13350003

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7306298 | 63 | 59 | 77 | 78 | 76 | 70 |
| 7306299 | 77 | 68 | 96 | 98 | 90 | 79 |
| 7306300 | 77 | 81 | 96 | 94 | 92 | 92 |
| Blank | 59 | 55 | 73 | 74 | 71 | 64 |
| OPR | 66 | 58 | 82 | 82 | 77 | 69 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7306298 | 63 | 52 | 42 | 55 | 75 | 76 |
| 7306299 | 73 | 58 | 45 | 64 | 89 | 92 |
| 7306300 | 90 | 82 | 83 | 75 | 87 | 85 |
| Blank | 61 | 49 | 42 | 53 | 70 | 72 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439434
Reported: 01/09/14 at 01:32 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| OPR | 64 | 53 | 42 | 56 | 75 | 78 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |
| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
| 7306298 | 71 | 56 | 43 | 65 | 61 | |
| 7306299 | 87 | 65 | 45 | 78 | 68 | |
| 7306300 | 83 | 80 | 77 | 77 | 84 | |
| Blank | 67 | 55 | 43 | 61 | 57 | |
| OPR | 76 | 58 | 43 | 68 | 59 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

13013 1439434 7306298-310

**CDM Smith**

DateShipped: 12/5/2013
CarrierName: FedEx
AirbillNo: 797324756363

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131205-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB1-120513 | 12/5/13 14:30 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-120513 | 12/5/13 14:30 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| EB2-120513 | 12/5/13 15:00 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-120513 | 12/5/13 15:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Pam Hartman

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stacy Myers | 12/5/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | CEsch | 12/9/13 | 0910 |

13013 1439434 7306298-310

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 12/5/2013
CarrierName: FedEx
AirbillNo: 797324756363

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131205-02
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB2-120513 | 12/5/13 15:00 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| EB3-120513 | 12/5/13 15:30 | WQ | None | 4 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| EB3-120513 | 12/5/13 15:30 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Pa Hart

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Shipped | 12/05/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | CCLA | 12/9/13 | 0910 |

13013 1439434 7306298-310

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 12/5/2013
CarrierName: FedEx
AirbillNo: 797324756363

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131205-03
Cooler #: 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EHH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB1-120513 | 12/5/13 14:30 | WQ | None | 3 - 250 mL Amber | 10 day | | | | | | | X | | | X | | | | | | | X | | | | | | | | | | | | | | | | | |
| EB1-120513 | 12/5/13 14:30 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| EB1-120513 | 12/5/13 14:30 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| EB2-120513 | 12/5/13 15:00 | WQ | None | 2 - 250 mL Amber | 10 day | | | | | | | X | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| EB2-120513 | 12/5/13 15:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| EB2-120513 | 12/5/13 15:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-120513 | 12/5/13 15:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| EB3-120513 | 12/5/13 15:30 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB3-120513 | 12/5/13 15:30 | WQ | None | 3 - 250 mL Amber | 10 day | | | | | | | X | | | X | | | | | | | X | | | | | | | | | | | | | | | | | |
| EB3-120513 | 12/5/13 15:30 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| EB3-120513 | 12/5/13 15:30 | WQ | NaOH | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | |
| EB3-120513 | 12/5/13 15:30 | WQ | None | 2 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | |
| EB3-120513 | 12/5/13 15:30 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |

Special Instructions:

Sampler: Pat Hart

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stephanie Myers | 12/05/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | CCash | 12/6/13 | 0900 |

13013 1439434 7306298-310

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 12/5/2013
CarrierName: FedEx
AirbillNo: 797324756363

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131205-04
Cooler #: 4
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terpenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | TOC ASTM D5373 | Total Nitrogen ASTM D5373 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-120513 | 12/5/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-525-NBZ-SB-0.0-0.5 | 12/5/13 09:30 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | X | | | | | X | | | | | | | | | | | | | | |
| SL-525-NBZ-SB-4.0-5.0MS | 12/5/13 10:45 | SO | None | 3 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | X | | | | | X | | | | | | | | | | | | | | MS/MSD |
| SL-525-NBZ-SB-4.0-5.0MS | 12/5/13 10:45 | SO | None | 6 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | MS/MSD |
| SL-825-NBZ-SB-4.0-5.0 | 12/5/13 11:00 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | X | | | | | X | | | | | | | | | | | | | | |
| SL-825-NBZ-SB-4.0-5.0 | 12/5/13 11:00 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-526-NBZ-SB-0.0-0.5 | 12/5/13 11:30 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | X | X | | | | X | | | | | | | | | | | | | | |
| SL-526-NBZ-SB-2.5-3.5 | 12/5/13 12:00 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | X | X | | | | X | | | | | | | | | | | | | | |
| SL-526-NBZ-SB-2.5-3.5 | 12/5/13 12:00 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-527-NBZ-SB-0.0-0.5 | 12/5/13 10:45 | SO | None | 2 - SS-Sleeve | 10 day | | | | | | | X | | X | X | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-528-NBZ-SB-0.0-0.5 | 12/5/13 12:05 | SO | None | 2 - SS-Sleeve | 10 day | | | | | | | X | | X | X | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-529-NBZ-SB-0.0-0.5 | 12/5/13 13:00 | SO | None | 2 - SS-Sleeve | 10 day | | | | | | | X | | X | X | | | | | | | | X | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12/05/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 12/6/13 | 0910 |

**Nicole Maljovec**

**From:** Zakowski, Cherie [ZakowskiCA@cdmsmith.com]
**Sent:** Monday, December 09, 2013 11:41 AM
**To:** Nicole Maljovec
**Subject:** RE: SSFL 12/05/2013 COC- Coolers Delayed

No trip blank either. Thanks!

Cherie Zakowski
Project Manager/Scientist
CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202
Direct Phone: 720-264-1109
Main Phone: 303-383-2300
Fax: 303-308-3003

-----Original Message-----
From: Nicole Maljovec [mailto:nmaljovec@lancasterlabs.com]
Sent: Monday, December 09, 2013 9:33 AM
To: Zakowski, Cherie
Cc: Burgesser, Todd; Hartman, Pamela; Mysel, Stefanie
Subject: RE: SSFL 12/05/2013 COC- Coolers Delayed

Hi all,
The coolers arrived this morning. The temperature blanks were at 0.7-2.3°C. Based on the rules below, we're going to discard the encores and won't run Nitrate on the equipment blanks.

Do you still want to analyze the three EBs and TB for GRO since none of the soils are being analyzed for GRO now?

Thanks,
Nicole

Nicole Maljovec
Eurofins Lancaster Labs
Phone: 717-556-7259

-----Original Message-----
From: Zakowski, Cherie [mailto:ZakowskiCA@cdmsmith.com]
Sent: Friday, December 06, 2013 5:33 PM
To: Nicole Maljovec
Cc: Burgesser, Todd; Hartman, Pamela; Mysel, Stefanie
Subject: RE: SSFL 12/05/2013 COC- Coolers Delayed

Here's the plan:

1) If you get the Encore samples on Saturday we are ok.
2) If you get the Encore samples on Monday and they aren't frozen (Maybe the coolers in a very cold place) then you can't run them. The results would be rejected.
3) If you get Nitrates on Saturday you ok - but Monday - they won't work
4) If the temperature is below 11 Degrees all is good.
5) If the temperature is above level degrees the Encores would be rejected but all else is ok (just estimated)

Nicole, please let us know when you get the coolers.

Thanks

Cherie Zakowski
Project Manager/Scientist
CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202

**Nicole Maljovec**

**From:** Hartman, Pamela [HartmanPM@cdmsmith.com]
**Sent:** Monday, December 09, 2013 11:37 AM
**To:** Zakowski, Cherie; Nicole Maljovec
**Cc:** Burgesser, Todd; Mysel, Stefanie
**Subject:** RE: SSFL 12/05/2013 COC- Coolers Delayed

Yes, I would think we would drop the GRO EB for last week.

Pamela Hartman
CDM Smith
523 West Sixth Street Suite 400
Los Angeles, CA 90014
714 900 0916 (Cell)

From: Zakowski, Cherie
Sent: Monday, December 09, 2013 8:34 AM
To: Nicole Maljovec
Cc: Burgesser, Todd; Hartman, Pamela; Mysel, Stefanie
Subject: RE: SSFL 12/05/2013 COC- Coolers Delayed

Pam - I think that would be a waste correct? You will have to resample the soils anyway? Do you agree?

Cherie Zakowski
Project Manager/Scientist
CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202
Direct Phone: 720-264-1109
Main Phone: 303-383-2300
Fax: 303-308-3003

-----Original Message-----
From: Nicole Maljovec [mailto:nmaljovec@lancasterlabs.com]
Sent: Monday, December 09, 2013 9:33 AM
To: Zakowski, Cherie
Cc: Burgesser, Todd; Hartman, Pamela; Mysel, Stefanie
Subject: RE: SSFL 12/05/2013 COC- Coolers Delayed

Hi all,
The coolers arrived this morning. The temperature blanks were at 0.7-2.3°C. Based on the rules below, we're going to discard the encores and won't run Nitrate on the equipment blanks.

Do you still want to analyze the three EBs and TB for GRO since none of the soils are being analyzed for GRO now?

Thanks,
Nicole

Nicole Maljovec
Eurofins Lancaster Labs
Phone: 717-556-7259

-----Original Message-----
From: Zakowski, Cherie [mailto:ZakowskiCA@cdmsmith.com]
Sent: Friday, December 06, 2013 5:33 PM
To: Nicole Maljovec
Cc: Burgesser, Todd; Hartman, Pamela; Mysel, Stefanie
Subject: RE: SSFL 12/05/2013 COC- Coolers Delayed

Here's the plan:

1) If you get the Encore samples on Saturday we are ok.
2) If you get the Encore samples on Monday and they aren't frozen (Maybe the coolers in a very cold place) then you can't run them. The results would be rejected.

3) If you get Nitrates on Saturday you ok - but Monday - they won't work
4) If the temperature is below 11 Degrees all is good.
5) If the temperature is above level degrees the Encores would be rejected but all else is ok (just estimated)

Nicole, please let us know when you get the coolers.

Thanks

Cherie Zakowski
Project Manager/Scientist
CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202
Direct Phone: 720-264-1109
Main Phone: 303-383-2300
Fax: 303-308-3003

-----Original Message-----
From: Nicole Maljovec [mailto:nmaljovec@lancasterlabs.com]
Sent: Friday, December 06, 2013 2:24 PM
To: Zakowski, Cherie
Subject: RE: SSFL 12/05/2013 COC- Coolers Delayed

Sure! Here you go.

Nicole Maljovec
Eurofins Lancaster Labs
Phone: 717-556-7259

-----Original Message-----
From: Zakowski, Cherie [mailto:ZakowskiCA@cdmsmith.com]
Sent: Friday, December 06, 2013 4:18 PM
To: Nicole Maljovec
Subject: RE: SSFL 12/05/2013 COC- Coolers Delayed

Hi Nicole: Do you have the list of analyses? I wasn't included on the original email so I didn't get the excel spread sheet thing.

Thanks

Cherie Zakowski
Project Manager/Scientist
CDM Smith
555 17th Street, Suite 1100
Denver, CO 80202
Direct Phone: 720-264-1109
Main Phone: 303-383-2300
Fax: 303-308-3003

-----Original Message-----
From: Nicole Maljovec [mailto:nmaljovec@lancasterlabs.com]
Sent: Friday, December 06, 2013 1:30 PM
To: Mysel, Stefanie; Burgesser, Todd; Zakowski, Cherie
Cc: Hartman, Pamela
Subject: RE: SSFL 12/05/2013 COC- Coolers Delayed

One more thing! The entry people reminded me that an EB with Nitrate is included in the delayed coolers. Ok to run past hold when it gets here?
I'm being proactive in case the coolers arrive on Saturday.

Nicole Maljovec
Eurofins Lancaster Labs

Phone: 717-556-7259

-----Original Message-----
From: Nicole Maljovec
Sent: Friday, December 06, 2013 1:37 PM
To: 'Mysel, Stefanie'; Burgesser, Todd
Cc: Hartman, Pamela
Subject: SSFL 12/05/2013 COC- Coolers Delayed

Hi all,
The 4 coolers for today are delayed in Indiana due to inclement weather.
We're assuming the coolers won't make it here until tomorrow or Monday.

If the temperature is above 6.0C should we log the samples in?

Thanks!
Nicole

Nicole Maljovec
Eurofins Lancaster Labs
Phone: 717-556-7259

-----Original Message-----
From: Mysel, Stefanie [mailto:MyselSJ@cdmsmith.com]
Sent: Thursday, December 05, 2013 5:42 PM
To: !US19_SSFLShip; Burgesser, Todd
Cc: Hartman, Pamela; Mysel, Stefanie
Subject: SSFL 12/05/2013 COC

4 coolers were shipped to your lab for delivery tomorrow. These samples are from today's sampling. Samples were collected from NBZ. The airbill number for today's shipment is 797324756363. Let me know if you have any questions or issues. Attached is an excel table with sample names, dates and times from today's sampling. Tomorrow's samples will be Saturday delivery.

Regards,

Stefanie

Stefanie J. Mysel
Geologist

CDM Smith
111 Academy Way
Suite 150
Irvine, CA 92617
Direct: 949-930-9877
Main: 949-752-5452
Cell: 949-579-0634
Email: myselsj@cdmsmith.com<mailto:myselsj@cdmsmith.com>

eurofins | Lancaster Laboratories

# Environmental Sample Administration Receipt Documentation Log

1439434

**Client/Project:** CDM Smith

**Date of Receipt:** 12/9/13

**Time of Receipt:** 0910

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT131 | 1.0 | TB | WI | Y | B | |
| 2 | ↓ | 1.5 | ↓ | ↓ | ↓ | ↓ | |
| 3 | ↓ | 0.7 | ↓ | ↓ | ↓ | ↓ | |
| 4 | ↓ | 2.3 | ↓ | ↓ | ↓ | ↓ | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** ∅

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** 3647 **Date/Time:** 12/9/13 1125

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

December 31, 2013

Project: SSFL Phase 3 Sampling

Submittal Date: 12/07/2013
Group Number: 1439273
SDG: PH141
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-512-NBZ-SB-0.0-0.5 Soil | 7305591 |
| SL-534-NBZ-SB-0.0-0.5 Soil | 7305592 |
| SL-535-NBZ-SB-0.0-0.5 Soil | 7305593 |
| SL-501-NBZ-SB-0.0-0.5 Soil | 7305594 |
| SL-537-NBZ-SB-0.0-0.5 Soil | 7305595 |
| SL-538-NBZ-SB-0.0-0.5 Soil | 7305596 |
| SL-556-NBZ-SB-0.0-0.5 Soil | 7305597 |
| SL-556-NBZ-SB-4.0-5.0 Soil | 7305598 |
| TB-120613 Water | 7305599 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

**Sample Description:** SL-512-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7305591**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 09:25

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

512-- SDG#: PH141-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 0.88 | J | 1.7 | 0.67 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.68 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.77 | J | 1.7 | 0.67 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.74 | J | 1.7 | 0.67 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.4 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 12 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 38 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,700 | | 39.6 | 7.14 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.96 | U | 3.96 | 0.733 | 1 |
| 06935 | Arsenic | 7440-38-2 | 19.7 | | 3.96 | 0.693 | 1 |
| 06946 | Barium | 7440-39-3 | 61.3 | | 0.991 | 0.0327 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.514 | J | 0.991 | 0.0664 | 1 |
| 07914 | Boron | 7440-42-8 | 9.91 | U | 9.91 | 0.832 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.372 | J | 0.991 | 0.0753 | 1 |
| 01650 | Calcium | 7440-70-2 | 1,980 | | 19.8 | 3.31 | 1 |
| 06951 | Chromium | 7440-47-3 | 14.9 | | 2.97 | 0.159 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.67 | | 0.991 | 0.0981 | 1 |
| 06953 | Copper | 7440-50-8 | 1.74 | J | 1.98 | 0.287 | 1 |
| 01654 | Iron | 7439-89-6 | 18,200 | | 39.6 | 3.59 | 1 |
| 06955 | Lead | 7439-92-1 | 7.30 | | 2.97 | 0.495 | 1 |
| 01656 | Lithium | 7439-93-2 | 29.1 | | 4.0 | 0.34 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-512-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7305591**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 09:25

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

512-- SDG#: PH141-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01657 | Magnesium | 7439-95-4 | 4,720 | | 9.91 | 1.65 | 1 |
| 06958 | Manganese | 7439-96-5 | 257 | | 0.991 | 0.0822 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 1.98 | U | 1.98 | 0.168 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.40 | | 1.98 | 0.129 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 458 | | 9.91 | 2.86 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,290 | | 99.1 | 8.26 | 1 |
| 01667 | Sodium | 7440-23-5 | 64.2 | J | 99.1 | 16.5 | 1 |
| 06969 | Tin | 7440-31-5 | 2.71 | J | 9.91 | 0.218 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,110 | | 0.991 | 0.168 | 1 |
| 06971 | Vanadium | 7440-62-2 | 29.3 | | 0.991 | 0.129 | 1 |
| 06972 | Zinc | 7440-66-6 | 52.9 | | 3.96 | 0.198 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.48 | J | 4.95 | 0.832 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.396 | U | 0.396 | 0.0991 | 2 |
| 06142 | Silver | 7440-22-4 | 0.198 | U | 0.198 | 0.0258 | 2 |
| 06144 | Strontium | 7440-24-6 | 8.81 | | 0.396 | 0.0674 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.227 | | 0.198 | 0.0297 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0167 | U | 0.0167 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.0 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-512-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7305591**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 09:25

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

512-- SDG#: PH141-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.999 U | 0.999 | 0.0394 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0420 JBQ | 5.00 | 0.0294 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0452 JBQ | 5.00 | 0.0280 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0917 JBQ | 5.00 | 0.0294 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0856 JBQ | 5.00 | 0.0268 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.13 JB | 5.00 | 0.0299 | 1 |
| 11031 | OCDD | 3268-87-9 | 8.50 JB | 9.99 | 0.0279 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0559 JBQ | 0.999 | 0.0439 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0868 JB | 5.00 | 0.0202 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0828 JBQ | 5.00 | 0.0198 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0570 JB | 5.00 | 0.0239 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0490 JB | 5.00 | 0.0237 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0616 JBQ | 5.00 | 0.0232 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0502 JB | 5.00 | 0.0223 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.282 JB | 5.00 | 0.0160 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0494 JBQ | 5.00 | 0.0217 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.669 JB | 9.99 | 0.0339 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0352 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 65 | 25 - 164 |
| 13C12-12378-PeCDD | 65 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 70 | 23 - 140 |
| 13C12-OCDD | 57 | 17 - 157 |
| 13C12-2378-TCDF | 59 | 24 - 169 |
| 13C12-12378-PeCDF | 64 | 24 - 185 |
| 13C12-23478-PeCDF | 63 | 21 - 178 |
| 13C12-123478-HxCDF | 74 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 82 | 29 - 147 |
| 13C12-1234678-HpCDF | 75 | 28 - 143 |
| 13C12-1234789-HpCDF | 63 | 26 - 138 |
| 13C12-OCDF | 52 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-512-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305591**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 09:25

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

512-- SDG#: PH141-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-512-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305591**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 09:25

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

512-- SDG#: PH141-01

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/27/2013 13:50 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 01:35 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/17/2013 08:40 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:27 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133470637001B | 12/17/2013 18:38 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:38 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:38 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:38 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133470638001 | 12/17/2013 07:42 | Damary Valentin | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-512-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305591**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 09:25

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

512-- SDG#: PH141-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133470637001 | 12/15/2013 23:55 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133470638001 | 12/16/2013 02:30 | Annamaria Kuhns | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-534-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305592**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 09:10

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-534- SDG#: PH141-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.5 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 18 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 42 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 2.2 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 02:18 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-535-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305593**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 10:10

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-535- SDG#: PH141-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 6.0 | U | 6.0 | 2.4 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 7.0 | | 6.0 | 2.4 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 36 | | 6.0 | 2.4 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 85 | | 12 | 4.8 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 6.0 | U | 6.0 | 2.4 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 16.0 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 02:40 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-501-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305594**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 12:50

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-501- SDG#: PH141-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,400 | | 39.5 | 7.11 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.95 | U | 3.95 | 0.730 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.19 | J | 3.95 | 0.691 | 1 |
| 06946 | Barium | 7440-39-3 | 87.6 | | 0.987 | 0.0326 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.496 | J | 0.987 | 0.0661 | 1 |
| 07914 | Boron | 7440-42-8 | 9.87 | U | 9.87 | 0.829 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.425 | J | 0.987 | 0.0750 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,460 | | 19.7 | 3.30 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.8 | | 2.96 | 0.158 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.64 | | 0.987 | 0.0977 | 1 |
| 06953 | Copper | 7440-50-8 | 3.26 | | 1.97 | 0.286 | 1 |
| 01654 | Iron | 7439-89-6 | 21,500 | | 39.5 | 3.57 | 1 |
| 06955 | Lead | 7439-92-1 | 10.7 | | 2.96 | 0.493 | 1 |
| 01656 | Lithium | 7439-93-2 | 29.0 | | 3.9 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,500 | | 9.87 | 1.65 | 1 |
| 06958 | Manganese | 7439-96-5 | 330 | | 0.987 | 0.0819 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.197 | J | 1.97 | 0.168 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.2 | | 1.97 | 0.128 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 472 | | 9.87 | 2.85 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,520 | | 98.7 | 8.23 | 1 |
| 01667 | Sodium | 7440-23-5 | 84.2 | J | 98.7 | 16.5 | 1 |
| 06969 | Tin | 7440-31-5 | 2.70 | J | 9.87 | 0.217 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,180 | | 0.987 | 0.168 | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.4 | | 0.987 | 0.128 | 1 |
| 06972 | Zinc | 7440-66-6 | 60.9 | | 3.95 | 0.197 | 1 |
| 10146 | Zirconium | 7440-67-7 | 0.897 | J | 4.93 | 0.829 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.104 | J | 0.395 | 0.0987 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0322 | J | 0.197 | 0.0257 | 2 |
| 06144 | Strontium | 7440-24-6 | 14.7 | | 0.395 | 0.0671 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.238 | | 0.197 | 0.0296 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0129 | J | 0.0166 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.98 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 19.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-501-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305594**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 12:50

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-501- SDG#: PH141-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:30 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133470637001B | 12/17/2013 18:41 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:41 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:41 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:41 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133470638001 | 12/17/2013 07:44 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133470637001 | 12/15/2013 23:55 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133470638001 | 12/16/2013 02:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13341039401A | 12/07/2013 15:05 | Noah M Rainbow | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-537-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305595**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 12:55

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-537- SDG#: PH141-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 0.89 | J | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.86 | J | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.9 | U | 1.9 | 1.9 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 10 | U | 10 | 4.1 | 2 |
| 12952 | EFH (C15-C20) | n.a. | 8.1 | J | 10 | 4.1 | 2 |
| 12952 | EFH (C21-C30) | n.a. | 43 | | 10 | 4.1 | 2 |
| 12952 | EFH (C30-C40) | n.a. | 140 | | 21 | 8.2 | 2 |
| 12952 | EFH (C8-C11) | n.a. | 10 | U | 10 | 4.1 | 2 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.0 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-537-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7305595**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 12:55

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-537- SDG#: PH141-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0995 JBQ | 0.996 | 0.0792 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.143 JBQ | 4.98 | 0.0548 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0843 JB | 4.98 | 0.0516 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.272 JB | 4.98 | 0.0541 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.228 JBQ | 4.98 | 0.0504 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.71 JB | 4.98 | 0.0582 | 1 |
| 11031 | OCDD | 3268-87-9 | 19.3 B | 9.96 | 0.0507 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.194 JBQ | 0.996 | 0.0894 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.190 JB | 4.98 | 0.0500 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.405 JB | 4.98 | 0.0473 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.161 JB | 4.98 | 0.0536 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.182 JB | 4.98 | 0.0514 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0541 JBQ | 4.98 | 0.0518 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.181 JB | 4.98 | 0.0491 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.633 JB | 4.98 | 0.0379 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0524 JBQ | 4.98 | 0.0468 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.35 JB | 9.96 | 0.0730 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.255 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 73 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 73 | 23 - 140 |
| 13C12-OCDD | 61 | 17 - 157 |
| 13C12-2378-TCDF | 66 | 24 - 169 |
| 13C12-12378-PeCDF | 70 | 24 - 185 |
| 13C12-23478-PeCDF | 69 | 21 - 178 |
| 13C12-123478-HxCDF | 78 | 26 - 152 |
| 13C12-123678-HxCDF | 80 | 26 - 123 |
| 13C12-234678-HxCDF | 82 | 28 - 136 |
| 13C12-123789-HxCDF | 86 | 29 - 147 |
| 13C12-1234678-HpCDF | 77 | 28 - 143 |
| 13C12-1234789-HpCDF | 65 | 26 - 138 |
| 13C12-OCDF | 56 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-537-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305595**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 12:55

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-537- SDG#: PH141-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-537-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305595**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 12:55

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-537- SDG#: PH141-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 22:24 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 21:17 | Heather E Williams | 2 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/17/2013 09:37 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-538-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305596**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 14:05

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-538- SDG#: PH141-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 0.78 | J | 1.7 | 0.67 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.71 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.72 | J | 1.7 | 0.67 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.88 | J | 1.7 | 0.67 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.84 | U | 0.84 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.84 | U | 0.84 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-538-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305596**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 14:05

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-538- SDG#: PH141-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.2 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 11 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 19 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 1.6 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-538-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7305596**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 14:05

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-538- SDG#: PH141-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.972 | U | 0.972 | 0.0611 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0529 | JBQ | 4.86 | 0.0382 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0417 | JBQ | 4.86 | 0.0311 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.102 | JBQ | 4.86 | 0.0321 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0911 | JB | 4.86 | 0.0305 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.929 | JB | 4.86 | 0.0434 | 1 |
| 11031 | OCDD | 3268-87-9 | 6.81 | JB | 9.72 | 0.0394 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.972 | U | 0.972 | 0.0625 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.107 | JBQ | 4.86 | 0.0277 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.149 | JBQ | 4.86 | 0.0274 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0688 | JB | 4.86 | 0.0354 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0572 | JB | 4.86 | 0.0334 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.102 | JBQ | 4.86 | 0.0366 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0814 | JBQ | 4.86 | 0.0326 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.270 | JB | 4.86 | 0.0212 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0407 | JBQ | 4.86 | 0.0284 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.626 | JB | 9.72 | 0.0629 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0360 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 68 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 68 | 23 - 140 |
| 13C12-OCDD | 56 | 17 - 157 |
| 13C12-2378-TCDF | 62 | 24 - 169 |
| 13C12-12378-PeCDF | 67 | 24 - 185 |
| 13C12-23478-PeCDF | 65 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 79 | 26 - 123 |
| 13C12-234678-HxCDF | 80 | 28 - 136 |
| 13C12-123789-HxCDF | 78 | 29 - 147 |
| 13C12-1234678-HpCDF | 74 | 28 - 143 |
| 13C12-1234789-HpCDF | 59 | 26 - 138 |
| 13C12-OCDF | 50 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-538-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305596**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 14:05

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-538- SDG#: PH141-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-538-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305596**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 14:05

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-538- SDG#: PH141-06

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/27/2013 14:23 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 22:39 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 00:30 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13347003 | 12/17/2013 10:34 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13347003 | 12/13/2013 11:30 | Chin F Ly | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-556-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305597**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 14:00

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-556- SDG#: PH141-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 92 | U | 92 | 53 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 26 | U | 26 | 26 | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.2 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.2 | 1 |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 780 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 770 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 2.0 | | 1.7 | 0.84 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 0.97 | J | 1.7 | 0.77 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 2.7 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 2.6 | | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 0.40 | J | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 28 | | 26 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 180 | | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 490 | | 52 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 10 | 5 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-556-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305597**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 14:00

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-556- SDG#: PH141-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133450034A | 12/15/2013 22:36 | Melissa McDermott | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 22:54 | Jamie L Brillhart | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/17/2013 12:47 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133450034A | 12/12/2013 06:45 | Kerrie A Freeburn | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 20:12 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-556-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305598**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 14:30

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

556-4 SDG#: PH141-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 25.1 |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 100 | U | 100 | 100 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 17 | U | 17 | 12 | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.2 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.2 | 1 |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 780 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 770 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.84 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.77 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 30 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 74 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-556-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7305598**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 14:30

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

556-4 SDG#: PH141-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 3.6 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13347A16A | 12/16/2013 22:05 | Marie D Beamenderfer | 25.1 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201334133368 | 12/07/2013 14:16 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201334133368 | 12/07/2013 14:17 | Mitchell R Washel | n.a. |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133450034A | 12/15/2013 23:57 | Melissa McDermott | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/16/2013 23:09 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133450034A | 12/12/2013 06:45 | Kerrie A Freeburn | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133450021A | 12/13/2013 03:02 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133450021A | 12/12/2013 03:00 | Sherry L Morrow | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401A | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-120613 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7305599**
**LL Group # 1439273**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/06/2013 08:00

Submitted: 12/07/2013 10:50
Reported: 12/31/2013 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TBPHA SDG#: PH141-09TB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13346A20A | 12/13/2013 19:14 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13346A20A | 12/13/2013 19:14 | Marie D Beamenderfer | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439273
Reported: 12/31/13 at 02:30 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13348SLG026 | Sample number(s): 7305591,7305596 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 126 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 101 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 110 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 109 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 112 | | 79-112 | | |
| Batch number: 13346A20A | Sample number(s): 7305599 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 97 | 100 | 75-135 | 3 | 30 |
| Batch number: 13347A16A | Sample number(s): 7305598 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 83 | 87 | 67-119 | 4 | 30 |
| Batch number: 133450034A | Sample number(s): 7305597-7305598 | | | | | | | | | |
| 2,4-D | 36 | U | 36. | 12 | ug/kg | 136* | | 59-122 | | |
| Dalapon | 90 | U | 90. | 44 | ug/kg | 71 | | 25-100 | | |
| 2,4-DB | 17 | U | 17. | 6.2 | ug/kg | 135* | | 54-131 | | |
| Dicamba | 12 | U | 12. | 4.0 | ug/kg | 102 | | 55-138 | | |
| Dinoseb | 24 | U | 24. | 9.0 | ug/kg | 13 | | 10-56 | | |
| 2,4-DP (Dichlorprop) | 17 | U | 17. | 9.0 | ug/kg | 153 | | 65-158 | | |
| MCPA | 2,500 U | | 2,500. | 760 | ug/kg | 97 | | 56-133 | | |
| MCPP (Mecoprop) | 2,500 | | 2,500. | 750 | ug/kg | 96 | | 54-134 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439273
Reported: 12/31/13 at 02:30 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| | U | | | | | | | | | |
| 2,4,5-T | 1.7 | U | 1.7 | 0.82 | ug/kg | 112 | | 58-135 | | |
| 2,4,5-TP | 1.7 | U | 1.7 | 0.75 | ug/kg | 125 | | 63-130 | | |
| Batch number: 133470015A | Sample number(s): 7305595-7305598 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 103 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 109 | | 62-128 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 107 | | 69-121 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 114 | | 64-130 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 109 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 115 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 114 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 110 | | 51-141 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 73-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 87 | | 64-130 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 109 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 60-120 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 103 | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 101 | | 62-127 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 105 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 107 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 133450021A | Sample number(s): 7305591-7305593,7305595-7305598 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 101 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 107 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 105 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 57 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 83 | | 60-115 | | |
| Batch number: 133470637001 | Sample number(s): 7305591,7305594 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 102 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 105 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 96 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 110 | | 80-120 | | |
| Calcium | 4.84 | J | 20.0 | 3.34 | mg/kg | 103 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 97 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 109 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 106 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 112 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 105 | | 80-120 | | |
| Magnesium | 2.30 | J | 10.0 | 1.67 | mg/kg | 104 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 106 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 114 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 110 | | 80-120 | | |
| Potassium | 100 | U | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439273
Reported: 12/31/13 at 02:30 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.63 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 100 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 99 | | 80-120 | | |
| Zinc | 0.233 | J | 4.00 | 0.200 | mg/kg | 108 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 98 | | 80-120 | | |
| Batch number: 133470637001A | Sample number(s): 7305591,7305594 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 109 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 106 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 109 | | 80-120 | | |
| Batch number: 133470637001B | Sample number(s): 7305591,7305594 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 114 | | 80-120 | | |
| Batch number: 133470638001 | Sample number(s): 7305591,7305594 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 112 | | 85-120 | | |
| Batch number: 13341039401A | Sample number(s): 7305594 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 13347162401A | Sample number(s): 7305591-7305598 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 99 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13347003 | Sample number(s): 7305591,7305595-7305596 | | | | | | | | | |
| 2378-TCDD | 0.0842 | J | 1.00 | 0.0450 | ng/kg | 93 | | 67-158 | | |
| 12378-PeCDD | 0.186 | J | 5.00 | 0.0305 | ng/kg | 95 | | 70-142 | | |
| 123478-HxCDD | 0.164 | J | 5.00 | 0.0285 | ng/kg | 100 | | 70-164 | | |
| 123678-HxCDD | 0.174 | J | 5.00 | 0.0294 | ng/kg | 101 | | 76-134 | | |
| 123789-HxCDD | 0.220 | J | 5.00 | 0.0273 | ng/kg | 100 | | 64-162 | | |
| 1234678-HpCDD | 0.255 | J | 5.00 | 0.0234 | ng/kg | 100 | | 70-140 | | |
| OCDD | 0.606 | J | 10.0 | 0.0277 | ng/kg | 97 | | 78-144 | | |
| 2378-TCDF | 0.0670 | J | 1.00 | 0.0481 | ng/kg | 96 | | 75-158 | | |
| 12378-PeCDF | 0.219 | J | 5.00 | 0.0214 | ng/kg | 99 | | 80-134 | | |
| 23478-PeCDF | 0.287 | J | 5.00 | 0.0200 | ng/kg | 100 | | 68-160 | | |
| 123478-HxCDF | 0.187 | J | 5.00 | 0.0280 | ng/kg | 102 | | 72-134 | | |
| 123678-HxCDF | 0.183 | J | 5.00 | 0.0270 | ng/kg | 101 | | 84-130 | | |
| 123789-HxCDF | 0.333 | J | 5.00 | 0.0260 | ng/kg | 102 | | 78-130 | | |
| 234678-HxCDF | 0.271 | J | 5.00 | 0.0256 | ng/kg | 101 | | 70-156 | | |
| 1234678-HpCDF | 0.219 | J | 5.00 | 0.0126 | ng/kg | 99 | | 82-122 | | |
| 1234789-HpCDF | 0.237 | J | 5.00 | 0.0167 | ng/kg | 103 | | 78-138 | | |
| OCDF | 0.588 | J | 10.0 | 0.0393 | ng/kg | 100 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.325 | | | | ng/kg | | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439273
Reported: 12/31/13 at 02:30 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13348SLG026 | Sample number(s): 7305591,7305596 UNSPK: P307349 | | | | | | | | |
| Acenaphthene | 84 | 90 | 48-127 | 7 | 30 | | | | |
| Acenaphthylene | 84 | 90 | 49-121 | 7 | 30 | | | | |
| Anthracene | 84 | 94 | 52-126 | 11 | 30 | | | | |
| Benzo(a)anthracene | 90 | 99 | 44-143 | 10 | 30 | | | | |
| Benzo(a)pyrene | 80 | 101 | 44-140 | 23 | 30 | | | | |
| Benzo(b)fluoranthene | 99 | 134 | 26-142 | 29 | 30 | | | | |
| Benzo(e)pyrene | 81 | 101 | 70-130 | 23 | 30 | | | | |
| Benzo(g,h,i)perylene | 40 | 48 | 33-141 | 18 | 30 | | | | |
| Benzo(k)fluoranthene | 94 | 114 | 54-142 | 20 | 30 | | | | |
| Butylbenzylphthalate | 98 | 115 | 49-151 | 16 | 30 | | | | |
| Di-n-butylphthalate | 89 | 98 | 52-147 | 9 | 30 | | | | |
| Chrysene | 88 | 106 | 29-148 | 18 | 30 | | | | |
| Dibenz(a,h)anthracene | 50 | 57 | 20-137 | 13 | 30 | | | | |
| Diethylphthalate | 90 | 99 | 43-145 | 10 | 30 | | | | |
| Dimethylphthalate | 93 | 104 | 58-129 | 12 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 101 | 124 | 39-167 | 21 | 30 | | | | |
| Fluoranthene | 84 | 101 | 40-148 | 18 | 30 | | | | |
| Fluorene | 87 | 95 | 51-137 | 10 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 48 | 57 | 17-136 | 18 | 30 | | | | |
| 1-Methylnaphthalene | 100 | 115 | 50-131 | 14 | 30 | | | | |
| 2-Methylnaphthalene | 96 | 112 | 35-152 | 15 | 30 | | | | |
| Naphthalene | 87 | 112 | 31-148 | 24 | 30 | | | | |
| N-Nitrosodimethylamine | 82 | 95 | 48-113 | 15 | 30 | | | | |
| Di-n-octylphthalate | 134 | 171* | 52-162 | 25 | 30 | | | | |
| Phenanthrene | 84 | 106 | 29-142 | 23 | 30 | | | | |
| Pyrene | 90 | 111 | 26-143 | 21 | 30 | | | | |
| Batch number: 133450034A | Sample number(s): 7305597-7305598 UNSPK: P306302 | | | | | | | | |
| 2,4-D | 142 | 151* | 42-143 | 6 | 35 | | | | |
| Dalapon | 62 | 57 | 16-98 | 8 | 50 | | | | |
| 2,4-DB | 144 | 152 | 10-179 | 5 | 50 | | | | |
| Dicamba | 106 | 115 | 55-133 | 8 | 50 | | | | |
| Dinoseb | 25 | 28 | 10-52 | 12 | 35 | | | | |
| 2,4-DP (Dichlorprop) | 154 | 161 | 32-171 | 4 | 50 | | | | |
| MCPA | 101 | 110 | 23-169 | 9 | 50 | | | | |
| MCPP (Mecoprop) | 95 | 97 | 24-164 | 2 | 50 | | | | |
| 2,4,5-T | 124 | 177* | 12-172 | 35 | 35 | | | | |
| 2,4,5-TP | 128 | 131 | 10-142 | 2 | 35 | | | | |
| Batch number: 133470015A | Sample number(s): 7305595-7305598 UNSPK: P300108 | | | | | | | | |
| Aldrin | 104 | 103 | 16-126 | 1 | 50 | | | | |
| Alpha BHC | 108 | 111 | 14-140 | 3 | 50 | | | | |
| Beta BHC | 106 | 107 | 42-133 | 1 | 50 | | | | |
| Gamma BHC - Lindane | 114 | 117 | 30-137 | 2 | 50 | | | | |
| p,p-DDD | 111 | 112 | 43-149 | 1 | 50 | | | | |
| p,p-DDE | 114 | 116 | 35-152 | 2 | 50 | | | | |
| p,p-DDT | 115 | 116 | 12-193 | 1 | 50 | | | | |
| Delta BHC | 110 | 112 | 13-153 | 1 | 50 | | | | |
| Dieldrin | 104 | 106 | 41-153 | 2 | 50 | | | | |
| Endosulfan I | 88 | 90 | 26-146 | 1 | 50 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439273
Reported: 12/31/13 at 02:30 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Endosulfan II | 94 | 96 | 34-141 | 3 | 50 | | | | |
| Endosulfan Sulfate | 111 | 111 | 10-181 | 0 | 50 | | | | |
| Endrin | 102 | 104 | 30-152 | 2 | 50 | | | | |
| Endrin Aldehyde | 96 | 98 | 23-138 | 2 | 50 | | | | |
| Endrin Ketone | 103 | 103 | 30-148 | 0 | 50 | | | | |
| Heptachlor | 101 | 101 | 16-152 | 0 | 50 | | | | |
| Heptachlor Epoxide | 103 | 107 | 33-144 | 4 | 50 | | | | |
| Methoxychlor | 108 | 109 | 41-161 | 1 | 50 | | | | |
| Batch number: 133450021A | Sample number(s): 7305591-7305593,7305595-7305598 UNSPK: P301926 | | | | | | | | |
| EFH (C12-C14) | 0* | 0* | 49-123 | 0 | 20 | | | | |
| EFH (C15-C20) | -98 (2) | 54 (2) | 49-123 | 38* | 20 | | | | |
| EFH (C21-C30) | -219 (2) | -79 (2) | 49-123 | 14 | 20 | | | | |
| EFH (C30-C40) | -386 (2) | 248 (2) | 49-123 | 29* | 20 | | | | |
| EFH (C8-C11) | 0* | 0* | 49-123 | 0 | 20 | | | | |
| Batch number: 133470637001 | Sample number(s): 7305591,7305594 UNSPK: P301926 BKG: P301926 | | | | | | | | |
| Aluminum | 1409 (2) | 1052 (2) | 75-125 | 5 | 20 | 11,200 | 9,940 | 12 | 20 |
| Antimony | 63* | 62* | 75-125 | 1 | 20 | 3.92 U | 3.92 U | 0 (1) | 20 |
| Arsenic | 104 | 98 | 75-125 | 4 | 20 | 3.00 J | 2.85 J | 5 (1) | 20 |
| Barium | 104 | 101 | 75-125 | 2 | 20 | 66.1 | 63.8 | 4 | 20 |
| Beryllium | 104 | 102 | 75-125 | 2 | 20 | 0.441 J | 0.393 J | 12 (1) | 20 |
| Boron | 97 | 95 | 75-125 | 1 | 20 | 4.43 J | 4.34 J | 2 (1) | 20 |
| Cadmium | 102 | 98 | 75-125 | 3 | 20 | 0.414 J | 0.389 J | 6 (1) | 20 |
| Calcium | 252 (2) | 220 (2) | 75-125 | 2 | 20 | 4,690 | 4,740 | 1 | 20 |
| Chromium | 101 | 92 | 75-125 | 5 | 20 | 15.5 | 15.0 | 3 | 20 |
| Cobalt | 100 | 97 | 75-125 | 3 | 20 | 4.44 | 4.03 | 10 (1) | 20 |
| Copper | 100 | 97 | 75-125 | 2 | 20 | 4.45 | 4.03 | 10 (1) | 20 |
| Iron | 1112 (2) | 38 (2) | 75-125 | 6 | 20 | 17,100 | 15,900 | 7 | 20 |
| Lead | 104 | 94 | 75-125 | 5 | 20 | 13.7 | 12.4 | 10 (1) | 20 |
| Lithium | 105 | 101 | 75-125 | 3 | 20 | 21.0 | 19.2 | 9 (1) | 20 |
| Magnesium | 233 (2) | 129 (2) | 75-125 | 5 | 20 | 3,920 | 3,720 | 5 | 20 |
| Manganese | 141 (2) | 114 (2) | 75-125 | 4 | 20 | 262 | 240 | 8 | 20 |
| Molybdenum | 95 | 93 | 75-125 | 2 | 20 | 0.924 J | 0.381 J | 83* (1) | 20 |
| Nickel | 103 | 99 | 75-125 | 3 | 20 | 9.93 | 9.06 | 9 (1) | 20 |
| Phosphorus | 85 (2) | 56 (2) | 75-125 | 6 | 20 | 399 | 358 | 11 | 20 |
| Potassium | 124 | 109 | 75-125 | 3 | 20 | 3,230 | 3,040 | 6 | 20 |
| Sodium | 100 | 97 | 75-125 | 3 | 20 | 72.5 J | 68.1 J | 6 (1) | 20 |
| Tin | 89 | 87 | 75-125 | 2 | 20 | 2.63 J | 2.73 J | 4 (1) | 20 |
| Titanium | 293 (2) | 271 (2) | 75-125 | 2 | 20 | 934 | 817 | 13 | 20 |
| Vanadium | 103 | 97 | 75-125 | 4 | 20 | 28.8 | 26.5 | 9 | 20 |
| Zinc | 106 | 100 | 75-125 | 3 | 20 | 52.9 | 49.8 | 6 | 20 |
| Zirconium | 90 | 87 | 75-125 | 3 | 20 | 1.54 J | 1.46 J | 5 (1) | 20 |
| Batch number: 133470637001A | Sample number(s): 7305591,7305594 UNSPK: P301926 BKG: P301926 | | | | | | | | |
| Silver | 105 | 102 | 75-125 | 2 | 20 | 0.186 J | 0.204 | 9 (1) | 20 |
| Strontium | 124 | 196* | 75-125 | 16 | 20 | 23.4 | 24.1 | 3 | 20 |
| Thallium | 97 | 98 | 75-125 | 1 | 20 | 0.197 | 0.188 J | 4 (1) | 20 |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439273
Reported: 12/31/13 at 02:30 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 133470637001B | Sample number(s): 7305591,7305594 UNSPK: P301926 BKG: P301926 | | | | | | | | |
| Selenium | 104 | 110 | 75-125 | 5 | 20 | 0.188 J | 0.188 J | 0 (1) | 20 |
| Batch number: 133470638001 | Sample number(s): 7305591,7305594 UNSPK: P301926 BKG: P301926 | | | | | | | | |
| 3a Mercury 7471A | 95 | 112 | 65-135 | 8 | 20 | 0.169 | 0.151 | 11 | 20 |
| Batch number: 13341039401A | Sample number(s): 7305594 BKG: 7305594 | | | | | | | | |
| 15a pH by 9045D | | | | | | 6.98 | 6.97 | 0 | 3 |
| Batch number: 13347162401A | Sample number(s): 7305591-7305598 BKG: P306302 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 2.6 | 2.5 | 4 | 20 |
| Batch number: 13347003 | Sample number(s): 7305591,7305595-7305596 UNSPK: P301926 | | | | | | | | |
| 2378-TCDD | 87 | 89 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDD | 93 | 95 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDD | 98 | 100 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDD | 99 | 98 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDD | 99 | 97 | 40-135 | 3 | 20 | | | | |
| 1234678-HpCDD | 91 | 90 | 40-135 | 2 | 20 | | | | |
| OCDD | 76 | 58 | 40-135 | 14 | 20 | | | | |
| 2378-TCDF | 92 | 92 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDF | 98 | 99 | 40-135 | 0 | 20 | | | | |
| 23478-PeCDF | 101 | 99 | 40-135 | 3 | 20 | | | | |
| 123478-HxCDF | 101 | 101 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDF | 102 | 101 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 101 | 103 | 40-135 | 1 | 20 | | | | |
| 234678-HxCDF | 99 | 101 | 40-135 | 0 | 20 | | | | |
| 1234678-HpCDF | 99 | 99 | 40-135 | 1 | 20 | | | | |
| 1234789-HpCDF | 101 | 102 | 40-135 | 0 | 20 | | | | |
| OCDF | 97 | 96 | 40-135 | 2 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13348SLG026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7305591 | 84 | 86 | 104 |
| 7305596 | 87 | 89 | 104 |
| Blank | 82 | 88 | 101 |
| LCS | 84 | 86 | 101 |
| MS | 74 | 68 | 93 |
| MSD | 81 | 81 | 102 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439273
Reported: 12/31/13 at 02:30 PM

## Surrogate Quality Control

Limits: 54-129 59-125 61-125

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13346A20A

| | Trifluorotoluene-F |
|---|---|
| 7305599 | 75 |
| Blank | 81 |
| LCS | 86 |
| LCSD | 88 |
| Limits: | 63-135 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13347A16A

| | Trifluorotoluene-F |
|---|---|
| 7305598 | 85 |
| Blank | 90 |
| LCS | 96 |
| LCSD | 99 |
| Limits: | 50-142 |

Analysis Name: 21a Herbicides by EPA 8151A
Batch number: 133450034A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7305597 | 95 |
| 7305598 | 88 |
| Blank | 82 |
| LCS | 98 |
| MS | 99 |
| MSD | 105 |
| Limits: | 50-150 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 133470015A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7305595 | 85 | 93 |
| 7305596 | 87 | 102 |
| 7305597 | 80 | 102 |
| 7305598 | 97 | 98 |
| Blank | 100 | 111 |
| LCS | 109 | 120 |
| MS | 101 | 115 |
| MSD | 107 | 116 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 133450021A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439273
Reported: 12/31/13 at 02:30 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7305591 | 105 | 109 |
| 7305592 | 102 | 96 |
| 7305593 | 98 | 98 |
| 7305595 | 99 | 104 |
| 7305596 | 100 | 98 |
| 7305597 | 101 | 105 |
| 7305598 | 98 | 89 |
| Blank | 105 | 100 |
| LCS | 97 | 96 |
| MS | 103 | 111 |
| MSD | 105 | 109 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13347003

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7305591 | 65 | 63 | 74 | 77 | 77 | 82 |
| 7305595 | 72 | 69 | 78 | 80 | 82 | 86 |
| 7305596 | 68 | 65 | 75 | 79 | 80 | 78 |
| Blank | 74 | 75 | 84 | 87 | 88 | 96 |
| MS | 82 | 73 | 80 | 82 | 86 | 99 |
| MSD | 77 | 70 | 79 | 79 | 82 | 81 |
| OPR | 68 | 68 | 75 | 79 | 81 | 84 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7305591 | 75 | 63 | 52 | 65 | 82 | 80 |
| 7305595 | 77 | 65 | 56 | 73 | 86 | 85 |
| 7305596 | 74 | 59 | 50 | 70 | 84 | 85 |
| Blank | 85 | 69 | 60 | 78 | 91 | 92 |
| MS | 80 | 69 | 62 | 75 | 88 | 88 |
| MSD | 73 | 62 | 55 | 72 | 83 | 84 |
| OPR | 80 | 62 | 54 | 71 | 83 | 82 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7305591 | 80 | 70 | 57 | 59 | 64 |
| 7305595 | 86 | 73 | 61 | 66 | 70 |
| 7305596 | 83 | 68 | 56 | 62 | 67 |
| Blank | 89 | 77 | 66 | 69 | 75 |
| MS | 87 | 76 | 66 | 73 | 75 |
| MSD | 83 | 68 | 58 | 72 | 71 |
| OPR | 82 | 71 | 61 | 60 | 70 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 12/6/2013 A-13013
CarrierName: FedEx G-1439273
AirbillNo: 797337756282 S-7305591-99

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131206-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-512-NBZ-SB-0.0-0.5 | 12/6/13 09:25 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-534-NBZ-SB-0.0-0.5 | 12/6/13 09:10 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-535-NBZ-SB-0.0-0.5 | 12/6/13 10:10 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-501-NBZ-SB-0.0-0.5 | 12/6/13 12:50 | SO | None | 1 - SS-Sleeve | 10 day | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SL-501-NBZ-SB-0.0-0.5 | 12/6/13 12:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-537-NBZ-SB-0.0-0.5 | 12/6/13 12:55 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | X | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-538-NBZ-SB-0.0-0.5 | 12/6/13 14:05 | SO | None | 2 - SS-Sleeve | 10 day | | | | | | | X | | X | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-556-NBZ-SB-0.0-0.5 | 12/6/13 14:00 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | X | X | | | | X | | | | | | | | | | | | | | |
| SL-556-NBZ-SB-4.0-5.0 | 12/6/13 14:30 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | X | X | | | | X | | | | | | | | | | | | | | |
| SL-556-NBZ-SB-4.0-5.0 | 12/6/13 14:30 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| TB-120613 | 12/6/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 12/6/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 12/7/13 | 1050 |

COC Rev 3

COC: 20131206-01, Page 1 of 1

1 of 1

eurofins | Lancaster Laboratories

G-1439273

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** QM Smith

**Date of Receipt:** 12/7/13

**Time of Receipt:** 1050

**Source Code:** 50

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | D131 | 1.1 | TB | WI | Y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** ϕ

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** 52

**Date/Time:** 12/7/13 1145

Issued by Dept. 6042 Management

2174.06

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

December 31, 2013

Project: SSFL Phase 3 Sampling

Submittal Date: 12/10/2013
Group Number: 1439666
SDG: PH142
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB-120913 Water | 7307341 |
| SL-514-NBZ-SB-0.0-0.5 Soil | 7307342 |
| SL-515-NBZ-SB-0.0-0.5 Soil | 7307343 |
| SL-516-NBZ-SB-0.0-0.5 Soil | 7307344 |
| SL-516-NBZ-SB-4.0-5.0 Soil | 7307345 |
| SL-513-NBZ-SB-0.0-0.5 Soil | 7307346 |
| SL-522-NBZ-SB-0.0-0.5 Soil | 7307347 |
| SL-523-NBZ-SB-0.0-0.5 Soil | 7307348 |
| SL-524-NBZ-SB-0.0-0.5 Soil | 7307349 |
| SL-524-NBZ-SB-0.0-0.5MS Soil | 7307350 |
| SL-524-NBZ-SB-0.0-0.5MSD Soil | 7307351 |
| SL-524-NBZ-SB-0.0-0.5DUP Soil | 7307352 |
| SL-824-NBZ-SB-0.0-0.5 Soil | 7307353 |
| SL-522-NBZ-SB-2.5-3.5 Soil | 7307354 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB-120913 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7307341**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 08:00

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TBD9- SDG#: PH142-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13346A20A | 12/13/2013 19:36 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13346A20A | 12/13/2013 19:36 | Marie D Beamenderfer | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-514-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307342**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 12:00 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51400 SDG#: PH142-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.90 | U | 0.90 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.90 | U | 0.90 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.1 | U | 2.1 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.90 | U | 0.90 | 0.22 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.3 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 0.85 | J | 1.8 | 0.36 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.61 | J | 1.8 | 0.38 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.90 | U | 0.90 | 0.49 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.42 | J | 0.90 | 0.24 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 0.50 | J | 1.8 | 0.36 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 2.0 | U | 2.0 | 0.65 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.90 | U | 0.90 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.90 | U | 0.90 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.3 | U | 7.3 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.38 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 36 | U | 36 | 15 | 1 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 8.0 | | 0.10 | 0.10 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/17/2013 00:41 | Jamie L Brillhart | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/17/2013 13:02 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-515-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307343**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 13:00 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51500 SDG#: PH142-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.1 | U | 2.1 | 1.1 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Chlordane | 57-74-9 | 19 | U | 19 | 4.4 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.0 | J | 1.9 | 0.36 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.2 | J | 1.9 | 0.39 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.91 | U | 0.91 | 0.50 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.91 | U | 0.91 | 0.24 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin | 72-20-8 | 1.9 | U | 1.9 | 0.61 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.9 | U | 1.9 | 0.36 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 2.0 | U | 2.0 | 0.66 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.91 | U | 0.91 | 0.19 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.4 | U | 7.4 | 1.9 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.9 | U | 1.9 | 0.39 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 36 | U | 36 | 15 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133470015A | 12/17/2013 00:56 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133470015A | 12/13/2013 17:50 | Sally L Appleyard | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-516-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7307344**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 10:30 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51600 SDG#: PH142-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.1 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.2 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.3 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.0 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.0 | J | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.8 | | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.3 | | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.82 | J | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.1 | J | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.1 | J | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.4 | | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | J | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.4 | | 1.8 | 0.71 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 14 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 21 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,700 | | 41.5 | 7.48 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.15 | U | 4.15 | 0.768 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.19 | | 4.15 | 0.726 | 1 |
| 06946 | Barium | 7440-39-3 | 90.6 | | 1.04 | 0.0342 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.658 | J | 1.04 | 0.0695 | 1 |
| 07914 | Boron | 7440-42-8 | 2.00 | J | 10.4 | 0.871 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.430 | J | 1.04 | 0.0788 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,780 | | 20.7 | 3.46 | 1 |
| 06951 | Chromium | 7440-47-3 | 20.6 | | 3.11 | 0.166 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.89 | | 1.04 | 0.103 | 1 |
| 06953 | Copper | 7440-50-8 | 6.04 | | 2.07 | 0.301 | 1 |
| 01654 | Iron | 7439-89-6 | 23,500 | | 41.5 | 3.75 | 1 |
| 06955 | Lead | 7439-92-1 | 11.8 | | 3.11 | 0.519 | 1 |
| 01656 | Lithium | 7439-93-2 | 29.5 | | 4.1 | 0.35 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-516-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307344**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 10:30 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51600 SDG#: PH142-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01657 | Magnesium | 7439-95-4 | 5,340 | | 10.4 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 348 | | 1.04 | 0.0861 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.07 | U | 2.07 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.9 | | 2.07 | 0.135 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 565 | | 10.4 | 3.00 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,550 | | 104 | 8.65 | 1 |
| 01667 | Sodium | 7440-23-5 | 71.7 | J | 104 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 3.17 | J | 10.4 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,170 | | 1.04 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 37.8 | | 1.04 | 0.135 | 1 |
| 06972 | Zinc | 7440-66-6 | 69.8 | | 4.15 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.35 | J | 5.19 | 0.871 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.184 | J | 0.415 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0598 | J | 0.207 | 0.0270 | 2 |
| 06144 | Strontium | 7440-24-6 | 18.9 | | 0.415 | 0.0705 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.297 | | 0.207 | 0.0311 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0162 | J | 0.0176 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.87 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 19.6 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-516-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7307344**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 10:30 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51600 SDG#: PH142-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0924 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.15 | U | 5.15 | 0.0589 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.15 | U | 5.15 | 0.0405 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.144 | J | 5.15 | 0.0420 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.140 | JQ | 5.15 | 0.0394 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.52 | JB | 5.15 | 0.0422 | 1 |
| 11031 | OCDD | 3268-87-9 | 10.3 | B | 10.3 | 0.0236 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.115 | JQ | 1.03 | 0.0896 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.231 | JBQ | 5.15 | 0.0381 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.300 | JQ | 5.15 | 0.0343 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.156 | JBQ | 5.15 | 0.0353 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.101 | JB | 5.15 | 0.0339 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.129 | JB | 5.15 | 0.0402 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.153 | J | 5.15 | 0.0355 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.411 | JB | 5.15 | 0.0239 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0540 | JBQ | 5.15 | 0.0295 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.775 | JB | 10.3 | 0.0434 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0752 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 55 | 25 - 164 |
| 13C12-12378-PeCDD | 60 | 25 - 181 |
| 13C12-123478-HxCDD | 74 | 32 - 141 |
| 13C12-123678-HxCDD | 74 | 28 - 130 |
| 13C12-123789-HxCDD | 74 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 90 | 17 - 157 |
| 13C12-2378-TCDF | 53 | 24 - 169 |
| 13C12-12378-PeCDF | 58 | 24 - 185 |
| 13C12-23478-PeCDF | 59 | 21 - 178 |
| 13C12-123478-HxCDF | 71 | 26 - 152 |
| 13C12-123678-HxCDF | 72 | 26 - 123 |
| 13C12-234678-HxCDF | 70 | 28 - 136 |
| 13C12-123789-HxCDF | 70 | 29 - 147 |
| 13C12-1234678-HpCDF | 83 | 28 - 143 |
| 13C12-1234789-HpCDF | 75 | 26 - 138 |
| 13C12-OCDF | 85 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-516-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307344**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 10:30 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51600 SDG#: PH142-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-516-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307344**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 10:30 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51600 SDG#: PH142-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/29/2013 09:31 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500024A | 12/18/2013 06:10 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500024A | 12/17/2013 08:40 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13348002 | 12/17/2013 10:23 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13348002 | 12/14/2013 09:00 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:34 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133470637001B | 12/17/2013 18:43 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:43 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:43 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:43 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133470638001 | 12/17/2013 07:46 | Damary Valentin | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-516-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307344**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 10:30 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51600 SDG#: PH142-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133470637001 | 12/15/2013 23:55 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133470638001 | 12/16/2013 02:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13344039402A | 12/10/2013 16:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-516-NBZ-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7307345**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 11:00 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51640 SDG#: PH142-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.4 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 24.51 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,400 | | 41.3 | 7.44 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.13 | U | 4.13 | 0.764 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.81 | J | 4.13 | 0.722 | 1 |
| 06946 | Barium | 7440-39-3 | 56.3 | | 1.03 | 0.0341 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.577 | J | 1.03 | 0.0691 | 1 |
| 07914 | Boron | 7440-42-8 | 1.24 | J | 10.3 | 0.867 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.303 | J | 1.03 | 0.0784 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,200 | | 20.6 | 3.45 | 1 |
| 06951 | Chromium | 7440-47-3 | 13.6 | | 3.10 | 0.165 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-516-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307345**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 11:00 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51640 SDG#: PH142-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06952 | Cobalt | 7440-48-4 | 4.53 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 1.31 | J | 2.06 | 0.299 | 1 |
| 01654 | Iron | 7439-89-6 | 17,900 | | 41.3 | 3.74 | 1 |
| 06955 | Lead | 7439-92-1 | 5.65 | | 3.10 | 0.516 | 1 |
| 01656 | Lithium | 7439-93-2 | 27.4 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,480 | | 10.3 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 237 | | 1.03 | 0.0857 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.06 | U | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 7.91 | | 2.06 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 280 | | 10.3 | 2.98 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,490 | | 103 | 8.61 | 1 |
| 01667 | Sodium | 7440-23-5 | 58.9 | J | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 2.93 | J | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 994 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 28.2 | | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 44.2 | | 4.13 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.65 | J | 5.16 | 0.867 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.413 | U | 0.413 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.206 | U | 0.206 | 0.0268 | 2 |
| 06144 | Strontium | 7440-24-6 | 10.7 | | 0.413 | 0.0702 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.218 | | 0.206 | 0.0310 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0166 | U | 0.0166 | 0.010 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.09 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 18.6 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.1 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-516-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307345**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 11:00 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51640 SDG#: PH142-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 U | 1.02 | 0.0819 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0392 JBQ | 5.10 | 0.0390 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.10 U | 5.10 | 0.0230 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 5.10 U | 5.10 | 0.0246 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0337 JQ | 5.10 | 0.0229 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.0566 JBQ | 5.10 | 0.0271 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.285 JB | 10.2 | 0.0217 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 U | 1.02 | 0.0570 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0646 JBQ | 5.10 | 0.0292 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 5.10 U | 5.10 | 0.0261 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0296 JBQ | 5.10 | 0.0194 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.10 U | 5.10 | 0.0187 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0225 JBQ | 5.10 | 0.0205 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 5.10 U | 5.10 | 0.0192 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0309 JBQ | 5.10 | 0.0118 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0275 JBQ | 5.10 | 0.0137 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.118 JBQ | 10.2 | 0.0303 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.000103 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 57 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 90 | 23 - 140 |
| 13C12-OCDD | 96 | 17 - 157 |
| 13C12-2378-TCDF | 54 | 24 - 169 |
| 13C12-12378-PeCDF | 64 | 24 - 185 |
| 13C12-23478-PeCDF | 66 | 21 - 178 |
| 13C12-123478-HxCDF | 73 | 26 - 152 |
| 13C12-123678-HxCDF | 75 | 26 - 123 |
| 13C12-234678-HxCDF | 74 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 87 | 28 - 143 |
| 13C12-1234789-HpCDF | 82 | 26 - 138 |
| 13C12-OCDF | 88 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-516-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307345**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 11:00 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51640 SDG#: PH142-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-516-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307345**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 11:00 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51640 SDG#: PH142-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/29/2013 06:45 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13347A16A | 12/16/2013 22:42 | Marie D Beamenderfer | 24.51 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201334433386 | 12/10/2013 17:02 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201334433386 | 12/10/2013 17:03 | Lisa J Cooke | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500024A | 12/18/2013 05:27 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500024A | 12/17/2013 08:40 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13348002 | 12/17/2013 11:19 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13348002 | 12/14/2013 09:00 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133470637001 | 12/16/2013 18:38 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133470637001B | 12/17/2013 18:45 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:45 | John P Hook | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-516-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307345**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 11:00 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51640 SDG#: PH142-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06144 | Strontium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:45 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 133470637001A | 12/17/2013 18:45 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133470638001 | 12/17/2013 07:48 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133470637001 | 12/15/2013 23:55 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133470638001 | 12/16/2013 02:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13344039402A | 12/10/2013 16:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-513-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307346**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 10:10 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52200 SDG#: PH142-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 11 | U | 11 | 4.3 | 2 |
| 12952 | EFH (C15-C20) | n.a. | 12 | | 11 | 4.3 | 2 |
| 12952 | EFH (C21-C30) | n.a. | 47 | | 11 | 4.3 | 2 |
| 12952 | EFH (C30-C40) | n.a. | 120 | | 21 | 8.6 | 2 |
| 12952 | EFH (C8-C11) | n.a. | 11 | U | 11 | 4.3 | 2 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500024A | 12/19/2013 01:47 | Heather E Williams | 2 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500024A | 12/17/2013 08:40 | Katheryne V Sponheimer | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-522-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307347**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 11:05 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH142-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.93 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.0 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.3 | J | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.77 | J | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.78 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.1 | J | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.4 | J | 1.7 | 0.69 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.7 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 23 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 43 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 300.0** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07336 | 1a Anions by 300.0 - Nitrate | 14797-55-8 | 3.2 | | 0.78 | 0.42 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.3 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-522-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307347**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 11:05 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51300 SDG#: PH142-07

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/29/2013 07:18 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500024A | 12/18/2013 06:31 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500024A | 12/17/2013 08:40 | Katheryne V Sponheimer | 1 |
| 07336 | 1a Anions by 300.0 - Nitrate | EPA 300.0 | 1 | 13353347201A | 12/19/2013 07:28 | Sandra J Miller | 1 |
| 01352 | 1a Anions by 300.0 - Extract. | EPA 300.0 | 1 | 13353347201A | 12/19/2013 05:00 | Sandra J Miller | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-523-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7307348**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 12:45 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52300 SDG#: PH142-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.0 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.4 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.4 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.1 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 0.87 | J | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 7.6 | J | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 3.0 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.5 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.79 | J | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.1 | J | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.6 | J | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.1 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | J | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.5 | | 1.7 | 0.70 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.3 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 36 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 72 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 300.0** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07336 | 1a Anions by 300.0 - Nitrate | 14797-55-8 | 8.6 | | 0.78 | 0.42 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.5 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-523-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307348**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 12:45 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52300 SDG#: PH142-08

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/29/2013 10:03 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500024A | 12/18/2013 09:22 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500024A | 12/17/2013 08:40 | Katheryne V Sponheimer | 1 |
| 07336 | 1a Anions by 300.0 - Nitrate | EPA 300.0 | 1 | 13353347201A | 12/19/2013 07:44 | Sandra J Miller | 1 |
| 01352 | 1a Anions by 300.0 - Extract. | EPA 300.0 | 1 | 13353347201A | 12/19/2013 05:00 | Sandra J Miller | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307349**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 13:40 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH142-09BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.0 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.4 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.3 | J | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.87 | J | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.1 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.4 | J | 1.7 | 0.69 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 10 | U | 10 | 4.2 | 2 |
| 12952 | EFH (C15-C20) | n.a. | 8.4 | J | 10 | 4.2 | 2 |
| 12952 | EFH (C21-C30) | n.a. | 58 | | 10 | 4.2 | 2 |
| 12952 | EFH (C30-C40) | n.a. | 120 | | 21 | 8.4 | 2 |
| 12952 | EFH (C8-C11) | n.a. | 10 | U | 10 | 4.2 | 2 |
| **Wet Chemistry** | **EPA 300.0** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07336 | 1a Anions by 300.0 - Nitrate | 14797-55-8 | 0.70 | J | 0.78 | 0.42 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307349**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 13:40 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH142-09BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/27/2013 12:11 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500024A | 12/19/2013 02:09 | Heather E Williams | 2 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500024A | 12/17/2013 08:40 | Katheryne V Sponheimer | 1 |
| 07336 | 1a Anions by 300.0 - Nitrate | EPA 300.0 | 1 | 13353347201A | 12/19/2013 08:01 | Sandra J Miller | 1 |
| 01352 | 1a Anions by 300.0 - Extract. | EPA 300.0 | 1 | 13353347201A | 12/19/2013 05:00 | Sandra J Miller | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307350**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 13:40 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH142-09MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 29 | | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 29 | | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 29 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 31 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 28 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 37 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 28 | | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 14 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 33 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 34 | | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 31 | | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 33 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 31 | | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 32 | | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 35 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 31 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 30 | | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 35 | | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 34 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 32 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 29 | | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 47 | | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 31 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 33 | | 1.7 | 0.70 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 14 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 52 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 89 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.1 | J | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 300.0** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07336 | 1a Anions by 300.0 - Nitrate | 14797-55-8 | 7.4 | | 0.78 | 0.42 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.6 | | 0.10 | 0.10 | 1 |

**General Sample Comments**

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307350**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 13:40 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH142-09MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/27/2013 12:44 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500024A | 12/18/2013 07:57 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500024A | 12/17/2013 08:40 | Katheryne V Sponheimer | 1 |
| 07336 | 1a Anions by 300.0 - Nitrate | EPA 300.0 | 1 | 13353347201A | 12/19/2013 12:04 | Sandra J Miller | 1 |
| 01352 | 1a Anions by 300.0 - Extract. | EPA 300.0 | 1 | 13353347201A | 12/19/2013 05:00 | Sandra J Miller | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-524-NBZ-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7307351**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 13:40 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH142-09MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 32 | | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 31 | | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 33 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 34 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 35 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 49 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 35 | | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 40 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 40 | | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 34 | | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 39 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 20 | | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 35 | | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 36 | | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 43 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 36 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 33 | | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 20 | | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 40 | | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 40 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 41 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 33 | | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 60 | | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 39 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 40 | | 1.7 | 0.70 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.9 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 9.5 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 35 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 71 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.3 | J | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.6 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-NBZ-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307351**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 13:40 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH142-09MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/27/2013 13:17 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500024A | 12/18/2013 08:18 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500024A | 12/17/2013 08:40 | Katheryne V Sponheimer | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-524-NBZ-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307352**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 13:40 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52400 SDG#: PH142-09DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 300.0** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 07336 | 1a Anions by 300.0 - Nitrate | 14797-55-8 | 0.85 | 0.78 | 0.42 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.6 | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 4.6 | 0.10 | 0.10 | 1 |

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07336 | 1a Anions by 300.0 - Nitrate | EPA 300.0 | 1 | 13353347201A | 12/19/2013 08:17 | Sandra J Miller | 1 |
| 01352 | 1a Anions by 300.0 - Extract. | EPA 300.0 | 1 | 13353347201A | 12/19/2013 05:00 | Sandra J Miller | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-824-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307353**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 14:30 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

82400 SDG#: PH142-10

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.37 | J | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | J | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 2.2 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 5.7 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.6 | J | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | J | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 12 | J | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 5.4 | | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 31 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 4.1 | | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 0.97 | J | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.1 | J | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.2 | J | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.4 | J | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.3 | | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 3.3 | | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 4.7 | | 1.8 | 0.70 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.2 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 28 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 50 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 300.0** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07336 | 1a Anions by 300.0 - Nitrate | 14797-55-8 | 5.8 | | 0.79 | 0.42 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.4 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-824-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307353**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 14:30 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

82400 SDG#: PH142-10

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/29/2013 10:36 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500024A | 12/18/2013 06:52 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500024A | 12/17/2013 08:40 | Katheryne V Sponheimer | 1 |
| 07336 | 1a Anions by 300.0 - Nitrate | EPA 300.0 | 1 | 13353347201A | 12/19/2013 08:49 | Sandra J Miller | 1 |
| 01352 | 1a Anions by 300.0 - Extract. | EPA 300.0 | 1 | 13353347201A | 12/19/2013 05:00 | Sandra J Miller | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-522-NBZ-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307354**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 11:40 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52225 SDG#: PH142-11*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.99 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Wet Chemistry** | **EPA 300.0** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07336 | 1a Anions by 300.0 - Nitrate | 14797-55-8 | 0.61 | J | 0.79 | 0.42 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.8 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-522-NBZ-SB-2.5-3.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7307354**
**LL Group # 1439666**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/09/2013 11:40 by EL

Submitted: 12/10/2013 11:35
Reported: 12/31/2013 14:32

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52225 SDG#: PH142-11*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348SLG026 | 12/29/2013 07:52 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13348SLG026 | 12/16/2013 09:50 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13347A16A | 12/16/2013 23:20 | Marie D Beamenderfer | 25.99 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201334433386 | 12/10/2013 17:04 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201334433386 | 12/10/2013 17:04 | Lisa J Cooke | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500024A | 12/18/2013 05:48 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500024A | 12/17/2013 08:40 | Katheryne V Sponheimer | 1 |
| 07336 | 1a Anions by 300.0 - Nitrate | EPA 300.0 | 1 | 13353347201A | 12/19/2013 08:33 | Sandra J Miller | 1 |
| 01352 | 1a Anions by 300.0 - Extract. | EPA 300.0 | 1 | 13353347201A | 12/19/2013 05:00 | Sandra J Miller | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13351162401A | 12/17/2013 23:21 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439666
Reported: 12/31/13 at 02:32 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13348SLG026 | Sample number(s): 7307344-7307345,7307347-7307351,7307353-7307354 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 126 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 101 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 110 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 103 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 109 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 112 | | 79-112 | | |
| Batch number: 13346A20A | Sample number(s): 7307341 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 97 | 100 | 75-135 | 3 | 30 |
| Batch number: 13347A16A | Sample number(s): 7307345,7307354 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 83 | 87 | 67-119 | 4 | 30 |
| Batch number: 133470015A | Sample number(s): 7307342-7307343 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 103 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 109 | | 62-128 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 107 | | 69-121 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 114 | | 64-130 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 109 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 115 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 114 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 110 | | 51-141 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439666
Reported: 12/31/13 at 02:32 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 73-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 87 | | 64-130 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 109 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 60-120 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 103 | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 101 | | 62-127 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 105 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 107 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 133500024A | Sample number(s): 7307344-7307351,7307353-7307354 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 87 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 75 | | 60-115 | | |
| Batch number: 133470637001 | Sample number(s): 7307344-7307345 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 102 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 105 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 96 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 110 | | 80-120 | | |
| Calcium | 4.84 | J | 20.0 | 3.34 | mg/kg | 103 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 97 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 109 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 106 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 112 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 105 | | 80-120 | | |
| Magnesium | 2.30 | J | 10.0 | 1.67 | mg/kg | 104 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 106 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 114 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 110 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.63 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 100 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 99 | | 80-120 | | |
| Zinc | 0.233 | J | 4.00 | 0.200 | mg/kg | 108 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 98 | | 80-120 | | |
| Batch number: 133470637001A | Sample number(s): 7307344-7307345 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 109 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 106 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 109 | | 80-120 | | |
| Batch number: 133470637001B | Sample number(s): 7307344-7307345 | | | | | | | | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439666
Reported: 12/31/13 at 02:32 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 114 | | 80-120 | | |
| Batch number: 133470638001 | Sample number(s): 7307344-7307345 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 112 | | 85-120 | | |
| Batch number: 13353347201A | Sample number(s): 7307347-7307350,7307352-7307354 | | | | | | | | | |
| 1a Anions by 300.0 - Nitrate | 0.75 | U | 0.75 | 0.40 | mg/kg | 105 | | 90-110 | | |
| Batch number: 13344039402A | Sample number(s): 7307344-7307345 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 13351162401A | Sample number(s): 7307342-7307354 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13348002 | Sample number(s): 7307344-7307345 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0571 | ng/kg | 92 | | 67-158 | | |
| 12378-PeCDD | 0.0326 | J | 5.00 | 0.0325 | ng/kg | 95 | | 70-142 | | |
| 123478-HxCDD | 0.0259 | J | 5.00 | 0.0210 | ng/kg | 96 | | 70-164 | | |
| 123678-HxCDD | 5.00 | U | 5.00 | 0.0215 | ng/kg | 99 | | 76-134 | | |
| 123789-HxCDD | 5.00 | U | 5.00 | 0.0203 | ng/kg | 96 | | 64-162 | | |
| 1234678-HpCDD | 0.0876 | J | 5.00 | 0.0247 | ng/kg | 95 | | 70-140 | | |
| OCDD | 0.213 | J | 10.0 | 0.0231 | ng/kg | 94 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0380 | ng/kg | 96 | | 75-158 | | |
| 12378-PeCDF | 0.0310 | J | 5.00 | 0.0186 | ng/kg | 94 | | 80-134 | | |
| 23478-PeCDF | 5.00 | U | 5.00 | 0.0170 | ng/kg | 94 | | 68-160 | | |
| 123478-HxCDF | 0.0161 | J | 5.00 | 0.0154 | ng/kg | 94 | | 72-134 | | |
| 123678-HxCDF | 0.0232 | J | 5.00 | 0.0145 | ng/kg | 97 | | 84-130 | | |
| 123789-HxCDF | 0.0688 | J | 5.00 | 0.0153 | ng/kg | 96 | | 78-130 | | |
| 234678-HxCDF | 5.00 | U | 5.00 | 0.0144 | ng/kg | 97 | | 70-156 | | |
| 1234678-HpCDF | 0.0437 | J | 5.00 | 0.00760 | ng/kg | 96 | | 82-122 | | |
| 1234789-HpCDF | 0.0211 | J | 5.00 | 0.00960 | ng/kg | 96 | | 78-138 | | |
| OCDF | 0.125 | J | 10.0 | 0.0251 | ng/kg | 94 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0131 | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13348SLG026 | Sample number(s): 7307344-7307345,7307347-7307351,7307353-7307354 UNSPK: 7307349 | | | | | | | | |
| Acenaphthene | 84 | 90 | 48-127 | 7 | 30 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439666
Reported: 12/31/13 at 02:32 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthylene | 84 | 90 | 49-121 | 7 | 30 | | | | |
| Anthracene | 84 | 94 | 52-126 | 11 | 30 | | | | |
| Benzo(a)anthracene | 90 | 99 | 44-143 | 10 | 30 | | | | |
| Benzo(a)pyrene | 80 | 101 | 44-140 | 23 | 30 | | | | |
| Benzo(b)fluoranthene | 99 | 134 | 26-142 | 29 | 30 | | | | |
| Benzo(e)pyrene | 81 | 101 | 70-130 | 23 | 30 | | | | |
| Benzo(g,h,i)perylene | 40 | 48 | 33-141 | 18 | 30 | | | | |
| Benzo(k)fluoranthene | 94 | 114 | 54-142 | 20 | 30 | | | | |
| Butylbenzylphthalate | 98 | 115 | 49-151 | 16 | 30 | | | | |
| Di-n-butylphthalate | 89 | 98 | 52-147 | 9 | 30 | | | | |
| Chrysene | 88 | 106 | 29-148 | 18 | 30 | | | | |
| Dibenz(a,h)anthracene | 50 | 57 | 20-137 | 13 | 30 | | | | |
| Diethylphthalate | 90 | 99 | 43-145 | 10 | 30 | | | | |
| Dimethylphthalate | 93 | 104 | 58-129 | 12 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 101 | 124 | 39-167 | 21 | 30 | | | | |
| Fluoranthene | 84 | 101 | 40-148 | 18 | 30 | | | | |
| Fluorene | 87 | 95 | 51-137 | 10 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 48 | 57 | 17-136 | 18 | 30 | | | | |
| 1-Methylnaphthalene | 100 | 115 | 50-131 | 14 | 30 | | | | |
| 2-Methylnaphthalene | 96 | 112 | 35-152 | 15 | 30 | | | | |
| Naphthalene | 87 | 112 | 31-148 | 24 | 30 | | | | |
| N-Nitrosodimethylamine | 82 | 95 | 48-113 | 15 | 30 | | | | |
| Di-n-octylphthalate | 134 | 171* | 52-162 | 25 | 30 | | | | |
| Phenanthrene | 84 | 106 | 29-142 | 23 | 30 | | | | |
| Pyrene | 90 | 111 | 26-143 | 21 | 30 | | | | |
| Batch number: 133470015A | Sample number(s): 7307342-7307343 UNSPK: P300108 | | | | | | | | |
| Aldrin | 104 | 103 | 16-126 | 1 | 50 | | | | |
| Alpha BHC | 108 | 111 | 14-140 | 3 | 50 | | | | |
| Beta BHC | 106 | 107 | 42-133 | 1 | 50 | | | | |
| Gamma BHC - Lindane | 114 | 117 | 30-137 | 2 | 50 | | | | |
| p,p-DDD | 111 | 112 | 43-149 | 1 | 50 | | | | |
| p,p-DDE | 114 | 116 | 35-152 | 2 | 50 | | | | |
| p,p-DDT | 115 | 116 | 12-193 | 1 | 50 | | | | |
| Delta BHC | 110 | 112 | 13-153 | 1 | 50 | | | | |
| Dieldrin | 104 | 106 | 41-153 | 2 | 50 | | | | |
| Endosulfan I | 88 | 90 | 26-146 | 1 | 50 | | | | |
| Endosulfan II | 94 | 96 | 34-141 | 3 | 50 | | | | |
| Endosulfan Sulfate | 111 | 111 | 10-181 | 0 | 50 | | | | |
| Endrin | 102 | 104 | 30-152 | 2 | 50 | | | | |
| Endrin Aldehyde | 96 | 98 | 23-138 | 2 | 50 | | | | |
| Endrin Ketone | 103 | 103 | 30-148 | 0 | 50 | | | | |
| Heptachlor | 101 | 101 | 16-152 | 0 | 50 | | | | |
| Heptachlor Epoxide | 103 | 107 | 33-144 | 4 | 50 | | | | |
| Methoxychlor | 108 | 109 | 41-161 | 1 | 50 | | | | |
| Batch number: 133500024A | Sample number(s): 7307344-7307351,7307353-7307354 UNSPK: 7307349 | | | | | | | | |
| EFH (C12-C14) | 101 | 94 | 49-123 | 8 | 20 | | | | |
| EFH (C15-C20) | 75 | 15* | 49-123 | 40* | 20 | | | | |
| EFH (C21-C30) | -40 (2) | -175 (2) | 49-123 | 40* | 20 | | | | |
| EFH (C30-C40) | -178 | -294 | 49-123 | 23* | 20 | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439666
Reported: 12/31/13 at 02:32 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C8-C11) | 79 | 82 | 49-123 | 4 | 20 | | | | |
| Batch number: 133470637001 | Sample number(s): 7307344-7307345 UNSPK: P301926 BKG: P301926 | | | | | | | | |
| Aluminum | 1409 (2) | 1052 (2) | 75-125 | 5 | 20 | 11,200 | 9,940 | 12 | 20 |
| Antimony | 63* | 62* | 75-125 | 1 | 20 | 3.92 U | 3.92 U | 0 (1) | 20 |
| Arsenic | 104 | 98 | 75-125 | 4 | 20 | 3.00 J | 2.85 J | 5 (1) | 20 |
| Barium | 104 | 101 | 75-125 | 2 | 20 | 66.1 | 63.8 | 4 | 20 |
| Beryllium | 104 | 102 | 75-125 | 2 | 20 | 0.441 J | 0.393 J | 12 (1) | 20 |
| Boron | 97 | 95 | 75-125 | 1 | 20 | 4.43 J | 4.34 J | 2 (1) | 20 |
| Cadmium | 102 | 98 | 75-125 | 3 | 20 | 0.414 J | 0.389 J | 6 (1) | 20 |
| Calcium | 252 (2) | 220 (2) | 75-125 | 2 | 20 | 4,690 | 4,740 | 1 | 20 |
| Chromium | 101 | 92 | 75-125 | 5 | 20 | 15.5 | 15.0 | 3 | 20 |
| Cobalt | 100 | 97 | 75-125 | 3 | 20 | 4.44 | 4.03 | 10 (1) | 20 |
| Copper | 100 | 97 | 75-125 | 2 | 20 | 4.45 | 4.03 | 10 (1) | 20 |
| Iron | 1112 (2) | 38 (2) | 75-125 | 6 | 20 | 17,100 | 15,900 | 7 | 20 |
| Lead | 104 | 94 | 75-125 | 5 | 20 | 13.7 | 12.4 | 10 (1) | 20 |
| Lithium | 105 | 101 | 75-125 | 3 | 20 | 21.0 | 19.2 | 9 (1) | 20 |
| Magnesium | 233 (2) | 129 (2) | 75-125 | 5 | 20 | 3,920 | 3,720 | 5 | 20 |
| Manganese | 141 (2) | 114 (2) | 75-125 | 4 | 20 | 262 | 240 | 8 | 20 |
| Molybdenum | 95 | 93 | 75-125 | 2 | 20 | 0.924 J | 0.381 J | 83* (1) | 20 |
| Nickel | 103 | 99 | 75-125 | 3 | 20 | 9.93 | 9.06 | 9 (1) | 20 |
| Phosphorus | 85 (2) | 56 (2) | 75-125 | 6 | 20 | 399 | 358 | 11 | 20 |
| Potassium | 124 | 109 | 75-125 | 3 | 20 | 3,230 | 3,040 | 6 | 20 |
| Sodium | 100 | 97 | 75-125 | 3 | 20 | 72.5 J | 68.1 J | 6 (1) | 20 |
| Tin | 89 | 87 | 75-125 | 2 | 20 | 2.63 J | 2.73 J | 4 (1) | 20 |
| Titanium | 293 (2) | 271 (2) | 75-125 | 2 | 20 | 934 | 817 | 13 | 20 |
| Vanadium | 103 | 97 | 75-125 | 4 | 20 | 28.8 | 26.5 | 9 | 20 |
| Zinc | 106 | 100 | 75-125 | 3 | 20 | 52.9 | 49.8 | 6 | 20 |
| Zirconium | 90 | 87 | 75-125 | 3 | 20 | 1.54 J | 1.46 J | 5 (1) | 20 |
| Batch number: 133470637001A | Sample number(s): 7307344-7307345 UNSPK: P301926 BKG: P301926 | | | | | | | | |
| Silver | 105 | 102 | 75-125 | 2 | 20 | 0.186 J | 0.204 | 9 (1) | 20 |
| Strontium | 124 | 196* | 75-125 | 16 | 20 | 23.4 | 24.1 | 3 | 20 |
| Thallium | 97 | 98 | 75-125 | 1 | 20 | 0.197 | 0.188 J | 4 (1) | 20 |
| Batch number: 133470637001B | Sample number(s): 7307344-7307345 UNSPK: P301926 BKG: P301926 | | | | | | | | |
| Selenium | 104 | 110 | 75-125 | 5 | 20 | 0.188 J | 0.188 J | 0 (1) | 20 |
| Batch number: 133470638001 | Sample number(s): 7307344-7307345 UNSPK: P301926 BKG: P301926 | | | | | | | | |
| 3a Mercury 7471A | 95 | 112 | 65-135 | 8 | 20 | 0.169 | 0.151 | 11 | 20 |
| Batch number: 13353347201A | Sample number(s): 7307347-7307350,7307352-7307354 UNSPK: 7307349 BKG: 7307349 | | | | | | | | |
| 1a Anions by 300.0 - Nitrate | 129* | | 80-120 | | | 0.67 J | 0.81 | 19 (1) | 20 |
| Batch number: 13344039402A | Sample number(s): 7307344-7307345 BKG: 7307345 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.09 | 6.95 | 2 | 3 |
| Batch number: 13351162401A | Sample number(s): 7307342-7307354 BKG: 7307349 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.6 | 4.6 | 1 | 20 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439666
Reported: 12/31/13 at 02:32 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 14a Moisture Content by 160.3 | | | | | | 4.6 | 4.6 | 1 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 4.6 | 4.6 | 1 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13348SLG026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7307344 | 84 | 87 | 106 |
| 7307345 | 81 | 81 | 97 |
| 7307347 | 75 | 73 | 92 |
| 7307348 | 79 | 82 | 99 |
| 7307349 | 84 | 82 | 105 |
| 7307350 | 74 | 68 | 93 |
| 7307351 | 81 | 81 | 102 |
| 7307353 | 74 | 73 | 92 |
| 7307354 | 73 | 71 | 90 |
| Blank | 82 | 88 | 101 |
| LCS | 84 | 86 | 101 |
| MS | 74 | 68 | 93 |
| MSD | 81 | 81 | 102 |
| Limits: | 54-129 | 59-125 | 61-125 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13346A20A

| | Trifluorotoluene-F |
|---|---|
| 7307341 | 77 |
| Blank | 81 |
| LCS | 86 |
| LCSD | 88 |
| Limits: | 63-135 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13347A16A

| | Trifluorotoluene-F |
|---|---|
| 7307345 | 90 |
| 7307354 | 82 |
| Blank | 90 |
| LCS | 96 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439666
Reported: 12/31/13 at 02:32 PM

## Surrogate Quality Control

LCSD 99

Limits: 50-142

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 133470015A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7307342 | 84 | 94 |
| 7307343 | 79 | 86 |
| Blank | 100 | 111 |
| LCS | 109 | 120 |
| MS | 101 | 115 |
| MSD | 107 | 116 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 133500024A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7307344 | 82 | 85 |
| 7307345 | 84 | 90 |
| 7307346 | 90 | 96 |
| 7307347 | 85 | 86 |
| 7307348 | 79 | 83 |
| 7307349 | 84 | 89 |
| 7307350 | 83 | 81 |
| 7307351 | 86 | 89 |
| 7307353 | 81 | 86 |
| 7307354 | 88 | 90 |
| Blank | 87 | 90 |
| LCS | 86 | 91 |
| MS | 83 | 81 |
| MSD | 86 | 89 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13348002

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7307344 | 55 | 59 | 71 | 72 | 70 | 70 |
| 7307345 | 57 | 66 | 73 | 75 | 74 | 77 |
| Blank | 52 | 57 | 65 | 68 | 68 | 71 |
| OPR | 53 | 61 | 68 | 72 | 71 | 72 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7307344 | 83 | 75 | 85 | 60 | 74 | 74 |
| 7307345 | 87 | 82 | 88 | 70 | 81 | 81 |
| Blank | 82 | 74 | 79 | 61 | 74 | 73 |
| OPR | 88 | 74 | 76 | 66 | 76 | 77 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439666
Reported: 12/31/13 at 02:32 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |
| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
| 7307344 | 74 | 79 | 90 | 53 | 58 | |
| 7307345 | 82 | 90 | 96 | 54 | 64 | |
| Blank | 75 | 81 | 87 | 49 | 55 | |
| OPR | 77 | 83 | 87 | 49 | 61 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

A-13013

**CDM Smith**

DateShipped: 12/9/2013 G-1439666

CarrierName: FedEx S-730734I-54

AirbillNo: 797351083442

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20131209-01

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-120913 | 12/9/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-514-NBZ-SB-0.0-0.5 | 12/9/13 12:00 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-515-NBZ-SB-0.0-0.5 | 12/9/13 13:00 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SL-516-NBZ-SB-0.0-0.5 | 12/9/13 10:30 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | | | | X | | | | | | | | | | | | | |
| SL-516-NBZ-SB-0.0-0.5 | 12/9/13 10:30 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| SL-516-NBZ-SB-4.0-5.0 - | 12/9/13 11:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | | | | X | | | | | | | | | | | | | |
| SL-516-NBZ-SB-4.0-5.0 | 12/9/13 11:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| SL-516-NBZ-SB-4.0-5.0 | 12/9/13 11:00 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-513-NBZ-SB-0.0-0.5 | 12/9/13 10:10 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-522-NBZ-SB-0.0-0.5 | 12/9/13 11:05 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | X | | | | | | | | | | | | | | X | | | | X | | | | | | | | |
| SL-523-NBZ-SB-0.0-0.5 | 12/9/13 12:45 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | X | | | | | | | | | | | | | | X | | | | X | | | | | | | | |
| SL-524-NBZ-SB-0.0-0.5MS | 12/9/13 13:40 | SO | None | 3 - SS-Sleeve | 10 day | | | | | | | X | | | | | | | | | | | | | | X | | | | X | | | | | | | | MS/MSD |
| SL-824-NBZ-SB-0.0-0.5 | 12/9/13 14:30 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | X | | | | | | | | | | | | | | X | | | | X | | | | | | | | |
| SL-522-NBZ-SB-2.5-3.5 | 12/9/13 11:40 | SO | None | 1 - 16 oz glass | 10 day | | | | | | | X | | | | | | | | | | | | | | X | | | | X | | | | | | | | |
| SL-522-NBZ-SB-2.5-3.5 | 12/9/13 11:40 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12/09/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 12/10/13 | 1135 |

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G-1439666

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** CDM

**Date of Receipt:** 12/10/13

**Time of Receipt:** 1135

**Source Code:** SC-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT121 | 0.8 | TB | WI | Y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** [signature] 2308 **Date/Time:** 12/10/13 1230

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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# ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

December 16, 2013

Project: SSFL Phase 3 Sampling

Submittal Date: 12/11/2013
Group Number: 1439898
SDG: PH143
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-553-NBZ-SB-0.0-0.5 Soil | 7308297 |
| SL-554-NBZ-SB-0.0-0.5 Soil | 7308298 |
| SL-555-NBZ-SB-0.0-0.5 Soil | 7308299 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-553-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7308297**
**LL Group # 1439898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/10/2013 11:25

Submitted: 12/11/2013 09:50
Reported: 12/16/2013 17:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

553NB SDG#: PH143-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.9 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133480008A | 12/16/2013 12:12 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133480008A | 12/15/2013 20:30 | Karen L Beyer | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401B | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

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# Analysis Report

**Sample Description: SL-554-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7308298**
**LL Group # 1439898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/10/2013 10:35

Submitted: 12/11/2013 09:50
Reported: 12/16/2013 17:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

554NB SDG#: PH143-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133480008A | 12/16/2013 12:30 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133480008A | 12/15/2013 20:30 | Karen L Beyer | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401B | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-555-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7308299**
**LL Group # 1439898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/10/2013 10:05

Submitted: 12/11/2013 09:50
Reported: 12/16/2013 17:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

555NB SDG#: PH143-03*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.7 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133480008A | 12/16/2013 12:49 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133480008A | 12/15/2013 20:30 | Karen L Beyer | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13347162401B | 12/13/2013 22:59 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439898
Reported: 12/16/13 at 05:03 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 133480008A | Sample number(s): 7308297-7308299 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 67 | 86 | 36-106 | 24 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 105 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 114 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 13347162401B | Sample number(s): 7308297-7308299 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 99 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 133480008A | Sample number(s): 7308297-7308299 UNSPK: P306308 | | | | | | | | |
| PCB-1016 | 95 | 95 | 41-135 | 0 | 50 | | | | |
| PCB-1260 | 100 | 97 | 40-134 | 2 | 50 | | | | |
| Batch number: 13347162401B | Sample number(s): 7308297-7308299 BKG: 7308297 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 6.9 | 6.1 | 12 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 133480008A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1439898
Reported: 12/16/13 at 05:03 PM

## Surrogate Quality Control

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7308297 | 86 | 78 |
| 7308298 | 119 | 109 |
| 7308299 | 110 | 99 |
| Blank | 124* | 118 |
| LCS | 122* | 114 |
| LCSD | 123* | 118 |
| MS | 113 | 101 |
| MSD | 111 | 96 |
| Limits: | 45-120 | 45-120 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

13013 1439898 7308297-99

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 12/10/2013
CarrierName: FedEx
AirbillNo: 797362493901

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131210-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-553-NBZ-SB-0.0-0.5 | 12/10/13 11:25 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| SL-554-NBZ-SB-0.0-0.5 | 12/10/13 10:35 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| SL-555-NBZ-SB-0.0-0.5 | 12/10/13 10:05 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** [signature]

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 12/10/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 12/11/13 | 0850 |

COC Rev 3

COC: 20131210-01, Page 1 of 1

1 of 1

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# Environmental Sample Administration Receipt Documentation Log

1439898

**Client/Project:** CDM Smith

**Date of Receipt:** 12/11/13

**Time of Receipt:** 0950

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT146 | 0.5 | TB | WI | Y | B | |
| 2 | ↓ | 0.6 | ↓ | ↓ | ↓ | ↓ | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** Ø

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** C Fisher 3647 **Date/Time:** 12/11/13 1025

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

# Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

January 03, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 12/12/2013
Group Number: 1440439
SDG: PH146
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-552-NBZ-SB-0.0-0.5 Soil | 7310856 |
| SL-552-NBZ-SB-2.0-3.0 Soil | 7310857 |
| EB1-121113 Water | 7310858 |
| EB2-121113 Water | 7310859 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: SL-552-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7310856**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:15

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55200 SDG#: PH146-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 170 | U | 170 | 34 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 180 | U | 180 | 61 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Chrysene | 218-01-9 | 8.2 | J | 17 | 3.4 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 180 | U | 180 | 61 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 180 | U | 180 | 61 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 74 | J | 180 | 61 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | U | 17 | 6.8 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.8 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 6.8 | J | 17 | 6.8 | 10 |
| 12969 | Naphthalene | 91-20-3 | 21 | | 17 | 6.8 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.8 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 180 | U | 180 | 61 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 8.2 | J | 17 | 6.8 | 10 |
| 12969 | Pyrene | 129-00-0 | 17 | U | 17 | 6.8 | 10 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.0 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13352SLF026 | 12/29/2013 15:02 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13352SLF026 | 12/19/2013 09:00 | Anna E Stager | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401A | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-552-NBZ-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7310857**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 15:00

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55223 SDG#: PH146-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.76 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 0.96 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 58 | | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.3 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 16 | J | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.75 | J | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.88 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.6 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.75 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.73 | J | 1.7 | 0.68 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13352SLF026 | 12/31/2013 08:12 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13352SLF026 | 12/19/2013 09:00 | Anna E Stager | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401A | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310858**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:00 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB1 SDG#: PH146-03EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.050 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.13 | J | 1.0 | 0.050 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.15 | J | 1.0 | 0.050 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.050 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 2.2 | | 1.0 | 0.050 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.050 | U | 0.050 | 0.030 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.050 | U | 0.050 | 0.010 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.050 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.050 | U | 0.050 | 0.030 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.050 | U | 0.050 | 0.010 | 1 |
| | Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported. | | | | | | |
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/l | | ug/l | ug/l | |
| 10589 | Aldrin | 309-00-2 | 0.0090 | U | 0.0090 | 0.0018 | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0090 | U | 0.0090 | 0.0027 | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0090 | U | 0.0090 | 0.0030 | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0090 | U | 0.0090 | 0.0018 | 1 |
| 10589 | Chlordane | 57-74-9 | 0.45 | U | 0.45 | 0.14 | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.018 | U | 0.018 | 0.0045 | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.018 | U | 0.018 | 0.0045 | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.018 | U | 0.018 | 0.0047 | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0090 | U | 0.0090 | 0.0030 | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.018 | U | 0.018 | 0.0048 | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0090 | U | 0.0090 | 0.0039 | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.018 | U | 0.018 | 0.013 | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.018 | U | 0.018 | 0.0052 | 1 |
| 10589 | Endrin | 72-20-8 | 0.018 | U | 0.018 | 0.0073 | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.090 | U | 0.090 | 0.018 | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.018 | U | 0.018 | 0.0045 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310858**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:00 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB1 SDG#: PH146-03EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | **ug/l** | **ug/l** | |
| 10589 | Heptachlor | 76-44-8 | 0.0090 U | 0.0090 | 0.0018 | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0090 U | 0.0090 | 0.0021 | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.090 U | 0.090 | 0.027 | 1 |
| 10589 | Mirex | 2385-85-5 | 0.045 U | 0.045 | 0.0090 | 1 |
| 10589 | Toxaphene | 8001-35-2 | 0.90 U | 0.90 | 0.27 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.10 U | 0.10 | 0.051 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.10 U | 0.10 | 0.051 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.10 U | 0.10 | 0.051 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.51 U | 0.51 | 0.10 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.10 U | 0.10 | 0.051 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 U | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310858**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:00 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB1 SDG#: PH146-03EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7470A** | | mg/l | mg/l | mg/l | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | Std. Units | Std. Units | Std. Units | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 6.9 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310858**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:00 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB1 SDG#: PH146-03EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.93 | U | 1.93 | 0.585 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 0.460 | JQ | 9.65 | 0.418 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 0.289 | J | 9.65 | 0.237 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.65 | U | 9.65 | 0.238 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.65 | U | 9.65 | 0.257 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.464 | JBQ | 9.65 | 0.260 | 1 |
| 10915 | OCDD | 3268-87-9 | 1.60 | JBQ | 19.3 | 0.336 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 0.622 | JQ | 1.93 | 0.383 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.447 | JBQ | 9.65 | 0.287 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.658 | JQ | 9.65 | 0.278 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.255 | JBQ | 9.65 | 0.178 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.189 | JBQ | 9.65 | 0.184 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.258 | JQ | 9.65 | 0.233 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 9.65 | U | 9.65 | 0.175 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.623 | JBQ | 9.65 | 0.132 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.651 | JBQ | 9.65 | 0.159 | 1 |
| 10915 | OCDF | 39001-02-0 | 0.666 | JBQ | 19.3 | 0.391 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0289 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 64 | 25 - 164 |
| 13C12-12378-PeCDD | 63 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 76 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 82 | 17 - 157 |
| 13C12-2378-TCDF | 61 | 24 - 169 |
| 13C12-12378-PeCDF | 68 | 24 - 185 |
| 13C12-23478-PeCDF | 64 | 21 - 178 |
| 13C12-123478-HxCDF | 82 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 80 | 28 - 136 |
| 13C12-123789-HxCDF | 75 | 29 - 147 |
| 13C12-1234678-HpCDF | 86 | 28 - 143 |
| 13C12-1234789-HpCDF | 77 | 26 - 138 |
| 13C12-OCDF | 83 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310858**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:00 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB1 SDG#: PH146-03EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310858**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:00 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB1 SDG#: PH146-03EB

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348WAG026 | 12/19/2013 20:44 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13348WAG026 | 12/16/2013 05:40 | Roman Kuropatkin | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13346A20A | 12/13/2013 19:58 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13346A20A | 12/13/2013 19:58 | Marie D Beamenderfer | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 133510021A | 12/19/2013 18:00 | Jamie L Brillhart | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 133510021A | 12/18/2013 12:00 | William H Saadeh | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133520004A | 12/19/2013 14:21 | Tracy A Cole | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 133520004A | 12/18/2013 18:15 | JoElla L Rice | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13353002 | 12/21/2013 18:08 | Nelson H Risser | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13353002 | 12/19/2013 11:15 | Brett M Weidman | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310858**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:00 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB1 SDG#: PH146-03EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10144 | Zirconium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:15 | Eric L Eby | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 133530639001B | 12/23/2013 21:52 | John P Hook | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 133530639001A | 12/23/2013 21:52 | John P Hook | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 133530639001A | 12/23/2013 21:52 | John P Hook | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 133530639001A | 12/23/2013 21:52 | John P Hook | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 133465713005 | 12/14/2013 08:07 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 133530635003 | 12/21/2013 06:55 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 133530639001 | 12/21/2013 07:00 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 133465713005 | 12/13/2013 15:20 | Damary Valentin | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 13350002101A | 12/16/2013 12:47 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310859**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:30 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB2 SDG#: PH146-04EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.13 | J | 1.0 | 0.051 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.16 | J | 1.0 | 0.051 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.42 | J | 1.0 | 0.051 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.012 | J | 0.051 | 0.010 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.051 | U | 0.051 | 0.030 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.051 | U | 0.051 | 0.030 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.049 | J | 0.051 | 0.010 | 1 |
| | Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported. | | | | | | |
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Herbicides** | **SW-846 8151A** | | ug/l | | ug/l | ug/l | |
| 10407 | 2,4-D | 94-75-7 | 0.50 | U | 0.50 | 0.16 | 1 |
| 10407 | Dalapon | 75-99-0 | 1.2 | U | 1.2 | 0.25 | 1 |
| 10407 | 2,4-DB | 94-82-6 | 1.0 | U | 1.0 | 0.30 | 1 |
| 10407 | Dicamba | 1918-00-9 | 0.30 | U | 0.30 | 0.080 | 1 |
| 10407 | Dinoseb | 88-85-7 | 0.50 | U | 0.50 | 0.12 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10407 | 2,4-DP (Dichlorprop) | 120-36-5 | 0.50 | U | 0.50 | 0.16 | 1 |
| 10407 | MCPA | 94-74-6 | 200 | U | 200 | 50 | 1 |
| 10407 | MCPP | 93-65-2 | 200 | U | 200 | 50 | 1 |
| 10407 | 2,4,5-T | 93-76-5 | 0.050 | U | 0.050 | 0.015 | 1 |
| 10407 | 2,4,5-TP | 93-72-1 | 0.050 | U | 0.050 | 0.010 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/l | | ug/l | ug/l | |
| 10589 | Aldrin | 309-00-2 | 0.0082 | U | 0.0082 | 0.0016 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310859**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:30 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB2 SDG#: PH146-04EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | **ug/l** | **ug/l** | |
| 10589 | Alpha BHC | 319-84-6 | 0.0082 U | 0.0082 | 0.0025 | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0082 U | 0.0082 | 0.0028 | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0082 U | 0.0082 | 0.0016 | 1 |
| 10589 | Chlordane | 57-74-9 | 0.41 U | 0.41 | 0.13 | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.016 U | 0.016 | 0.0041 | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.016 U | 0.016 | 0.0041 | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.016 U | 0.016 | 0.0043 | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0082 U | 0.0082 | 0.0028 | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.016 U | 0.016 | 0.0044 | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0082 U | 0.0082 | 0.0035 | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.016 U | 0.016 | 0.012 | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.016 U | 0.016 | 0.0048 | 1 |
| 10589 | Endrin | 72-20-8 | 0.016 U | 0.016 | 0.0067 | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.082 U | 0.082 | 0.016 | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.016 U | 0.016 | 0.0041 | 1 |
| 10589 | Heptachlor | 76-44-8 | 0.0082 U | 0.0082 | 0.0016 | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0082 U | 0.0082 | 0.0019 | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.082 U | 0.082 | 0.025 | 1 |
| 10589 | Mirex | 2385-85-5 | 0.041 U | 0.041 | 0.0082 | 1 |
| 10589 | Toxaphene | 8001-35-2 | 0.82 U | 0.82 | 0.25 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | **ug/l** | **ug/l** | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.41 U | 0.41 | 0.082 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.41 U | 0.41 | 0.082 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.41 U | 0.41 | 0.091 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.41 U | 0.41 | 0.082 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.41 U | 0.41 | 0.082 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.41 U | 0.41 | 0.16 | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.41 U | 0.41 | 0.082 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.41 U | 0.41 | 0.082 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.41 U | 0.41 | 0.082 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.41 U | 0.41 | 0.12 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.41 U | 0.41 | 0.16 | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.41 U | 0.41 | 0.13 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.10 U | 0.10 | 0.051 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.10 U | 0.10 | 0.051 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.10 U | 0.10 | 0.051 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.51 U | 0.51 | 0.10 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.10 U | 0.10 | 0.051 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 U | 0.100 | 0.0084 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310859**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:30 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB2 SDG#: PH146-04EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 07049 | Cadmium | 7440-43-9 | 0.0100 U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0030 J | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **EPA 300.0** | | **mg/l** | **mg/l** | **mg/l** | |
| 00368 | 1b Anions by 300.0-Nitrate | 14797-55-8 | 0.10 U | 0.10 | 0.050 | 1 |
| | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 6.4 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310859**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:30 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB2 SDG#: PH146-04EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.91 | U | 1.91 | 0.491 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 9.54 | U | 9.54 | 0.411 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 9.54 | U | 9.54 | 0.220 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 0.285 | JQ | 9.54 | 0.224 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.54 | U | 9.54 | 0.220 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.464 | JBQ | 9.54 | 0.240 | 1 |
| 10915 | OCDD | 3268-87-9 | 1.09 | JBQ | 19.1 | 0.276 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.91 | U | 1.91 | 0.358 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.343 | JBQ | 9.54 | 0.228 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.258 | JQ | 9.54 | 0.214 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.432 | JBQ | 9.54 | 0.155 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.318 | JBQ | 9.54 | 0.161 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 9.54 | U | 9.54 | 0.176 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 9.54 | U | 9.54 | 0.153 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.338 | JBQ | 9.54 | 0.0932 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.230 | JB | 9.54 | 0.113 | 1 |
| 10915 | OCDF | 39001-02-0 | 0.604 | JBQ | 19.1 | 0.316 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00230 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 60 | 25 - 164 |
| 13C12-12378-PeCDD | 64 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 78 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 79 | 17 - 157 |
| 13C12-2378-TCDF | 57 | 24 - 169 |
| 13C12-12378-PeCDF | 66 | 24 - 185 |
| 13C12-23478-PeCDF | 63 | 21 - 178 |
| 13C12-123478-HxCDF | 77 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 75 | 28 - 136 |
| 13C12-123789-HxCDF | 78 | 29 - 147 |
| 13C12-1234678-HpCDF | 85 | 28 - 143 |
| 13C12-1234789-HpCDF | 78 | 26 - 138 |
| 13C12-OCDF | 79 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310859**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:30 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB2 SDG#: PH146-04EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310859**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:30 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB2 SDG#: PH146-04EB*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13348WAG026 | 12/19/2013 21:12 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13348WAG026 | 12/16/2013 05:40 | Roman Kuropatkin | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13346A20A | 12/13/2013 20:20 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13346A20A | 12/13/2013 20:20 | Marie D Beamenderfer | 1 |
| 10407 | 24b Herbicides by EPA 8151A | SW-846 8151A | 1 | 133510013A | 12/20/2013 18:43 | Melissa McDermott | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 133510021A | 12/19/2013 18:16 | Jamie L Brillhart | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 133510023A | 12/19/2013 11:38 | Monica M Souders | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 133510023A | 12/18/2013 12:00 | William H Saadeh | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 133510021A | 12/18/2013 12:00 | William H Saadeh | 1 |
| 00816 | Water Sample Herbicide Extract | SW-846 8151A | 1 | 133510013A | 12/18/2013 15:30 | Seth A Farrier | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133520004A | 12/19/2013 14:42 | Tracy A Cole | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 133520004A | 12/18/2013 18:15 | JoElla L Rice | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13353002 | 12/21/2013 19:05 | Nelson H Risser | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13353002 | 12/19/2013 11:15 | Brett M Weidman | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121113 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7310859**
**LL Group # 1440439**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:30 by PH

Submitted: 12/12/2013 09:45
Reported: 01/03/2014 09:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

NBEB2 SDG#: PH146-04EB*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10143 | Phosphorus | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:19 | Eric L Eby | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 133530639001B | 12/23/2013 21:54 | John P Hook | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 133530639001A | 12/23/2013 21:54 | John P Hook | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 133530639001A | 12/23/2013 21:54 | John P Hook | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 133530639001A | 12/23/2013 21:54 | John P Hook | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 133465713005 | 12/14/2013 08:09 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 133530635003 | 12/21/2013 06:55 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 133530639001 | 12/21/2013 07:00 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 133465713005 | 12/13/2013 15:20 | Damary Valentin | 1 |
| 00368 | 1b Anions by 300.0-Nitrate | EPA 300.0 | 3 | 13347347601B | 12/13/2013 11:47 | Clinton M Wilson | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 13350002101A | 12/16/2013 12:51 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440439
Reported: 01/03/14 at 09:15 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13348WAG026 | Sample number(s): 7310858-7310859 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 104 | 77-118 | 1 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 113 | 80-123 | 7 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 108 | 78-123 | 8 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 103 | 108 | 73-127 | 5 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 107 | 72-120 | 8 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 119 | 79-136 | 9 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 91 | 99 | 70-130 | 8 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 111 | 64-130 | 7 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 107 | 73-131 | 6 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 67 | 64 | 40-138 | 4 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 91 | 101 | 64-141 | 11 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 109 | 76-125 | 8 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 113 | 58-131 | 7 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 90 | 94 | 64-128 | 4 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 57 | 58 | 23-139 | 1 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.077 | J | 1.0 | 0.050 | ug/l | 112 | 111 | 70-143 | 1 | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 108 | 79-124 | 8 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 110 | 74-115 | 7 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 110 | 62-130 | 6 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 113 | 80-126 | 8 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 110 | 81-124 | 8 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 101 | 108 | 75-120 | 7 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 86 | 88 | 36-120 | 2 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 94 | 107 | 57-145 | 14 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 98 | 105 | 75-120 | 7 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 115 | 71-130 | 5 | 30 |
| Batch number: 13352SLF026 | Sample number(s): 7310856-7310857 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 114 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 97 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 104 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 95 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 85-122 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440439
Reported: 01/03/14 at 09:15 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 18 U | 18. | 6.0 | ug/kg | 100 | | 79-121 | | |
| Fluoranthene | 1.7 U | 1.7 | 0.67 | ug/kg | 100 | | 85-116 | | |
| Fluorene | 1.7 U | 1.7 | 0.67 | ug/kg | 101 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 U | 1.7 | 0.67 | ug/kg | 102 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 U | 1.7 | 0.67 | ug/kg | 108 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 U | 1.7 | 0.67 | ug/kg | 108 | | 78-121 | | |
| Naphthalene | 1.7 U | 1.7 | 0.67 | ug/kg | 99 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 U | 1.7 | 0.67 | ug/kg | 95 | | 71-124 | | |
| Di-n-octylphthalate | 18 U | 18. | 6.0 | ug/kg | 108 | | 76-131 | | |
| Phenanthrene | 1.7 U | 1.7 | 0.67 | ug/kg | 96 | | 72-110 | | |
| Pyrene | 1.7 U | 1.7 | 0.67 | ug/kg | 108 | | 79-112 | | |
| Batch number: 13346A20A | Sample number(s): 7310858-7310859 | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 U | 50. | 20 | ug/l | 97 | 100 | 75-135 | 3 | 30 |
| Batch number: 133510013A | Sample number(s): 7310859 | | | | | | | | |
| 2,4-D | 0.50 U | 0.50 | 0.16 | ug/l | 144 | 145 | 68-155 | 0 | 30 |
| Dalapon | 1.3 U | 1.3 | 0.25 | ug/l | 60 | 55 | 25-119 | 9 | 30 |
| 2,4-DB | 1.0 U | 1.0 | 0.30 | ug/l | 131 | 132 | 50-163 | 0 | 30 |
| Dicamba | 0.30 U | 0.30 | 0.080 | ug/l | 100 | 105 | 64-163 | 5 | 30 |
| Dinoseb | 0.50 U | 0.50 | 0.12 | ug/l | 216* | 223* | 16-163 | 3 | 30 |
| 2,4-DP (Dichlorprop) | 0.50 U | 0.50 | 0.16 | ug/l | 142 | 138 | 89-162 | 3 | 30 |
| MCPA | 200 U | 200. | 50 | ug/l | 96 | 94 | 68-154 | 1 | 30 |
| MCPP | 200 U | 200. | 50 | ug/l | 96 | 99 | 46-173 | 3 | 30 |
| 2,4,5-T | 0.050 U | 0.050 | 0.015 | ug/l | 118 | 118 | 71-174 | 0 | 30 |
| 2,4,5-TP | 0.050 U | 0.050 | 0.010 | ug/l | 131 | 133 | 58-155 | 1 | 30 |
| Batch number: 133510021A | Sample number(s): 7310858-7310859 | | | | | | | | |
| Aldrin | 0.0080 U | 0.0080 | 0.0016 | ug/l | 90 | 92 | 45-125 | 2 | 30 |
| Alpha BHC | 0.0080 U | 0.0080 | 0.0024 | ug/l | 117 | 116 | 51-139 | 1 | 30 |
| Beta BHC | 0.0080 U | 0.0080 | 0.0027 | ug/l | 106 | 104 | 57-127 | 2 | 30 |
| Gamma BHC - Lindane | 0.0080 U | 0.0080 | 0.0016 | ug/l | 122 | 124 | 57-133 | 2 | 30 |
| Chlordane | 0.40 U | 0.40 | 0.13 | ug/l | | | | | |
| p,p-DDD | 0.016 U | 0.016 | 0.0040 | ug/l | 112 | 110 | 55-145 | 2 | 30 |
| p,p-DDE | 0.016 U | 0.016 | 0.0040 | ug/l | 116 | 112 | 58-130 | 3 | 30 |
| p,p-DDT | 0.016 U | 0.016 | 0.0042 | ug/l | 116 | 113 | 45-140 | 2 | 30 |
| Delta BHC | 0.0080 U | 0.0080 | 0.0027 | ug/l | 116 | 111 | 52-133 | 4 | 30 |
| Dieldrin | 0.016 U | 0.016 | 0.0042 | ug/l | 109 | 106 | 60-135 | 3 | 30 |
| Endosulfan I | 0.0080 U | 0.0080 | 0.0034 | ug/l | 88 | 86 | 56-128 | 3 | 30 |
| Endosulfan II | 0.016 U | 0.016 | 0.012 | ug/l | 90 | 88 | 53-123 | 3 | 30 |
| Endosulfan Sulfate | 0.016 U | 0.016 | 0.0046 | ug/l | 109 | 107 | 51-130 | 2 | 30 |
| Endrin | 0.016 U | 0.016 | 0.0065 | ug/l | 46 | 96 | 43-139 | 71* | 30 |
| Endrin Aldehyde | 0.080 U | 0.080 | 0.016 | ug/l | 117 | 98 | 50-122 | 18 | 20 |
| Endrin Ketone | 0.016 U | 0.016 | 0.0040 | ug/l | 140* | 107 | 51-133 | 27 | 30 |
| Heptachlor | 0.0080 U | 0.0080 | 0.0016 | ug/l | 97 | 97 | 48-130 | 0 | 30 |
| Heptachlor Epoxide | 0.0080 U | 0.0080 | 0.0018 | ug/l | 108 | 106 | 65-128 | 2 | 30 |
| Methoxychlor | 0.080 U | 0.080 | 0.024 | ug/l | 105 | 104 | 40-150 | 1 | 30 |
| Mirex | 0.040 U | 0.040 | 0.0080 | ug/l | | | | | |
| Toxaphene | 0.80 U | 0.80 | 0.24 | ug/l | | | | | |
| Batch number: 133510023A | Sample number(s): 7310859 | | | | | | | | |
| Aroclor 5432 | 0.40 U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 U | 0.40 | 0.080 | ug/l | 58 | 64 | 35-84 | 10 | 30 |
| Aroclor 5460 | 0.40 U | 0.40 | 0.088 | ug/l | | | | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440439
Reported: 01/03/14 at 09:15 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 89 | 101 | 67-117 | 13 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 82 | 103 | 67-128 | 23 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 133520004A | Sample number(s): 7310858-7310859 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 81 | 78 | 67-109 | 4 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 89 | 86 | 71-119 | 3 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 89 | 86 | 75-117 | 3 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 78 | 73 | 44-134 | 7 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 64 | 61 | 55-86 | 5 | 30 |
| Batch number: 133465713005 | Sample number(s): 7310858-7310859 | | | | | | | | | |
| 3b Mercury 7470A | 0.00020 | U | 0.00020 | 0.00006 0 | mg/l | 97 | 95 | 90-115 | 3 | 20 |
| Batch number: 133530635003 | Sample number(s): 7310858-7310859 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0828 | mg/l | 100 | 100 | 90-112 | 0 | 20 |
| Antimony | 0.0400 | U | 0.0400 | 0.0053 | mg/l | 105 | 105 | 88-111 | 1 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 102 | 102 | 90-113 | 0 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 103 | 102 | 90-110 | 1 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 100 | 99 | 90-111 | 0 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0084 | mg/l | 97 | 97 | 90-110 | 0 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00076 | mg/l | 104 | 103 | 90-112 | 1 | 20 |
| Calcium | 0.400 | U | 0.400 | 0.0334 | mg/l | 100 | 99 | 90-112 | 1 | 20 |
| Chromium | 0.0300 | U | 0.0300 | 0.0016 | mg/l | 102 | 101 | 90-110 | 1 | 20 |
| Cobalt | 0.0100 | U | 0.0100 | 0.0013 | mg/l | 104 | 103 | 90-110 | 1 | 20 |
| Copper | 0.0200 | U | 0.0200 | 0.0027 | mg/l | 104 | 103 | 90-112 | 1 | 20 |
| Iron | 0.400 | U | 0.400 | 0.0430 | mg/l | 104 | 99 | 90-112 | 4 | 20 |
| Lead | 0.0300 | U | 0.0300 | 0.0047 | mg/l | 106 | 105 | 88-110 | 1 | 20 |
| Lithium | 0.0400 | U | 0.0400 | 0.0047 | mg/l | 102 | 101 | 90-110 | 1 | 20 |
| Magnesium | 0.200 | U | 0.200 | 0.0167 | mg/l | 99 | 98 | 89-110 | 1 | 20 |
| Manganese | 0.0100 | U | 0.0100 | 0.00083 | mg/l | 104 | 102 | 90-110 | 1 | 20 |
| Molybdenum | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 105 | 104 | 90-110 | 0 | 20 |
| Nickel | 0.0200 | U | 0.0200 | 0.0015 | mg/l | 106 | 105 | 90-111 | 1 | 20 |
| Phosphorus | 0.200 | U | 0.200 | 0.0418 | mg/l | 101 | 100 | 90-110 | 1 | 20 |
| Potassium | 1.00 | U | 1.00 | 0.0980 | mg/l | 96 | 96 | 90-110 | 0 | 20 |
| Sodium | 2.00 | U | 2.00 | 0.167 | mg/l | 98 | 98 | 87-114 | 1 | 20 |
| Tin | 0.0400 | U | 0.0400 | 0.0029 | mg/l | 102 | 102 | 90-110 | 0 | 20 |
| Titanium | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 102 | 102 | 90-113 | 0 | 20 |
| Vanadium | 0.0100 | U | 0.0100 | 0.0020 | mg/l | 104 | 103 | 90-110 | 1 | 20 |
| Zinc | 0.0400 | U | 0.0400 | 0.0020 | mg/l | 100 | 100 | 90-110 | 0 | 20 |
| Zirconium | 0.100 | U | 0.100 | 0.0084 | mg/l | 101 | 101 | 90-110 | 0 | 20 |
| Batch number: 133530639001A | Sample number(s): 7310858-7310859 | | | | | | | | | |
| Silver | 0.0010 | U | 0.0010 | 0.00011 | mg/l | 103 | 104 | 90-115 | 1 | 20 |
| Strontium | 0.0020 | U | 0.0020 | 0.00034 | mg/l | 103 | 106 | 90-110 | 3 | 20 |
| Thallium | 0.0010 | U | 0.0010 | 0.00015 | mg/l | 99 | 95 | 90-115 | 4 | 20 |
| Batch number: 133530639001B | Sample number(s): 7310858-7310859 | | | | | | | | | |
| Selenium | 0.0040 | U | 0.0040 | 0.00050 | mg/l | 104 | 106 | 90-120 | 2 | 20 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440439
Reported: 01/03/14 at 09:15 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13347347601B | Sample number(s): 7310859 | | | | | | | | | |
| 1b Anions by 300.0-Nitrate | 0.10 | U | 0.10 | 0.050 | mg/l | 93 | 92 | 90-110 | 1 | 20 |
| Batch number: 13350002101A | Sample number(s): 7310858-7310859 | | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 100 | | 90-110 | | |
| Batch number: 13352162401A | Sample number(s): 7310856-7310857 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13353002 | Sample number(s): 7310858-7310859 | | | | | | | | | |
| 2378-TCDD | 2.00 | U | 2.00 | 0.586 | pg/l | 99 | | 60-150 | | |
| 12378-PeCDD | 10.0 | U | 10.0 | 0.498 | pg/l | 98 | | 60-150 | | |
| 123478-HxCDD | 10.0 | U | 10.0 | 0.242 | pg/l | 100 | | 60-150 | | |
| 123678-HxCDD | 10.0 | U | 10.0 | 0.270 | pg/l | 101 | | 60-150 | | |
| 123789-HxCDD | 10.0 | U | 10.0 | 0.247 | pg/l | 98 | | 60-150 | | |
| 1234678-HpCDD | 0.375 | J | 10.0 | 0.300 | pg/l | 101 | | 60-150 | | |
| OCDD | 1.46 | J | 20.0 | 0.362 | pg/l | 100 | | 60-150 | | |
| 2378-TCDF | 2.00 | U | 2.00 | 0.382 | pg/l | 98 | | 60-150 | | |
| 12378-PeCDF | 0.905 | J | 10.0 | 0.263 | pg/l | 101 | | 60-150 | | |
| 23478-PeCDF | 10.0 | U | 10.0 | 0.254 | pg/l | 101 | | 60-150 | | |
| 123478-HxCDF | 0.270 | J | 10.0 | 0.181 | pg/l | 96 | | 60-150 | | |
| 123678-HxCDF | 0.304 | J | 10.0 | 0.184 | pg/l | 100 | | 60-150 | | |
| 123789-HxCDF | 10.0 | U | 10.0 | 0.204 | pg/l | 99 | | 60-150 | | |
| 234678-HxCDF | 0.347 | J | 10.0 | 0.180 | pg/l | 99 | | 60-150 | | |
| 1234678-HpCDF | 0.579 | J | 10.0 | 0.117 | pg/l | 100 | | 60-150 | | |
| 1234789-HpCDF | 0.410 | J | 10.0 | 0.154 | pg/l | 103 | | 60-150 | | |
| OCDF | 1.19 | J | 20.0 | 0.417 | pg/l | 97 | | 60-150 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0141 | | | | pg/l | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13352SLF026 | Sample number(s): 7310856-7310857 UNSPK: P312454 | | | | | | | | |
| Acenaphthene | 75 | 75 | 48-127 | 0 | 30 | | | | |
| Acenaphthylene | 74 | 74 | 49-121 | 1 | 30 | | | | |
| Anthracene | 76 | 79 | 52-126 | 4 | 30 | | | | |
| Benzo(a)anthracene | 82 | 86 | 44-143 | 4 | 30 | | | | |
| Benzo(a)pyrene | 83 | 86 | 44-140 | 4 | 30 | | | | |
| Benzo(b)fluoranthene | 102 | 106 | 26-142 | 3 | 30 | | | | |
| Benzo(e)pyrene | 80 | 86 | 70-130 | 7 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440439
Reported: 01/03/14 at 09:15 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | 39 | 40 | 33-141 | 3 | 30 | | | | |
| Benzo(k)fluoranthene | 94 | 104 | 54-142 | 10 | 30 | | | | |
| Butylbenzylphthalate | 100 | 111 | 49-151 | 11 | 30 | | | | |
| Di-n-butylphthalate | 76 | 82 | 52-147 | 8 | 30 | | | | |
| Chrysene | 84 | 86 | 29-148 | 3 | 30 | | | | |
| Dibenz(a,h)anthracene | 49 | 50 | 20-137 | 2 | 30 | | | | |
| Diethylphthalate | 71 | 69 | 43-145 | 2 | 30 | | | | |
| Dimethylphthalate | 91 | 90 | 58-129 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 95 | 87 | 39-167 | 6 | 30 | | | | |
| Fluoranthene | 76 | 80 | 40-148 | 4 | 30 | | | | |
| Fluorene | 75 | 68 | 51-137 | 10 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 50 | 51 | 17-136 | 1 | 30 | | | | |
| 1-Methylnaphthalene | 89 | 88 | 50-131 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 90 | 87 | 35-152 | 3 | 30 | | | | |
| Naphthalene | 82 | 77 | 31-148 | 5 | 30 | | | | |
| N-Nitrosodimethylamine | 87 | 84 | 48-113 | 3 | 30 | | | | |
| Di-n-octylphthalate | 147 | 167* | 52-162 | 12 | 30 | | | | |
| Phenanthrene | 78 | 80 | 29-142 | 2 | 30 | | | | |
| Pyrene | 90 | 97 | 26-143 | 8 | 30 | | | | |
| Batch number: 13350002101A Sample number(s): 7310858-7310859 BKG: P314027 | | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 7.2 | 7.3 | 0 | 3 |
| Batch number: 13352162401A Sample number(s): 7310856-7310857 BKG: P312450 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.3 | 4.3 | 2 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 13348WAG026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7310858 | 97 | 93 | 99 |
| 7310859 | 86 | 85 | 84 |
| Blank | 108 | 107 | 110 |
| LCS | 97 | 97 | 101 |
| LCSD | 105 | 106 | 111 |
| Limits: | 44-137 | 62-141 | 51-136 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13352SLF026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440439
Reported: 01/03/14 at 09:15 AM

## Surrogate Quality Control

| | | | |
|---|---|---|---|
| 7310856 | 84 | 81 | 106 |
| 7310857 | 80 | 80 | 102 |
| Blank | 89 | 92 | 110 |
| LCS | 83 | 84 | 102 |
| MS | 67 | 71 | 91 |
| MSD | 70 | 73 | 86 |
| Limits: | 54-129 | 59-125 | 61-125 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13346A20A

| | Trifluorotoluene-F |
|---|---|
| 7310858 | 77 |
| 7310859 | 78 |
| Blank | 81 |
| LCS | 86 |
| LCSD | 88 |
| Limits: | 63-135 |

Analysis Name: 24b Herbicides by EPA 8151A
Batch number: 133510013A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7310859 | 77 |
| Blank | 79 |
| LCS | 94 |
| LCSD | 96 |
| Limits: | 50-150 |

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 133510021A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7310858 | 97 | 49 |
| 7310859 | 113 | 60 |
| Blank | 71 | 35 |
| LCS | 98 | 45 |
| LCSD | 100 | 51 |
| Limits: | 60-140 | 20-120 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 133510023A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7310859 | 115 | 55 |
| Blank | 82 | 38* |
| LCS | 98 | 30* |
| LCSD | 114 | 34* |
| Limits: | 45-120 | 45-120 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440439
Reported: 01/03/14 at 09:15 AM

## Surrogate Quality Control

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 133520004A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7310858 | 93 | 84 |
| 7310859 | 81 | 82 |
| Blank | 81 | 79 |
| LCS | 85 | 87 |
| LCSD | 82 | 83 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 13353002

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7310858 | 64 | 64 | 82 | 81 | 80 | 75 |
| 7310859 | 60 | 63 | 77 | 77 | 75 | 78 |
| Blank | 63 | 61 | 78 | 80 | 76 | 75 |
| OPR | 65 | 64 | 85 | 83 | 81 | 79 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7310858 | 86 | 77 | 83 | 63 | 80 | 81 |
| 7310859 | 85 | 78 | 79 | 64 | 78 | 78 |
| Blank | 80 | 70 | 71 | 61 | 76 | 76 |
| OPR | 84 | 73 | 77 | 62 | 81 | 82 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7310858 | 76 | 81 | 82 | 61 | 68 |
| 7310859 | 77 | 83 | 79 | 57 | 66 |
| Blank | 75 | 74 | 71 | 62 | 66 |
| OPR | 80 | 78 | 76 | 64 | 67 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

13013 1440439 7310856-59

**CDM Smith**

DateShipped: 12/11/2013
CarrierName: FedEx
AirbillNo: 797376645051

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131211-08
Cooler #: 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 SIM | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-552-NBZ-SB-0.0-0.5 | 12/10/13 14:15 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SL-552-NBZ-SB-2.0-3.0 | 12/10/13 15:00 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 12/11/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 12/12/13 | 945 |

13013 1440439 7310856-59

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 12/11/2013
CarrierName: FedEx
AirbillNo: 797376645051

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131211-02
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB1-121113 | 12/11/13 14:00 | WQ | None | 2 - 250 mL Amber | 10 day | | | | | | | X | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB1-121113 | 12/11/13 14:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-121113 | 12/11/13 14:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| EB1-121113 | 12/11/13 14:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| EB2-121113 | 12/11/13 14:30 | WQ | None | 3 - 250 mL Amber | 10 day | | | | | | | X | | | X | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB2-121113 | 12/11/13 14:30 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-121113 | 12/11/13 14:30 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| EB2-121113 | 12/11/13 14:30 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| EB2-121113 | 12/11/13 14:30 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB2-121113 | 12/11/13 14:30 | WQ | None | 2 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | |

NBZ

Special Instructions:

**Sampler:** Pa Hart

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steph Mypel | 12/11/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Duane Bailey | 12/12/13 | 945 |

13013 1440439 7310856-59

# SSFL Phase 3 Chain of Custody

**CDM Smith**

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 12/11/2013 | Contact Name: | Pam Hartman | COC No: | 20131211-01 |
| CarrierName: | FedEx | Contact Phone: | (818)466-8007 | Cooler #: | 1 |
| AirbillNo: | 797376645051 | | | Lab: | Lancaster |
| | | | | Lab Phone: | 717-556-7259 |
| | | | | Lab Address | 2425 New Holland Pike<br>Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB1-121113 | 12/11/13 14:00 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-121113 | 12/11/13 14:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| EB2-121113 | 12/11/13 14:30 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-121113 | 12/11/13 14:30 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |

NBZ

Special Instructions:

**Sampler:** Pa Hartman

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steve Myers | 12/11/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

121213 945

COC Rev 3

COC: 20131211-01, Page 1 of 1

1 of 1

eurofins | Lancaster Laboratories

1440439

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** CDM

**Date of Receipt:** 121213

**Time of Receipt:** 945

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT46 | 0.7 | TB | WI | Y | B | |
| 2 | ↓ | 0.6 | ↓ | ↓ | ↓ | ↓ | |
| 3 | ↓ | 1.1 | ↓ | ↓ | ↓ | ↓ | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** Brianna Beach 2299 **Date/Time:** 121213 1158

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

January 08, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 12/13/2013
Group Number: 1440744
SDG: PH148
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-540-NBZ-SB-0.0-0.5 Soil | 7312454 |
| SL-540-NBZ-SB-0.0-0.5MS Soil | 7312455 |
| SL-540-NBZ-SB-0.0-0.5MSD Soil | 7312456 |
| SL-840-NBZ-SB-0.0-0.5 Soil | 7312457 |
| SL-541-NBZ-SB-0.0-0.5 Soil | 7312458 |
| SL-542-NBZ-SB-0.0-0.5 Soil | 7312459 |
| SL-539-NBZ-SB-0.0-0.5 Soil | 7312460 |
| SL-543-NBZ-SB-0.0-0.5 Soil | 7312461 |
| SL-544-NBZ-SB-0.0-0.5 Soil | 7312462 |
| SL-544-NBZ-SB-0.0-0.5MS Soil | 7312463 |
| SL-544-NBZ-SB-0.0-0.5MSD Soil | 7312464 |
| SL-544-NBZ-SB-0.0-0.5DUP Soil | 7312465 |
| SL-844-NBZ-SB-0.0-0.5 Soil | 7312466 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-540-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312454**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 2.0 | U | 2.0 | 0.79 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 2.0 | U | 2.0 | 0.39 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.53 | J | 2.0 | 0.39 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.2 | J | 2.0 | 0.79 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.5 | J | 2.0 | 0.79 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.7 | | 2.0 | 0.79 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 20 | U | 20 | 3.9 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.1 | J | 2.0 | 0.79 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.2 | J | 2.0 | 0.79 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 21 | U | 21 | 7.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 21 | U | 21 | 7.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 3.5 | | 2.0 | 0.39 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 2.0 | U | 2.0 | 0.79 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 21 | U | 21 | 7.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 21 | U | 21 | 7.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 15 | J | 21 | 7.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.9 | | 2.0 | 0.79 | 1 |
| 12969 | Fluorene | 86-73-7 | 2.0 | U | 2.0 | 0.79 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.0 | U | 2.0 | 0.79 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 2.4 | | 2.0 | 0.79 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 2.9 | | 2.0 | 0.79 | 1 |
| 12969 | Naphthalene | 91-20-3 | 5.3 | | 2.0 | 0.79 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 2.0 | U | 2.0 | 0.79 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 21 | U | 21 | 7.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.9 | | 2.0 | 0.79 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.2 | | 2.0 | 0.79 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 42 | U | 42 | 14 | 1 |
| 10401 | Dalapon | 75-99-0 | 110 | U | 110 | 52 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 20 | U | 20 | 15 | 1 |
| 10401 | Dicamba | 1918-00-9 | 14 | U | 14 | 4.7 | 1 |
| 10401 | Dinoseb | 88-85-7 | 28 | U | 28 | 11 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 20 | U | 20 | 11 | 1 |
| 10401 | MCPA | 94-74-6 | 2,900 | U | 2,900 | 900 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,900 | U | 2,900 | 880 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 2.0 | U | 2.0 | 0.97 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 0.98 | J | 2.0 | 0.88 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.97 | U | 0.97 | 0.20 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.97 | U | 0.97 | 0.20 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.2 | U | 2.2 | 1.1 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.97 | U | 0.97 | 0.40 | 1 |
| 10590 | Chlordane | 57-74-9 | 20 | U | 20 | 4.7 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 2.0 | U | 2.0 | 0.39 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 2.0 | U | 2.0 | 1.9 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-540-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312454**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | p,p-DDT | 50-29-3 | 2.0 | U | 2.0 | 0.41 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.97 | U | 0.97 | 0.53 | 1 |
| 10590 | Dieldrin | 60-57-1 | 0.56 | J | 2.0 | 0.39 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.97 | U | 0.97 | 0.26 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 2.0 | U | 2.0 | 0.39 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 2.0 | U | 2.0 | 0.39 | 1 |
| 10590 | Endrin | 72-20-8 | 0.46 | J | 2.0 | 0.39 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 2.0 | U | 2.0 | 0.68 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 2.1 | U | 2.1 | 0.70 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.54 | J | 0.97 | 0.20 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.97 | U | 0.97 | 0.20 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.8 | U | 7.8 | 2.0 | 1 |
| 10590 | Mirex | 2385-85-5 | 2.0 | U | 2.0 | 0.41 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 39 | U | 39 | 16 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 15.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-540-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312454**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0859 JBQ | 1.18 | 0.0607 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.222 JBQ | 5.90 | 0.0525 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.350 J | 5.90 | 0.0895 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.75 JB | 5.90 | 0.0902 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.583 JB | 5.90 | 0.0900 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 36.2 B | 5.90 | 0.0810 | 1 |
| 11031 | OCDD | 3268-87-9 | 288 B | 11.8 | 0.0691 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.332 JB | 1.18 | 0.0889 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.785 JB | 5.90 | 0.0481 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.580 JB | 5.90 | 0.0511 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.337 JQ | 5.90 | 0.0644 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.490 J | 5.90 | 0.0586 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.139 JBQ | 5.90 | 0.0751 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.575 JB | 5.90 | 0.0624 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 8.53 B | 5.90 | 0.0479 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.654 JB | 5.90 | 0.0782 | 1 |
| 11031 | OCDF | 39001-02-0 | 21.2 B | 11.8 | 0.0592 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.15 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 78 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 87 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 75 | 17 - 157 |
| 13C12-2378-TCDF | 70 | 24 - 169 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 69 | 21 - 178 |
| 13C12-123478-HxCDF | 76 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 79 | 28 - 136 |
| 13C12-123789-HxCDF | 70 | 29 - 147 |
| 13C12-1234678-HpCDF | 89 | 28 - 143 |
| 13C12-1234789-HpCDF | 62 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-540-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312454**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-540-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312454**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13352SLF026 | 12/29/2013 13:22 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13352SLF026 | 12/19/2013 09:00 | Anna E Stager | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133500015A | 12/19/2013 03:52 | Melissa McDermott | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133480013A | 12/19/2013 15:28 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133480013A | 12/16/2013 03:00 | Sherry L Morrow | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133500015A | 12/16/2013 20:00 | Elaine F Stoltzfus | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13352002 | 12/21/2013 06:35 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13352002 | 12/18/2013 12:40 | Chin F Ly | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401B | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-540-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312455**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 30 | | 2.0 | 0.79 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 29 | | 2.0 | 0.39 | 1 |
| 12969 | Anthracene | 120-12-7 | 30 | | 2.0 | 0.39 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 33 | | 2.0 | 0.79 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 34 | | 2.0 | 0.79 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 44 | | 2.0 | 0.79 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 32 | | 20 | 3.9 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 16 | | 2.0 | 0.79 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 38 | | 2.0 | 0.79 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 39 | | 21 | 7.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 30 | | 21 | 7.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 36 | | 2.0 | 0.39 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 19 | | 2.0 | 0.79 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 28 | | 21 | 7.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 36 | | 21 | 7.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 53 | | 21 | 7.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 33 | | 2.0 | 0.79 | 1 |
| 12969 | Fluorene | 86-73-7 | 30 | | 2.0 | 0.79 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 20 | | 2.0 | 0.79 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 38 | | 2.0 | 0.79 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 38 | | 2.0 | 0.79 | 1 |
| 12969 | Naphthalene | 91-20-3 | 38 | | 2.0 | 0.79 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 34 | | 2.0 | 0.79 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 58 | | 21 | 7.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 34 | | 2.0 | 0.79 | 1 |
| 12969 | Pyrene | 129-00-0 | 38 | | 2.0 | 0.79 | 1 |
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 140 | | 42 | 14 | 1 |
| 10401 | Dalapon | 75-99-0 | 240 | | 110 | 52 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 130 | | 20 | 7.3 | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | J | 14 | 4.7 | 1 |
| 10401 | Dinoseb | 88-85-7 | 50 | | 28 | 11 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 160 | | 20 | 11 | 1 |
| 10401 | MCPA | 94-74-6 | 12,000 | | 2,900 | 900 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 10,000 | | 2,900 | 880 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 2.7 | | 2.0 | 0.97 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 11 | | 2.0 | 0.88 | 1 |
| | The % difference for the calibration verification standard is outside the +/- 15% criteria for the analyte(s) listed below. Since the average of the % difference values meets the criteria, the results are reported. This applies to the following analyte(s): dinoseb | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 3.4 | | 0.97 | 0.20 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.0 | | 0.97 | 0.20 | 1 |
| 10590 | Beta BHC | 319-85-7 | 4.0 | | 2.2 | 1.1 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 3.7 | | 0.97 | 0.20 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-540-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312455**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Chlordane | 57-74-9 | 20 | U | 20 | 4.7 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 8.1 | | 2.0 | 0.39 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 10 | | 2.0 | 0.39 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 9.3 | | 2.0 | 0.41 | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.0 | | 0.97 | 0.53 | 1 |
| 10590 | Dieldrin | 60-57-1 | 7.3 | | 2.0 | 0.39 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 2.7 | | 0.97 | 0.26 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 5.7 | | 2.0 | 0.39 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 7.1 | | 2.0 | 0.39 | 1 |
| 10590 | Endrin | 72-20-8 | 7.4 | | 2.0 | 0.39 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 6.4 | | 2.0 | 0.39 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 6.9 | | 2.1 | 0.70 | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.8 | | 0.97 | 0.20 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.4 | | 0.97 | 0.20 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 40 | | 7.8 | 2.0 | 1 |
| 10590 | Mirex | 2385-85-5 | 2.0 | U | 2.0 | 0.41 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 39 | U | 39 | 16 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 15.2 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-540-NBZ-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312455**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 19.4 | B | 1.17 | 0.0733 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 101 | B | 5.83 | 0.0673 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 106 | | 5.83 | 0.108 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 110 | B | 5.83 | 0.107 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 104 | B | 5.83 | 0.104 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 144 | B | 5.83 | 0.0874 | 1 |
| 11031 | OCDD | 3268-87-9 | 542 | B | 11.7 | 0.0836 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.1 | B | 1.17 | 0.114 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 106 | B | 5.83 | 0.0745 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 105 | B | 5.83 | 0.0756 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 107 | | 5.83 | 0.0991 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 110 | | 5.83 | 0.0940 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 108 | B | 5.83 | 0.117 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 106 | B | 5.83 | 0.0963 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 116 | B | 5.83 | 0.0718 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 108 | B | 5.83 | 0.104 | 1 |
| 11031 | OCDF | 39001-02-0 | 230 | B | 11.7 | 0.0915 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 66 | 25 - 164 |
| 13C12-12378-PeCDD | 66 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 78 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 71 | 23 - 140 |
| 13C12-OCDD | 68 | 17 - 157 |
| 13C12-2378-TCDF | 60 | 24 - 169 |
| 13C12-12378-PeCDF | 64 | 24 - 185 |
| 13C12-23478-PeCDF | 61 | 21 - 178 |
| 13C12-123478-HxCDF | 70 | 26 - 152 |
| 13C12-123678-HxCDF | 73 | 26 - 123 |
| 13C12-234678-HxCDF | 73 | 28 - 136 |
| 13C12-123789-HxCDF | 66 | 29 - 147 |
| 13C12-1234678-HpCDF | 76 | 28 - 143 |
| 13C12-1234789-HpCDF | 59 | 26 - 138 |
| 13C12-OCDF | 58 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-540-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312455**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13352SLF026 | 12/29/2013 13:56 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13352SLF026 | 12/19/2013 09:00 | Anna E Stager | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133500015A | 12/19/2013 05:12 | Melissa McDermott | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133480013A | 12/19/2013 15:43 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133480013A | 12/16/2013 03:00 | Sherry L Morrow | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133500015A | 12/16/2013 20:00 | Elaine F Stoltzfus | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13352002 | 12/21/2013 07:31 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13352002 | 12/18/2013 12:40 | Chin F Ly | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401B | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-540-NBZ-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312456**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 30 | | 2.0 | 0.79 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 29 | | 2.0 | 0.39 | 1 |
| 12969 | Anthracene | 120-12-7 | 32 | | 2.0 | 0.39 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 35 | | 2.0 | 0.79 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 35 | | 2.0 | 0.79 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 45 | | 2.0 | 0.79 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 34 | | 20 | 3.9 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | | 2.0 | 0.79 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 42 | | 2.0 | 0.79 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 44 | | 21 | 7.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 32 | | 21 | 7.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 38 | | 2.0 | 0.39 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 20 | | 2.0 | 0.79 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 27 | | 21 | 7.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 35 | | 21 | 7.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 50 | | 21 | 7.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 34 | | 2.0 | 0.79 | 1 |
| 12969 | Fluorene | 86-73-7 | 27 | | 2.0 | 0.79 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 20 | | 2.0 | 0.79 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 37 | | 2.0 | 0.79 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 37 | | 2.0 | 0.79 | 1 |
| 12969 | Naphthalene | 91-20-3 | 36 | | 2.0 | 0.79 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 33 | | 2.0 | 0.79 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 66 | | 21 | 7.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 34 | | 2.0 | 0.79 | 1 |
| 12969 | Pyrene | 129-00-0 | 42 | | 2.0 | 0.79 | 1 |
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 150 | | 42 | 14 | 1 |
| 10401 | Dalapon | 75-99-0 | 180 | | 110 | 52 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 140 | | 20 | 7.3 | 1 |
| 10401 | Dicamba | 1918-00-9 | 14 | J | 14 | 4.7 | 1 |
| 10401 | Dinoseb | 88-85-7 | 41 | | 28 | 11 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 170 | | 20 | 11 | 1 |
| 10401 | MCPA | 94-74-6 | 13,000 | | 2,900 | 900 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 11,000 | | 2,900 | 880 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 3.5 | | 2.0 | 0.97 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 12 | | 2.0 | 0.88 | 1 |
| | The % difference for the calibration verification standard is outside the +/- 15% criteria for the analyte(s) listed below. Since the average of the % difference values meets the criteria, the results are reported. This applies to the following analyte(s): dinoseb | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 3.7 | | 0.97 | 0.20 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.6 | | 0.97 | 0.20 | 1 |
| 10590 | Beta BHC | 319-85-7 | 4.1 | | 2.2 | 1.1 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 4.3 | | 0.97 | 0.20 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-540-NBZ-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312456**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Chlordane | 57-74-9 | 20 | U | 20 | 4.7 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 8.8 | | 2.0 | 0.39 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 11 | | 2.0 | 0.39 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 11 | | 2.0 | 0.41 | 1 |
| 10590 | Delta BHC | 319-86-8 | 4.2 | | 0.97 | 0.53 | 1 |
| 10590 | Dieldrin | 60-57-1 | 8.2 | | 2.0 | 0.39 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 3.2 | | 0.97 | 0.26 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 6.6 | | 2.0 | 0.39 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 8.3 | | 2.0 | 0.39 | 1 |
| 10590 | Endrin | 72-20-8 | 8.2 | | 2.0 | 0.39 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 7.1 | | 2.0 | 0.39 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 7.4 | | 2.1 | 0.70 | 1 |
| 10590 | Heptachlor | 76-44-8 | 4.5 | | 0.97 | 0.20 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 4.1 | | 0.97 | 0.20 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 45 | | 7.8 | 2.0 | 1 |
| 10590 | Mirex | 2385-85-5 | 2.0 | U | 2.0 | 0.41 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 39 | U | 39 | 16 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 15.2 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 13.9 | | 0.10 | 0.10 | 1 |

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-540-NBZ-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312456**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 19.3 | B | 1.17 | 0.0813 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 104 | B | 5.86 | 0.0824 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 110 | | 5.86 | 0.126 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 111 | B | 5.86 | 0.137 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 107 | B | 5.86 | 0.125 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 138 | B | 5.86 | 0.110 | 1 |
| 11031 | OCDD | 3268-87-9 | 470 | B | 11.7 | 0.101 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.6 | B | 1.17 | 0.116 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 107 | B | 5.86 | 0.0706 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 107 | B | 5.86 | 0.0731 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 109 | | 5.86 | 0.135 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 113 | | 5.86 | 0.129 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 111 | B | 5.86 | 0.144 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 111 | B | 5.86 | 0.126 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 118 | B | 5.86 | 0.0698 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 110 | B | 5.86 | 0.0940 | 1 |
| 11031 | OCDF | 39001-02-0 | 230 | B | 11.7 | 0.0789 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 66 | 25 - 164 |
| 13C12-12378-PeCDD | 65 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 76 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 68 | 17 - 157 |
| 13C12-2378-TCDF | 60 | 24 - 169 |
| 13C12-12378-PeCDF | 64 | 24 - 185 |
| 13C12-23478-PeCDF | 60 | 21 - 178 |
| 13C12-123478-HxCDF | 69 | 26 - 152 |
| 13C12-123678-HxCDF | 70 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 69 | 29 - 147 |
| 13C12-1234678-HpCDF | 74 | 28 - 143 |
| 13C12-1234789-HpCDF | 62 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-540-NBZ-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312456**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54000 SDG#: PH148-01MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13352SLF026 | 12/29/2013 14:29 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13352SLF026 | 12/19/2013 09:00 | Anna E Stager | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133500015A | 12/19/2013 05:39 | Melissa McDermott | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133480013A | 12/19/2013 15:58 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133480013A | 12/16/2013 03:00 | Sherry L Morrow | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133500015A | 12/16/2013 20:00 | Elaine F Stoltzfus | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13352002 | 12/21/2013 08:28 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13352002 | 12/18/2013 12:40 | Chin F Ly | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401B | 12/18/2013 21:53 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401B | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312457**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84000 SDG#: PH148-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.78 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.39 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.46 | J | 1.9 | 0.39 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.2 | J | 1.9 | 0.78 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.4 | J | 1.9 | 0.78 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.3 | | 1.9 | 0.78 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 20 | U | 20 | 3.9 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.3 | J | 1.9 | 0.78 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.2 | J | 1.9 | 0.78 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 21 | U | 21 | 7.0 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 21 | U | 21 | 7.0 | 1 |
| 12969 | Chrysene | 218-01-9 | 3.3 | | 1.9 | 0.39 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.78 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 21 | U | 21 | 7.0 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 21 | U | 21 | 7.0 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 13 | J | 21 | 7.0 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.1 | | 1.9 | 0.78 | 1 |
| 12969 | Fluorene | 86-73-7 | 5.5 | | 1.9 | 0.78 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.85 | J | 1.9 | 0.78 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.78 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.5 | J | 1.9 | 0.78 | 1 |
| 12969 | Naphthalene | 91-20-3 | 3.8 | | 1.9 | 0.78 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.78 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 21 | U | 21 | 7.0 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.9 | | 1.9 | 0.78 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.8 | | 1.9 | 0.78 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 43 | U | 43 | 14 | 1 |
| 10401 | Dalapon | 75-99-0 | 110 | U | 110 | 52 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 20 | U | 20 | 12 | 1 |
| 10401 | Dicamba | 1918-00-9 | 14 | U | 14 | 4.7 | 1 |
| 10401 | Dinoseb | 88-85-7 | 28 | U | 28 | 11 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 20 | U | 20 | 11 | 1 |
| 10401 | MCPA | 94-74-6 | 3,000 | U | 3,000 | 900 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 3,000 | U | 3,000 | 890 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 2.2 | | 2.0 | 0.97 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 2.0 | U | 2.0 | 0.89 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.97 | U | 0.97 | 0.20 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.97 | U | 0.97 | 0.20 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.2 | U | 2.2 | 1.1 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.97 | U | 0.97 | 0.44 | 1 |
| 10590 | Chlordane | 57-74-9 | 20 | U | 20 | 4.7 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 2.0 | U | 2.0 | 0.39 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 2.0 | U | 2.0 | 1.5 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312457**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84000 SDG#: PH148-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | p,p-DDT | 50-29-3 | 1.3 | J | 2.0 | 0.41 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.97 | U | 0.97 | 0.53 | 1 |
| 10590 | Dieldrin | 60-57-1 | 2.0 | U | 2.0 | 0.39 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.97 | U | 0.97 | 0.26 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 2.0 | U | 2.0 | 0.39 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 2.0 | U | 2.0 | 0.39 | 1 |
| 10590 | Endrin | 72-20-8 | 2.0 | U | 2.0 | 0.39 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 2.0 | U | 2.0 | 0.68 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 2.1 | U | 2.1 | 0.70 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.29 | J | 0.97 | 0.20 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.97 | U | 0.97 | 0.20 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.9 | U | 7.9 | 2.0 | 1 |
| 10590 | Mirex | 2385-85-5 | 2.0 | U | 2.0 | 0.41 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 39 | U | 39 | 16 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 15.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312457**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84000 SDG#: PH148-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.16 | U | 1.16 | 0.123 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.215 | JQ | 5.80 | 0.0834 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.665 | JQ | 5.80 | 0.0681 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 3.07 | JB | 5.80 | 0.0701 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.18 | J | 5.80 | 0.0667 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 90.2 | B | 5.80 | 0.120 | 1 |
| 11031 | OCDD | 3268-87-9 | 856 | B | 11.6 | 0.0985 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.466 | J | 1.16 | 0.102 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.21 | JB | 5.80 | 0.0506 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.590 | JB | 5.80 | 0.0484 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.501 | JB | 5.80 | 0.0529 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.563 | J | 5.80 | 0.0509 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.172 | JBQ | 5.80 | 0.0553 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.787 | JB | 5.80 | 0.0498 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 14.5 | B | 5.80 | 0.0451 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 1.18 | JBQ | 5.80 | 0.0635 | 1 |
| 11031 | OCDF | 39001-02-0 | 35.2 | B | 11.6 | 0.0752 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 2.18 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 59 | 25 - 164 |
| 13C12-12378-PeCDD | 72 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 76 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 80 | 17 - 157 |
| 13C12-2378-TCDF | 56 | 24 - 169 |
| 13C12-12378-PeCDF | 71 | 24 - 185 |
| 13C12-23478-PeCDF | 70 | 21 - 178 |
| 13C12-123478-HxCDF | 72 | 26 - 152 |
| 13C12-123678-HxCDF | 76 | 26 - 123 |
| 13C12-234678-HxCDF | 75 | 28 - 136 |
| 13C12-123789-HxCDF | 73 | 29 - 147 |
| 13C12-1234678-HpCDF | 86 | 28 - 143 |
| 13C12-1234789-HpCDF | 71 | 26 - 138 |
| 13C12-OCDF | 70 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312457**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84000 SDG#: PH148-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312457**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 14:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84000 SDG#: PH148-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13352SLF026 | 12/31/2013 08:45 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13352SLF026 | 12/19/2013 09:00 | Anna E Stager | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133500015A | 12/19/2013 06:05 | Melissa McDermott | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133480013A | 12/19/2013 16:14 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133480013A | 12/16/2013 03:00 | Sherry L Morrow | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133500015A | 12/16/2013 20:00 | Elaine F Stoltzfus | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13353005 | 12/23/2013 20:44 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13353005 | 12/19/2013 11:30 | Chin F Ly | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401B | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-541-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312458**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 13:25

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54100 SDG#: PH148-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.81 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.85 | J | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.74 | J | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.93 | J | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.87 | J | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.74 | J | 1.7 | 0.69 | 1 |
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 93 | U | 93 | 46 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 18 | U | 18 | 6.4 | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.2 | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.3 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 18 | U | 18 | 9.3 | 1 |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 790 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 1,200 | J | 2,600 | 780 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 2.1 | | 1.8 | 0.85 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.8 | U | 1.8 | 0.78 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.36 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312458**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 13:25

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54100 SDG#: PH148-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 0.62 | J | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.7 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-541-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312458**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 13:25

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54100 SDG#: PH148-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.01 | U | 1.01 | 0.0988 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.304 | JQ | 5.07 | 0.0781 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.343 | JQ | 5.07 | 0.0535 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 2.78 | JB | 5.07 | 0.0587 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.878 | JQ | 5.07 | 0.0538 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 58.3 | B | 5.07 | 0.0826 | 1 |
| 11031 | OCDD | 3268-87-9 | 468 | B | 10.1 | 0.0595 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.134 | J | 1.01 | 0.0917 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.316 | JB | 5.07 | 0.0435 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.325 | JBQ | 5.07 | 0.0427 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.426 | JB | 5.07 | 0.0479 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.419 | J | 5.07 | 0.0442 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.207 | JBQ | 5.07 | 0.0484 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.577 | JB | 5.07 | 0.0436 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 14.5 | B | 5.07 | 0.0344 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 1.22 | JB | 5.07 | 0.0442 | 1 |
| 11031 | OCDF | 39001-02-0 | 38.3 | B | 10.1 | 0.0505 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.34 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 51 | 25 - 164 |
| 13C12-12378-PeCDD | 59 | 25 - 181 |
| 13C12-123478-HxCDD | 74 | 32 - 141 |
| 13C12-123678-HxCDD | 74 | 28 - 130 |
| 13C12-123789-HxCDD | 72 | 28 - 130 |
| 13C12-1234678-HpCDD | 80 | 23 - 140 |
| 13C12-OCDD | 86 | 17 - 157 |
| 13C12-2378-TCDF | 49 | 24 - 169 |
| 13C12-12378-PeCDF | 58 | 24 - 185 |
| 13C12-23478-PeCDF | 58 | 21 - 178 |
| 13C12-123478-HxCDF | 68 | 26 - 152 |
| 13C12-123678-HxCDF | 72 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 84 | 28 - 143 |
| 13C12-1234789-HpCDF | 77 | 26 - 138 |
| 13C12-OCDF | 79 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312458**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 13:25

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54100 SDG#: PH148-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-541-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312458**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 13:25

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54100 SDG#: PH148-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13352SLF026 | 12/31/2013 09:17 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13352SLF026 | 12/19/2013 09:00 | Anna E Stager | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133500015A | 12/19/2013 06:32 | Melissa McDermott | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133480013A | 12/19/2013 16:29 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133480013A | 12/16/2013 03:00 | Sherry L Morrow | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133500015A | 12/16/2013 20:00 | Elaine F Stoltzfus | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13353005 | 12/23/2013 21:41 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13353005 | 12/19/2013 11:30 | Chin F Ly | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401B | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-542-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312459**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 12:35

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54200 SDG#: PH148-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.0 | J | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | J | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.8 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.2 | J | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.4 | J | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 4.2 | | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 8.1 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.4 | | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 16 | | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.85 | J | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 3.5 | | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.4 | | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.3 | | 1.8 | 0.70 | 1 |
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 38 | U | 38 | 13 | 1 |
| 10401 | Dalapon | 75-99-0 | 96 | U | 96 | 47 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 18 | U | 18 | 11 | 1 |
| 10401 | Dicamba | 1918-00-9 | 13 | U | 13 | 4.3 | 1 |
| 10401 | Dinoseb | 88-85-7 | 26 | U | 26 | 9.6 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 18 | U | 18 | 9.6 | 1 |
| 10401 | MCPA | 94-74-6 | 2,700 | U | 2,700 | 810 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 1,300 | J | 2,700 | 800 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.8 | U | 1.8 | 0.88 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.8 | U | 1.8 | 0.80 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.88 | U | 0.88 | 0.46 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.2 | J | 1.8 | 0.35 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-542-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312459**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 12:35

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54200 SDG#: PH148-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | p,p-DDT | 50-29-3 | 2.3 | | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.74 | J | 0.88 | 0.48 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.88 | U | 0.88 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.64 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.93 | U | 0.93 | 0.93 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.1 | U | 7.1 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-542-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312459**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 12:35

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54200 SDG#: PH148-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.07 | U | 1.07 | 0.0863 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.151 | JQ | 5.34 | 0.0613 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.404 | JQ | 5.34 | 0.0473 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 2.03 | JB | 5.34 | 0.0521 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.799 | J | 5.34 | 0.0481 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 44.8 | B | 5.34 | 0.0732 | 1 |
| 11031 | OCDD | 3268-87-9 | 453 | B | 10.7 | 0.0563 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.127 | JQ | 1.07 | 0.0786 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.402 | JB | 5.34 | 0.0363 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.345 | JBQ | 5.34 | 0.0365 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.366 | JBQ | 5.34 | 0.0386 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.382 | J | 5.34 | 0.0357 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0701 | JBQ | 5.34 | 0.0577 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.626 | JB | 5.34 | 0.0361 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 10.8 | B | 5.34 | 0.0328 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.930 | JB | 5.34 | 0.0491 | 1 |
| 11031 | OCDF | 39001-02-0 | 28.7 | B | 10.7 | 0.0528 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.11 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 65 | 25 - 164 |
| 13C12-12378-PeCDD | 72 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 78 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 61 | 24 - 169 |
| 13C12-12378-PeCDF | 73 | 24 - 185 |
| 13C12-23478-PeCDF | 70 | 21 - 178 |
| 13C12-123478-HxCDF | 73 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 58 | 29 - 147 |
| 13C12-1234678-HpCDF | 87 | 28 - 143 |
| 13C12-1234789-HpCDF | 71 | 26 - 138 |
| 13C12-OCDF | 70 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-542-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312459**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 12:35

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54200 SDG#: PH148-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-542-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312459**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/11/2013 12:35

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54200 SDG#: PH148-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13352SLF026 | 12/31/2013 09:50 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13352SLF026 | 12/19/2013 09:00 | Anna E Stager | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 133500015A | 12/19/2013 06:59 | Melissa McDermott | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133480013A | 12/19/2013 16:44 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133480013A | 12/16/2013 03:00 | Sherry L Morrow | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 133500015A | 12/16/2013 20:00 | Elaine F Stoltzfus | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13353005 | 12/24/2013 01:35 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13353005 | 12/19/2013 11:30 | Chin F Ly | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401B | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-539-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312460**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 09:30

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53900 SDG#: PH148-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.38 | J | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.80 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.4 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.6 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.85 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 0.86 | J | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.7 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 13 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.8 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.3 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.6 | | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.5 | J | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.6 | J | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.87 | U | 0.87 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 0.43 | J | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.87 | U | 0.87 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin | 72-20-8 | 0.39 | J | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 0.55 | J | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-539-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312460**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 09:30

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53900 SDG#: PH148-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 11 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 21 | J | 26 | 11 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 120 | | 26 | 11 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 240 | | 53 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 11 | 5 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 5.5 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-539-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312460**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 09:30

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53900 SDG#: PH148-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0839 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.129 | JQ | 5.17 | 0.0494 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.151 | J | 5.17 | 0.0451 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.280 | JBQ | 5.17 | 0.0471 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.297 | J | 5.17 | 0.0452 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 3.90 | JB | 5.17 | 0.0404 | 1 |
| 11031 | OCDD | 3268-87-9 | 33.8 | B | 10.3 | 0.0283 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.246 | JQ | 1.03 | 0.0810 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.200 | JB | 5.17 | 0.0369 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.430 | JB | 5.17 | 0.0339 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.131 | JBQ | 5.17 | 0.0325 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.169 | JQ | 5.17 | 0.0297 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0803 | JB | 5.17 | 0.0352 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.185 | JB | 5.17 | 0.0299 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.01 | JBQ | 5.17 | 0.0360 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.190 | JBQ | 5.17 | 0.0493 | 1 |
| 11031 | OCDF | 39001-02-0 | 2.03 | JB | 10.3 | 0.0448 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.256 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 60 | 25 - 164 |
| 13C12-12378-PeCDD | 72 | 25 - 181 |
| 13C12-123478-HxCDD | 75 | 32 - 141 |
| 13C12-123678-HxCDD | 76 | 28 - 130 |
| 13C12-123789-HxCDD | 74 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 78 | 17 - 157 |
| 13C12-2378-TCDF | 57 | 24 - 169 |
| 13C12-12378-PeCDF | 70 | 24 - 185 |
| 13C12-23478-PeCDF | 69 | 21 - 178 |
| 13C12-123478-HxCDF | 72 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 74 | 28 - 136 |
| 13C12-123789-HxCDF | 71 | 29 - 147 |
| 13C12-1234678-HpCDF | 86 | 28 - 143 |
| 13C12-1234789-HpCDF | 73 | 26 - 138 |
| 13C12-OCDF | 73 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-539-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312460**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 09:30

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53900 SDG#: PH148-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-539-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312460**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 09:30

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53900 SDG#: PH148-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13352SLF026 | 12/31/2013 10:23 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13352SLF026 | 12/19/2013 09:00 | Anna E Stager | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133480013A | 12/19/2013 16:59 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133480013A | 12/16/2013 03:00 | Sherry L Morrow | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133530025A | 12/23/2013 15:13 | Tracy A Cole | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133530025A | 12/20/2013 09:15 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13353005 | 12/24/2013 02:32 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13353005 | 12/19/2013 11:30 | Chin F Ly | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401B | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-543-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312461**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 13:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54300 SDG#: PH148-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Acenaphthylene | 208-96-8 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Anthracene | 120-12-7 | 17 | U | 17 | 3.4 | 10 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 180 | U | 180 | 34 | 10 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 190 | U | 190 | 62 | 10 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 190 | U | 190 | 62 | 10 |
| 12969 | Chrysene | 218-01-9 | 8.1 | J | 17 | 3.4 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Diethylphthalate | 84-66-2 | 190 | U | 190 | 62 | 10 |
| 12969 | Dimethylphthalate | 131-11-3 | 190 | U | 190 | 62 | 10 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 190 | U | 190 | 62 | 10 |
| 12969 | Fluoranthene | 206-44-0 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Fluorene | 86-73-7 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | U | 17 | 6.9 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 17 | U | 17 | 6.9 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Naphthalene | 91-20-3 | 17 | U | 17 | 6.9 | 10 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 190 | U | 190 | 62 | 10 |
| 12969 | Phenanthrene | 85-01-8 | 17 | U | 17 | 6.9 | 10 |
| 12969 | Pyrene | 129-00-0 | 17 | U | 17 | 6.9 | 10 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 72 | | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 170 | | 52 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 10 | 5 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.0 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-543-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312461**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 13:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54300 SDG#: PH148-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13352SLF026 | 12/31/2013 10:55 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13352SLF026 | 12/19/2013 09:00 | Anna E Stager | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133530025A | 12/23/2013 15:56 | Tracy A Cole | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133530025A | 12/20/2013 09:15 | Katheryne V Sponheimer | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401B | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312462**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.5 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.1 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.1 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.72 | J | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.85 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.0 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 0.64 | J | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.90 | J | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-544-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312462**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 15 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 30 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,680 | | 39.9 | 7.20 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.99 | U | 3.99 | 0.739 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.84 | J | 3.99 | 0.699 | 1 |
| 06946 | Barium | 7440-39-3 | 65.1 | | 0.998 | 0.0329 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.359 | J | 0.998 | 0.0669 | 1 |
| 07914 | Boron | 7440-42-8 | 8.30 | J | 9.98 | 0.839 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.464 | J | 0.998 | 0.0759 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,090 | | 20.0 | 3.33 | 1 |
| 06951 | Chromium | 7440-47-3 | 13.8 | | 3.00 | 0.160 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.46 | | 0.998 | 0.0988 | 1 |
| 06953 | Copper | 7440-50-8 | 3.80 | | 2.00 | 0.290 | 1 |
| 01654 | Iron | 7439-89-6 | 17,600 | | 39.9 | 3.61 | 1 |
| 06955 | Lead | 7439-92-1 | 6.86 | | 3.00 | 0.499 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.5 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,920 | | 9.98 | 1.67 | 1 |
| 06958 | Manganese | 7439-96-5 | 276 | | 0.998 | 0.0829 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.329 | J | 2.00 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.13 | | 2.00 | 0.130 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 385 | | 9.98 | 2.89 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,770 | | 99.8 | 8.33 | 1 |
| 01667 | Sodium | 7440-23-5 | 53.9 | J | 99.8 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.33 | J | 9.98 | 0.220 | 1 |
| 06970 | Titanium | 7440-32-6 | 871 | | 0.998 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.3 | | 0.998 | 0.130 | 1 |
| 06972 | Zinc | 7440-66-6 | 51.6 | | 3.99 | 0.200 | 1 |
| 10146 | Zirconium | 7440-67-7 | 0.877 | J | 4.99 | 0.839 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.284 | J | 0.399 | 0.0998 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0426 | J | 0.200 | 0.0260 | 2 |
| 06144 | Strontium | 7440-24-6 | 9.84 | | 0.399 | 0.0679 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.218 | | 0.200 | 0.0300 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0109 | J | 0.0170 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.47 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 19.2 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312462**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.7 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-544-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312462**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.993 | U | 0.993 | 0.0937 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.126 | JQ | 4.96 | 0.0562 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.133 | JQ | 4.96 | 0.0418 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.474 | JB | 4.96 | 0.0447 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.429 | J | 4.96 | 0.0418 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 4.41 | JB | 4.96 | 0.0420 | 1 |
| 11031 | OCDD | 3268-87-9 | 43.6 | B | 9.93 | 0.0344 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.126 | J | 0.993 | 0.0872 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.229 | JB | 4.96 | 0.0343 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.250 | JB | 4.96 | 0.0325 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.165 | JB | 4.96 | 0.0326 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.214 | JQ | 4.96 | 0.0294 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.150 | JBQ | 4.96 | 0.0342 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.232 | JB | 4.96 | 0.0309 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.99 | JB | 4.96 | 0.0270 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.161 | JB | 4.96 | 0.0388 | 1 |
| 11031 | OCDF | 39001-02-0 | 2.24 | JB | 9.93 | 0.0456 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.304 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 54 | 25 - 164 |
| 13C12-12378-PeCDD | 65 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 76 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 81 | 17 - 157 |
| 13C12-2378-TCDF | 50 | 24 - 169 |
| 13C12-12378-PeCDF | 63 | 24 - 185 |
| 13C12-23478-PeCDF | 61 | 21 - 178 |
| 13C12-123478-HxCDF | 68 | 26 - 152 |
| 13C12-123678-HxCDF | 76 | 26 - 123 |
| 13C12-234678-HxCDF | 73 | 28 - 136 |
| 13C12-123789-HxCDF | 73 | 29 - 147 |
| 13C12-1234678-HpCDF | 91 | 28 - 143 |
| 13C12-1234789-HpCDF | 70 | 26 - 138 |
| 13C12-OCDF | 68 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312462**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312462**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13354SLB026 | 01/02/2014 07:15 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13354SLB026 | 12/23/2013 06:30 | Olivia Arosemena | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133520007A | 12/23/2013 16:18 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133520007A | 12/18/2013 18:35 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133530025A | 12/23/2013 13:47 | Tracy A Cole | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133530025A | 12/20/2013 09:15 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13353005 | 12/24/2013 03:28 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13353005 | 12/19/2013 11:30 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133540637001 | 12/27/2013 10:52 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:34 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:34 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:34 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:30 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:34 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133540637001B | 01/04/2014 00:14 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:14 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:14 | John P Hook | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312462**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:14 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133540638001 | 12/23/2013 09:54 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133540637001 | 12/22/2013 08:29 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133540638001 | 12/22/2013 10:33 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13347039401A | 12/13/2013 17:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401C | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312463**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 29 | | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 29 | | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 29 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 32 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 31 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 35 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 30 | | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 18 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 35 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 33 | | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 29 | | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 33 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 21 | | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 31 | | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 32 | | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 34 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 31 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 31 | | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 21 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 31 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 28 | | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 40 | | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 31 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 32 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 3.6 | | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.6 | | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 4.1 | | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 4.5 | | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 8.9 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 8.8 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 9.8 | | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 4.2 | | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 7.6 | | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 3.2 | | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 7.2 | | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 7.8 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 7.8 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 6.4 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 7.3 | | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.4 | | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.6 | | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 43 | | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312463**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.9 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 8.9 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 21 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 34 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.3 | J | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,000 | | 40.7 | 7.34 | 1 |
| 06944 | Antimony | 7440-36-0 | 33.8 | | 4.07 | 0.753 | 1 |
| 06935 | Arsenic | 7440-38-2 | 18.9 | | 4.07 | 0.713 | 1 |
| 06946 | Barium | 7440-39-3 | 265 | | 1.02 | 0.0336 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.54 | | 1.02 | 0.0682 | 1 |
| 07914 | Boron | 7440-42-8 | 197 | | 10.2 | 0.855 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.48 | | 1.02 | 0.0774 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,640 | | 20.4 | 3.40 | 1 |
| 06951 | Chromium | 7440-47-3 | 33.5 | | 3.05 | 0.163 | 1 |
| 06952 | Cobalt | 7440-48-4 | 54.0 | | 1.02 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 27.6 | | 2.04 | 0.295 | 1 |
| 01654 | Iron | 7439-89-6 | 18,200 | | 40.7 | 3.69 | 1 |
| 06955 | Lead | 7439-92-1 | 22.2 | | 3.05 | 0.509 | 1 |
| 01656 | Lithium | 7439-93-2 | 130 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,270 | | 10.2 | 1.70 | 1 |
| 06958 | Manganese | 7439-96-5 | 336 | | 1.02 | 0.0845 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 194 | | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 59.7 | | 2.04 | 0.132 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 432 | | 10.2 | 2.94 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,880 | | 102 | 8.49 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,020 | | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 376 | | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,200 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 79.3 | | 1.02 | 0.132 | 1 |
| 06972 | Zinc | 7440-66-6 | 102 | | 4.07 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 97.0 | | 5.09 | 0.855 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.51 | | 0.407 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 10.6 | | 0.204 | 0.0265 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.8 | | 0.407 | 0.0692 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.695 | | 0.204 | 0.0305 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.181 | | 0.0166 | 0.010 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 3.7 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-544-NBZ-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312463**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 19.7 | | 1.01 | 0.118 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 99.6 | | 5.04 | 0.0771 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 102 | | 5.04 | 0.0640 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 102 | B | 5.04 | 0.0668 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 101 | | 5.04 | 0.0610 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 103 | B | 5.04 | 0.0625 | 1 |
| 11031 | OCDD | 3268-87-9 | 225 | B | 10.1 | 0.0468 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.3 | | 1.01 | 0.103 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 99.1 | B | 5.04 | 0.0534 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 102 | B | 5.04 | 0.0495 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 106 | B | 5.04 | 0.0583 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 108 | | 5.04 | 0.0535 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 106 | B | 5.04 | 0.0619 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 109 | B | 5.04 | 0.0555 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 107 | B | 5.04 | 0.0452 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 108 | B | 5.04 | 0.0626 | 1 |
| 11031 | OCDF | 39001-02-0 | 216 | B | 10.1 | 0.0631 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 61 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 79 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 82 | 23 - 140 |
| 13C12-OCDD | 85 | 17 - 157 |
| 13C12-2378-TCDF | 56 | 24 - 169 |
| 13C12-12378-PeCDF | 68 | 24 - 185 |
| 13C12-23478-PeCDF | 67 | 21 - 178 |
| 13C12-123478-HxCDF | 73 | 26 - 152 |
| 13C12-123678-HxCDF | 79 | 26 - 123 |
| 13C12-234678-HxCDF | 75 | 28 - 136 |
| 13C12-123789-HxCDF | 75 | 29 - 147 |
| 13C12-1234678-HpCDF | 92 | 28 - 143 |
| 13C12-1234789-HpCDF | 74 | 26 - 138 |
| 13C12-OCDF | 76 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312463**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13354SLB026 | 01/02/2014 07:48 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13354SLB026 | 12/23/2013 06:30 | Olivia Arosemena | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133520007A | 12/23/2013 16:33 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133520007A | 12/18/2013 18:35 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133530025A | 12/23/2013 14:09 | Tracy A Cole | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133530025A | 12/20/2013 09:15 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13353005 | 12/24/2013 04:25 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13353005 | 12/19/2013 11:30 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133540637001 | 12/27/2013 11:04 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:46 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:46 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:46 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:41 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:46 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133540637001B | 01/04/2014 00:21 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133540637001A | 01/07/2014 21:14 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:21 | John P Hook | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312463**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:21 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133540638001 | 12/23/2013 10:00 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133540637001 | 12/22/2013 08:29 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133540638001 | 12/22/2013 10:33 | James L Mertz | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401C | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312464**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 27 | | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 27 | | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 28 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 31 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 30 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 29 | | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 18 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 31 | | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 28 | | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 32 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 20 | | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 30 | | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 30 | | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 31 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 30 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 29 | | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 21 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 32 | | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 32 | | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 29 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 26 | | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 38 | | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 29 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 31 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 3.7 | | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.7 | | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 4.1 | | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 4.5 | | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 8.9 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 8.7 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 9.3 | | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 4.0 | | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 7.8 | | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 3.4 | | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 7.5 | | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 7.7 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 7.8 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 7.1 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 7.3 | | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.5 | | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.7 | | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 43 | | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-544-NBZ-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312464**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.8 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 8.8 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 26 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 41 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.3 | J | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,400 | | 40.7 | 7.34 | 1 |
| 06944 | Antimony | 7440-36-0 | 28.8 | | 4.07 | 0.753 | 1 |
| 06935 | Arsenic | 7440-38-2 | 19.4 | | 4.07 | 0.713 | 1 |
| 06946 | Barium | 7440-39-3 | 282 | | 1.02 | 0.0336 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.43 | | 1.02 | 0.0682 | 1 |
| 07914 | Boron | 7440-42-8 | 191 | | 10.2 | 0.855 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.59 | | 1.02 | 0.0774 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,490 | | 20.4 | 3.40 | 1 |
| 06951 | Chromium | 7440-47-3 | 34.4 | | 3.05 | 0.163 | 1 |
| 06952 | Cobalt | 7440-48-4 | 54.5 | | 1.02 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 27.4 | | 2.04 | 0.295 | 1 |
| 01654 | Iron | 7439-89-6 | 19,100 | | 40.7 | 3.69 | 1 |
| 06955 | Lead | 7439-92-1 | 21.8 | | 3.05 | 0.509 | 1 |
| 01656 | Lithium | 7439-93-2 | 131 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,530 | | 10.2 | 1.70 | 1 |
| 06958 | Manganese | 7439-96-5 | 326 | | 1.02 | 0.0845 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 193 | | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 60.7 | | 2.04 | 0.132 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 433 | | 10.2 | 2.94 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,050 | | 102 | 8.49 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,020 | | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 376 | | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,200 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 79.6 | | 1.02 | 0.132 | 1 |
| 06972 | Zinc | 7440-66-6 | 107 | | 4.07 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 97.8 | | 5.09 | 0.855 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.55 | | 0.407 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 11.1 | | 0.204 | 0.0265 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.7 | | 0.407 | 0.0692 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.704 | | 0.204 | 0.0305 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.178 | | 0.0169 | 0.0101 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 3.7 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-544-NBZ-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312464**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 19.0 | | 0.998 | 0.0806 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 99.5 | | 4.99 | 0.0537 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 100 | | 4.99 | 0.0432 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 102 | B | 4.99 | 0.0448 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 99.1 | | 4.99 | 0.0415 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 101 | B | 4.99 | 0.0451 | 1 |
| 11031 | OCDD | 3268-87-9 | 211 | B | 9.98 | 0.0330 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.0 | | 0.998 | 0.0755 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 98.6 | B | 4.99 | 0.0382 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 100 | B | 4.99 | 0.0382 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 101 | B | 4.99 | 0.0389 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 103 | | 4.99 | 0.0350 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 102 | B | 4.99 | 0.0427 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 104 | B | 4.99 | 0.0368 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 103 | B | 4.99 | 0.0347 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 104 | B | 4.99 | 0.0501 | 1 |
| 11031 | OCDF | 39001-02-0 | 203 | B | 9.98 | 0.0475 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 54 | 25 - 164 |
| 13C12-12378-PeCDD | 64 | 25 - 181 |
| 13C12-123478-HxCDD | 75 | 32 - 141 |
| 13C12-123678-HxCDD | 74 | 28 - 130 |
| 13C12-123789-HxCDD | 74 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 80 | 17 - 157 |
| 13C12-2378-TCDF | 51 | 24 - 169 |
| 13C12-12378-PeCDF | 64 | 24 - 185 |
| 13C12-23478-PeCDF | 61 | 21 - 178 |
| 13C12-123478-HxCDF | 68 | 26 - 152 |
| 13C12-123678-HxCDF | 74 | 26 - 123 |
| 13C12-234678-HxCDF | 69 | 28 - 136 |
| 13C12-123789-HxCDF | 68 | 29 - 147 |
| 13C12-1234678-HpCDF | 88 | 28 - 143 |
| 13C12-1234789-HpCDF | 67 | 26 - 138 |
| 13C12-OCDF | 69 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312464**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13354SLB026 | 01/02/2014 08:21 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13354SLB026 | 12/23/2013 06:30 | Olivia Arosemena | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133520007A | 12/23/2013 16:48 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133520007A | 12/18/2013 18:35 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133530025A | 12/23/2013 14:30 | Tracy A Cole | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133530025A | 12/20/2013 09:15 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13353005 | 12/24/2013 05:22 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13353005 | 12/19/2013 11:30 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133540637001 | 12/27/2013 11:08 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:49 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:49 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:49 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:44 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:49 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133540637001B | 01/04/2014 00:24 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133540637001A | 01/07/2014 21:16 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133540637001A | 01/07/2014 21:16 | John P Hook | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312464**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:24 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133540638001 | 12/23/2013 10:02 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133540637001 | 12/22/2013 08:29 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133540638001 | 12/22/2013 10:33 | James L Mertz | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401C | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312465**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,980 | | 40.7 | 7.34 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.07 | U | 4.07 | 0.753 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.46 | J | 4.07 | 0.713 | 1 |
| 06946 | Barium | 7440-39-3 | 64.8 | | 1.02 | 0.0336 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.369 | J | 1.02 | 0.0682 | 1 |
| 07914 | Boron | 7440-42-8 | 7.68 | J | 10.2 | 0.855 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.494 | J | 1.02 | 0.0774 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,110 | | 20.4 | 3.40 | 1 |
| 06951 | Chromium | 7440-47-3 | 13.7 | | 3.05 | 0.163 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.58 | | 1.02 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 3.48 | | 2.04 | 0.295 | 1 |
| 01654 | Iron | 7439-89-6 | 18,100 | | 40.7 | 3.69 | 1 |
| 06955 | Lead | 7439-92-1 | 7.11 | | 3.05 | 0.509 | 1 |
| 01656 | Lithium | 7439-93-2 | 28.3 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,020 | | 10.2 | 1.70 | 1 |
| 06958 | Manganese | 7439-96-5 | 287 | | 1.02 | 0.0845 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.217 | J | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.46 | | 2.04 | 0.132 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 339 | | 10.2 | 2.94 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,980 | | 102 | 8.49 | 1 |
| 01667 | Sodium | 7440-23-5 | 58.7 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.40 | J | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 970 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.6 | | 1.02 | 0.132 | 1 |
| 06972 | Zinc | 7440-66-6 | 54.7 | | 4.07 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.09 | J | 5.09 | 0.855 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.279 | J | 0.407 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0514 | J | 0.204 | 0.0265 | 2 |
| 06144 | Strontium | 7440-24-6 | 9.79 | | 0.407 | 0.0692 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.270 | | 0.204 | 0.0305 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0167 | U | 0.0167 | 0.0100 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.45 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 18.8 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 3.7 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 3.8 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-544-NBZ-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312465**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:20

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54400 SDG#: PH148-07DUP

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133540637001 | 12/27/2013 11:00 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:42 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:42 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:42 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:37 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:42 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133540637001B | 01/04/2014 00:19 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:19 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:19 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:19 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133540638001 | 12/23/2013 09:58 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133540637001 | 12/22/2013 08:29 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133540638001 | 12/22/2013 10:33 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13347039401A | 12/13/2013 17:00 | Carolyn M Mastropietro | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401C | 12/18/2013 21:53 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401C | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-844-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312466**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84400 SDG#: PH148-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 0.73 | J | 1.7 | 0.67 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.3 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.81 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.1 | J | 1.7 | 0.67 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.80 | J | 1.7 | 0.67 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.67 | J | 1.7 | 0.67 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 0.40 | J | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.49 | J | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-844-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312466**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84400 SDG#: PH148-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 6.8 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 20 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,880 | | 39.7 | 7.16 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.22 | J | 3.97 | 0.735 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.75 | J | 3.97 | 0.695 | 1 |
| 06946 | Barium | 7440-39-3 | 63.9 | | 0.993 | 0.0328 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.382 | J | 0.993 | 0.0665 | 1 |
| 07914 | Boron | 7440-42-8 | 4.20 | J | 9.93 | 0.834 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.993 | U | 0.993 | 0.0754 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,070 | | 19.9 | 3.32 | 1 |
| 06951 | Chromium | 7440-47-3 | 13.5 | | 2.98 | 0.159 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.20 | | 0.993 | 0.0983 | 1 |
| 06953 | Copper | 7440-50-8 | 6.43 | | 1.99 | 0.288 | 1 |
| 01654 | Iron | 7439-89-6 | 17,800 | | 39.7 | 3.59 | 1 |
| 06955 | Lead | 7439-92-1 | 8.44 | | 2.98 | 0.496 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.1 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,960 | | 9.93 | 1.66 | 1 |
| 06958 | Manganese | 7439-96-5 | 273 | | 0.993 | 0.0824 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.287 | J | 1.99 | 0.169 | 1 |
| 06961 | Nickel | 7440-02-0 | 7.68 | | 1.99 | 0.129 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 321 | | 9.93 | 2.87 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,820 | | 99.3 | 8.28 | 1 |
| 01667 | Sodium | 7440-23-5 | 57.6 | J | 99.3 | 16.6 | 1 |
| 06969 | Tin | 7440-31-5 | 2.76 | J | 9.93 | 0.218 | 1 |
| 06970 | Titanium | 7440-32-6 | 959 | | 0.993 | 0.169 | 1 |
| 06971 | Vanadium | 7440-62-2 | 28.4 | | 0.993 | 0.129 | 1 |
| 06972 | Zinc | 7440-66-6 | 53.6 | | 3.97 | 0.199 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.96 | U | 4.96 | 0.834 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.459 | | 0.397 | 0.0993 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0450 | J | 0.199 | 0.0258 | 2 |
| 06144 | Strontium | 7440-24-6 | 10.2 | | 0.397 | 0.0675 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.233 | | 0.199 | 0.0298 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0096 | J | 0.0158 | 0.0095 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.41 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 18 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-844-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312466**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84400 SDG#: PH148-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.2 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-844-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7312466**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84400 SDG#: PH148-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.110 | JQ | 0.992 | 0.0966 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.328 | JQ | 4.96 | 0.0531 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.157 | JQ | 4.96 | 0.0355 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.391 | JB | 4.96 | 0.0378 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.472 | JQ | 4.96 | 0.0356 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 3.20 | JB | 4.96 | 0.0390 | 1 |
| 11031 | OCDD | 3268-87-9 | 26.9 | B | 9.92 | 0.0338 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.202 | JQ | 0.992 | 0.0805 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.288 | JBQ | 4.96 | 0.0354 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.395 | JBQ | 4.96 | 0.0331 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.198 | JB | 4.96 | 0.0334 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.220 | J | 4.96 | 0.0305 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.258 | JBQ | 4.96 | 0.0364 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.301 | JB | 4.96 | 0.0318 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.851 | JB | 4.96 | 0.0239 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.272 | JBQ | 4.96 | 0.0390 | 1 |
| 11031 | OCDF | 39001-02-0 | 2.03 | JB | 9.92 | 0.0524 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.160 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 54 | 25 - 164 |
| 13C12-12378-PeCDD | 67 | 25 - 181 |
| 13C12-123478-HxCDD | 73 | 32 - 141 |
| 13C12-123678-HxCDD | 75 | 28 - 130 |
| 13C12-123789-HxCDD | 72 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 50 | 24 - 169 |
| 13C12-12378-PeCDF | 65 | 24 - 185 |
| 13C12-23478-PeCDF | 62 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 74 | 26 - 123 |
| 13C12-234678-HxCDF | 68 | 28 - 136 |
| 13C12-123789-HxCDF | 66 | 29 - 147 |
| 13C12-1234678-HpCDF | 92 | 28 - 143 |
| 13C12-1234789-HpCDF | 64 | 26 - 138 |
| 13C12-OCDF | 63 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-844-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312466**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84400 SDG#: PH148-08*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-844-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312466**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84400 SDG#: PH148-08*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13354SLB026 | 01/02/2014 08:54 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13354SLB026 | 12/23/2013 06:30 | Olivia Arosemena | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 133520007A | 12/23/2013 17:03 | Jamie L Brillhart | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 133520007A | 12/18/2013 18:35 | Sally L Appleyard | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133530025A | 12/23/2013 16:38 | Tracy A Cole | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133530025A | 12/20/2013 09:15 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13353005 | 12/24/2013 06:18 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13353005 | 12/19/2013 11:30 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:52 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:52 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:52 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 03:52 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 10:57 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133540637001B | 01/04/2014 00:28 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:28 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:28 | John P Hook | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-844-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7312466**
**LL Group # 1440744**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/12/2013 14:40

Submitted: 12/13/2013 10:30
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84400 SDG#: PH148-08*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:28 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133540638001 | 12/23/2013 10:04 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133540637001 | 12/22/2013 08:29 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133540638001 | 12/22/2013 10:33 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13347039401A | 12/13/2013 17:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13352162401C | 12/18/2013 21:53 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13352SLF026 | Sample number(s): 7312454-7312461 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 114 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 97 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 104 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 95 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 79-112 | | |
| Batch number: 13354SLB026 | Sample number(s): 7312462-7312464,7312466 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 90 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 91 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 94 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 94 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 85-122 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 94 | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 87 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 90 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-112 | | |
| Batch number: 133500015A | Sample number(s): 7312454-7312459 | | | | | | | | | |
| 2,4-D | 36 | U | 36. | 12 | ug/kg | 101 | | 59-122 | | |
| Dalapon | 90 | U | 90. | 44 | ug/kg | 41 | | 25-100 | | |
| 2,4-DB | 17 | U | 17. | 6.2 | ug/kg | 117 | | 54-131 | | |
| Dicamba | 12 | U | 12. | 4.0 | ug/kg | 100 | | 55-138 | | |
| Dinoseb | 24 | U | 24. | 9.0 | ug/kg | 42 | | 10-56 | | |
| 2,4-DP (Dichlorprop) | 17 | U | 17. | 9.0 | ug/kg | 135 | | 65-158 | | |
| MCPA | 2,500 U | | 2,500. | 760 | ug/kg | 88 | | 56-133 | | |
| MCPP (Mecoprop) | 2,500 U | | 2,500. | 750 | ug/kg | 90 | | 54-134 | | |
| 2,4,5-T | 1.7 | U | 1.7 | 0.82 | ug/kg | 112 | | 58-135 | | |
| 2,4,5-TP | 1.7 | U | 1.7 | 0.75 | ug/kg | 116 | | 63-130 | | |
| Batch number: 133480013A | Sample number(s): 7312454-7312460 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 87 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 89 | | 62-128 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 87 | | 69-121 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 98 | | 64-130 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 95 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 97 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 92 | | 51-141 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 90 | | 73-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 68 | | 64-130 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 74 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 92 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 88 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 83 | | 60-120 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 87 | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 82 | | 62-127 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 90 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 94 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 133520007A | Sample number(s): 7312462-7312464,7312466 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 102 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 104 | | 62-128 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 111 | | 69-121 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 123 | | 64-130 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 117 | | 69-141 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 118 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 117 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 108 | | 51-141 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 73-135 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 91 | | 64-130 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 108 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 114 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 105 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 98 | | 60-120 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 109 | | 74-127 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 95 | | 62-127 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 105 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 116 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 133530025A | Sample number(s): 7312460-7312464,7312466 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 93 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 96 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 97 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 76 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 76 | | 60-115 | | |
| Batch number: 133540637001 | Sample number(s): 7312462-7312466 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 108 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 106 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 100 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 14.3 | J | 20.0 | 3.34 | mg/kg | 106 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 107 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 104 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 112 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 101 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 103 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 110 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 95 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 95 | | 80-120 | | |
| Tin | 1.62 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 100 | | 80-120 | | |
| Zinc | 0.768 | J | 4.00 | 0.200 | mg/kg | 106 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 100 | | 80-120 | | |
| Batch number: 133540637001A | Sample number(s): 7312462-7312466 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 111 | | 80-120 | | |
| Strontium | 0.111 | J | 0.400 | 0.0680 | mg/kg | 115 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Thallium | 0.200 U | 0.200 | 0.0300 | mg/kg | 112 | | 80-120 | | |
| Batch number: 133540637001B | Sample number(s): 7312462-7312466 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 118 | | 80-120 | | |
| Batch number: 133540638001 | Sample number(s): 7312462-7312466 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 100 | | 85-120 | | |
| Batch number: 13347039401A | Sample number(s): 7312462,7312465-7312466 | | | | | | | | |
| 15a pH by 9045D | | | | | 99 | | 95-105 | | |
| Batch number: 13352162401B | Sample number(s): 7312454-7312461 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| Batch number: 13352162401C | Sample number(s): 7312462-7312466 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13352002 | Sample number(s): 7312454-7312456 | | | | | | | | |
| 2378-TCDD | 0.0902 J | 1.00 | 0.0827 | ng/kg | 82 | | 67-158 | | |
| 12378-PeCDD | 0.0701 J | 5.00 | 0.0555 | ng/kg | 87 | | 70-142 | | |
| 123478-HxCDD | 5.00 U | 5.00 | 0.0374 | ng/kg | 93 | | 70-164 | | |
| 123678-HxCDD | 0.0651 J | 5.00 | 0.0391 | ng/kg | 92 | | 76-134 | | |
| 123789-HxCDD | 0.0482 J | 5.00 | 0.0379 | ng/kg | 90 | | 64-162 | | |
| 1234678-HpCDD | 0.0732 J | 5.00 | 0.0482 | ng/kg | 89 | | 70-140 | | |
| OCDD | 0.238 J | 10.0 | 0.0401 | ng/kg | 88 | | 78-144 | | |
| 2378-TCDF | 0.105 J | 1.00 | 0.0967 | ng/kg | 88 | | 75-158 | | |
| 12378-PeCDF | 0.0761 J | 5.00 | 0.0435 | ng/kg | 89 | | 80-134 | | |
| 23478-PeCDF | 0.0474 J | 5.00 | 0.0408 | ng/kg | 90 | | 68-160 | | |
| 123478-HxCDF | 5.00 U | 5.00 | 0.0397 | ng/kg | 91 | | 72-134 | | |
| 123678-HxCDF | 5.00 U | 5.00 | 0.0368 | ng/kg | 94 | | 84-130 | | |
| 123789-HxCDF | 0.0534 J | 5.00 | 0.0472 | ng/kg | 90 | | 78-130 | | |
| 234678-HxCDF | 0.0388 J | 5.00 | 0.0382 | ng/kg | 91 | | 70-156 | | |
| 1234678-HpCDF | 0.0397 J | 5.00 | 0.0197 | ng/kg | 90 | | 82-122 | | |
| 1234789-HpCDF | 0.0368 J | 5.00 | 0.0293 | ng/kg | 93 | | 78-138 | | |
| OCDF | 0.201 J | 10.0 | 0.0722 | ng/kg | 89 | | 63-170 | | |
| Batch number: 13353005 | Sample number(s): 7312457-7312460,7312462-7312464,7312466 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.111 | ng/kg | 96 | | 67-158 | | |
| 12378-PeCDD | 5.00 U | 5.00 | 0.0572 | ng/kg | 97 | | 70-142 | | |
| 123478-HxCDD | 5.00 U | 5.00 | 0.0280 | ng/kg | 98 | | 70-164 | | |
| 123678-HxCDD | 0.0586 J | 5.00 | 0.0292 | ng/kg | 100 | | 76-134 | | |
| 123789-HxCDD | 5.00 U | 5.00 | 0.0276 | ng/kg | 96 | | 64-162 | | |
| 1234678-HpCDD | 0.0690 J | 5.00 | 0.0341 | ng/kg | 96 | | 70-140 | | |
| OCDD | 0.271 J | 10.0 | 0.0282 | ng/kg | 97 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0876 | ng/kg | 97 | | 75-158 | | |
| 12378-PeCDF | 0.0545 J | 5.00 | 0.0321 | ng/kg | 96 | | 80-134 | | |
| 23478-PeCDF | 0.0525 J | 5.00 | 0.0323 | ng/kg | 99 | | 68-160 | | |
| 123478-HxCDF | 0.0531 J | 5.00 | 0.0287 | ng/kg | 97 | | 72-134 | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 123678-HxCDF | 5.00 | U | 5.00 | 0.0254 | ng/kg | 98 | | 84-130 | | |
| 123789-HxCDF | 0.0403 | J | 5.00 | 0.0290 | ng/kg | 108 | | 78-130 | | |
| 234678-HxCDF | 0.0536 | J | 5.00 | 0.0260 | ng/kg | 97 | | 70-156 | | |
| 1234678-HpCDF | 0.0520 | J | 5.00 | 0.0124 | ng/kg | 96 | | 82-122 | | |
| 1234789-HpCDF | 0.0556 | J | 5.00 | 0.0205 | ng/kg | 100 | | 78-138 | | |
| OCDF | 0.173 | J | 10.0 | 0.0515 | ng/kg | 96 | | 63-170 | | |
| Batch number: 13352002 | Sample number(s): 7312454-7312456 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00970 | | | | ng/kg | | | | | |
| Batch number: 13353005 | Sample number(s): 7312457-7312460,7312462-7312464,7312466 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0200 | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13352SLF026 | Sample number(s): 7312454-7312461 UNSPK: 7312454 | | | | | | | | |
| Acenaphthene | 75 | 75 | 48-127 | 0 | 30 | | | | |
| Acenaphthylene | 74 | 74 | 49-121 | 1 | 30 | | | | |
| Anthracene | 76 | 79 | 52-126 | 4 | 30 | | | | |
| Benzo(a)anthracene | 82 | 86 | 44-143 | 4 | 30 | | | | |
| Benzo(a)pyrene | 83 | 86 | 44-140 | 4 | 30 | | | | |
| Benzo(b)fluoranthene | 102 | 106 | 26-142 | 3 | 30 | | | | |
| Benzo(e)pyrene | 80 | 86 | 70-130 | 7 | 30 | | | | |
| Benzo(g,h,i)perylene | 39 | 40 | 33-141 | 3 | 30 | | | | |
| Benzo(k)fluoranthene | 94 | 104 | 54-142 | 10 | 30 | | | | |
| Butylbenzylphthalate | 100 | 111 | 49-151 | 11 | 30 | | | | |
| Di-n-butylphthalate | 76 | 82 | 52-147 | 8 | 30 | | | | |
| Chrysene | 84 | 86 | 29-148 | 3 | 30 | | | | |
| Dibenz(a,h)anthracene | 49 | 50 | 20-137 | 2 | 30 | | | | |
| Diethylphthalate | 71 | 69 | 43-145 | 2 | 30 | | | | |
| Dimethylphthalate | 91 | 90 | 58-129 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 95 | 87 | 39-167 | 6 | 30 | | | | |
| Fluoranthene | 76 | 80 | 40-148 | 4 | 30 | | | | |
| Fluorene | 75 | 68 | 51-137 | 10 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 50 | 51 | 17-136 | 1 | 30 | | | | |
| 1-Methylnaphthalene | 89 | 88 | 50-131 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 90 | 87 | 35-152 | 3 | 30 | | | | |
| Naphthalene | 82 | 77 | 31-148 | 5 | 30 | | | | |
| N-Nitrosodimethylamine | 87 | 84 | 48-113 | 3 | 30 | | | | |
| Di-n-octylphthalate | 147 | 167* | 52-162 | 12 | 30 | | | | |
| Phenanthrene | 78 | 80 | 29-142 | 2 | 30 | | | | |
| Pyrene | 90 | 97 | 26-143 | 8 | 30 | | | | |
| Batch number: 13354SLB026 | Sample number(s): 7312462-7312464,7312466 UNSPK: 7312462 | | | | | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 84 | 79 | 48-127 | 7 | 30 | | | | |
| Acenaphthylene | 85 | 80 | 49-121 | 6 | 30 | | | | |
| Anthracene | 86 | 82 | 52-126 | 5 | 30 | | | | |
| Benzo(a)anthracene | 91 | 87 | 44-143 | 4 | 30 | | | | |
| Benzo(a)pyrene | 88 | 86 | 44-140 | 3 | 30 | | | | |
| Benzo(b)fluoranthene | 95 | 92 | 26-142 | 2 | 30 | | | | |
| Benzo(e)pyrene | 89 | 85 | 70-130 | 4 | 30 | | | | |
| Benzo(g,h,i)perylene | 53 | 53 | 33-141 | 1 | 30 | | | | |
| Benzo(k)fluoranthene | 101 | 96 | 54-142 | 5 | 30 | | | | |
| Butylbenzylphthalate | 96 | 92 | 49-151 | 4 | 30 | | | | |
| Di-n-butylphthalate | 85 | 81 | 52-147 | 4 | 30 | | | | |
| Chrysene | 91 | 88 | 29-148 | 4 | 30 | | | | |
| Dibenz(a,h)anthracene | 61 | 60 | 20-137 | 1 | 30 | | | | |
| Diethylphthalate | 91 | 87 | 43-145 | 5 | 30 | | | | |
| Dimethylphthalate | 94 | 89 | 58-129 | 6 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 99 | 92 | 39-167 | 8 | 30 | | | | |
| Fluoranthene | 86 | 82 | 40-148 | 4 | 30 | | | | |
| Fluorene | 90 | 85 | 51-137 | 6 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 62 | 61 | 17-136 | 1 | 30 | | | | |
| 1-Methylnaphthalene | 99 | 92 | 50-131 | 7 | 30 | | | | |
| 2-Methylnaphthalene | 98 | 92 | 35-152 | 7 | 30 | | | | |
| Naphthalene | 87 | 81 | 31-148 | 6 | 30 | | | | |
| N-Nitrosodimethylamine | 83 | 78 | 48-113 | 6 | 30 | | | | |
| Di-n-octylphthalate | 117 | 111 | 52-162 | 6 | 30 | | | | |
| Phenanthrene | 85 | 82 | 29-142 | 4 | 30 | | | | |
| Pyrene | 88 | 84 | 26-143 | 4 | 30 | | | | |
| Batch number: 133500015A | Sample number(s): 7312454-7312459 UNSPK: 7312454 | | | | | | | | |
| 2,4-D | 138 | 148* | 42-143 | 7 | 35 | | | | |
| Dalapon | 96 | 75 | 16-98 | 25 | 50 | | | | |
| 2,4-DB | 135 | 146 | 10-179 | 8 | 50 | | | | |
| Dicamba | 118 | 138* | 55-133 | 16 | 50 | | | | |
| Dinoseb | 30 | 25 | 10-52 | 19 | 35 | | | | |
| 2,4-DP (Dichlorprop) | 158 | 168 | 32-171 | 6 | 50 | | | | |
| MCPA | 118 | 135 | 23-169 | 14 | 50 | | | | |
| MCPP (Mecoprop) | 103 | 113 | 24-164 | 9 | 50 | | | | |
| 2,4,5-T | 27 | 35 | 12-172 | 26 | 35 | | | | |
| 2,4,5-TP | 104 | 111 | 10-142 | 6 | 35 | | | | |
| Batch number: 133480013A | Sample number(s): 7312454-7312460 UNSPK: 7312454 | | | | | | | | |
| Aldrin | 86 | 94 | 16-126 | 9 | 50 | | | | |
| Alpha BHC | 76 | 89 | 14-140 | 16 | 50 | | | | |
| Beta BHC | 100 | 102 | 42-133 | 2 | 50 | | | | |
| Gamma BHC - Lindane | 92 | 107 | 30-137 | 16 | 50 | | | | |
| p,p-DDD | 96 | 104 | 43-149 | 9 | 50 | | | | |
| p,p-DDE | 127 | 141 | 35-152 | 10 | 50 | | | | |
| p,p-DDT | 86 | 102 | 12-193 | 13 | 50 | | | | |
| Delta BHC | 75 | 105 | 13-153 | 34 | 50 | | | | |
| Dieldrin | 81 | 92 | 41-153 | 12 | 50 | | | | |
| Endosulfan I | 65 | 77 | 26-146 | 17 | 50 | | | | |
| Endosulfan II | 73 | 83 | 34-141 | 13 | 50 | | | | |
| Endosulfan Sulfate | 91 | 106 | 10-181 | 16 | 50 | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Endrin | 81 | 91 | 30-152 | 11 | 50 | | | | |
| Endrin Aldehyde | 79 | 87 | 23-138 | 10 | 50 | | | | |
| Endrin Ketone | 86 | 93 | 30-148 | 7 | 50 | | | | |
| Heptachlor | 81 | 97 | 16-152 | 16 | 50 | | | | |
| Heptachlor Epoxide | 87 | 105 | 33-144 | 18 | 50 | | | | |
| Methoxychlor | 95 | 106 | 41-161 | 10 | 50 | | | | |
| Batch number: 133520007A | Sample number(s): 7312462-7312464,7312466 UNSPK: 7312462 | | | | | | | | |
| Aldrin | 102 | 105 | 16-126 | 3 | 50 | | | | |
| Alpha BHC | 102 | 105 | 14-140 | 3 | 50 | | | | |
| Beta BHC | 117 | 116 | 42-133 | 1 | 50 | | | | |
| Gamma BHC - Lindane | 126 | 127 | 30-137 | 1 | 50 | | | | |
| p,p-DDD | 119 | 118 | 43-149 | 0 | 50 | | | | |
| p,p-DDE | 118 | 116 | 35-152 | 1 | 50 | | | | |
| p,p-DDT | 120 | 113 | 12-193 | 5 | 50 | | | | |
| Delta BHC | 118 | 114 | 13-153 | 3 | 50 | | | | |
| Dieldrin | 104 | 106 | 41-153 | 2 | 50 | | | | |
| Endosulfan I | 88 | 94 | 26-146 | 7 | 50 | | | | |
| Endosulfan II | 103 | 107 | 34-141 | 5 | 50 | | | | |
| Endosulfan Sulfate | 113 | 111 | 10-181 | 2 | 50 | | | | |
| Endrin | 103 | 103 | 30-152 | 1 | 50 | | | | |
| Endrin Aldehyde | 89 | 98 | 23-138 | 10 | 50 | | | | |
| Endrin Ketone | 104 | 104 | 30-148 | 0 | 50 | | | | |
| Heptachlor | 94 | 97 | 16-152 | 3 | 50 | | | | |
| Heptachlor Epoxide | 103 | 105 | 33-144 | 1 | 50 | | | | |
| Methoxychlor | 114 | 116 | 41-161 | 2 | 50 | | | | |
| Batch number: 133530025A | Sample number(s): 7312460-7312464,7312466 UNSPK: 7312462 | | | | | | | | |
| EFH (C12-C14) | 95 | 93 | 49-123 | 1 | 20 | | | | |
| EFH (C15-C20) | 115 | 113 | 49-123 | 0 | 20 | | | | |
| EFH (C21-C30) | 49 | 83 | 49-123 | 19 | 20 | | | | |
| EFH (C30-C40) | 28* | 74 | 49-123 | 19 | 20 | | | | |
| EFH (C8-C11) | 84 | 82 | 49-123 | 2 | 20 | | | | |
| Batch number: 133540637001 | Sample number(s): 7312462-7312466 UNSPK: 7312462 BKG: 7312462 | | | | | | | | |
| Aluminum | 1159 (2) | 1359 (2) | 75-125 | 3 | 20 | 9,320 | 9,610 | 3 | 20 |
| Antimony | 66* | 57* | 75-125 | 16 | 20 | 3.85 U | 3.92 U | 0 (1) | 20 |
| Arsenic | 105 | 108 | 75-125 | 3 | 20 | 2.73 J | 2.37 J | 14 (1) | 20 |
| Barium | 98 | 106 | 75-125 | 6 | 20 | 62.6 | 62.4 | 0 | 20 |
| Beryllium | 102 | 100 | 75-125 | 2 | 20 | 0.346 J | 0.355 J | 2 (1) | 20 |
| Boron | 93 | 90 | 75-125 | 3 | 20 | 8.00 J | 7.40 J | 8 (1) | 20 |
| Cadmium | 99 | 101 | 75-125 | 2 | 20 | 0.447 J | 0.475 J | 6 (1) | 20 |
| Calcium | 133 (2) | 97 (2) | 75-125 | 6 | 20 | 2,020 | 2,030 | 1 | 20 |
| Chromium | 97 | 101 | 75-125 | 3 | 20 | 13.3 | 13.2 | 1 (1) | 20 |
| Cobalt | 97 | 98 | 75-125 | 1 | 20 | 4.29 | 4.41 | 3 (1) | 20 |
| Copper | 94 | 93 | 75-125 | 1 | 20 | 3.66 | 3.35 | 9 (1) | 20 |
| Iron | 600 (2) | 1470 (2) | 75-125 | 5 | 20 | 16,900 | 17,400 | 3 | 20 |
| Lead | 100 | 98 | 75-125 | 2 | 20 | 6.61 | 6.85 | 4 (1) | 20 |
| Lithium | 103 | 103 | 75-125 | 0 | 20 | 24.5 | 27.2 | 10 | 20 |
| Magnesium | 168 (2) | 299 (2) | 75-125 | 6 | 20 | 3,780 | 3,870 | 2 | 20 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | 118 (2) | 99 (2) | 75-125 | 3 | 20 | 266 | 277 | 4 | 20 |
| Molybdenum | 95 | 95 | 75-125 | 1 | 20 | 0.316 J | 0.209 J | 41* (1) | 20 |
| Nickel | 101 | 103 | 75-125 | 2 | 20 | 7.83 | 8.15 | 4 (1) | 20 |
| Phosphorus | 46* | 47* | 75-125 | 0 | 20 | 371 | 327 | 13 | 20 |
| Potassium | 108 | 125 | 75-125 | 4 | 20 | 2,670 | 2,870 | 7 | 20 |
| Sodium | 94 | 94 | 75-125 | 0 | 20 | 51.9 J | 56.5 J | 9 (1) | 20 |
| Tin | 92 | 92 | 75-125 | 0 | 20 | 2.24 J | 2.31 J | 3 (1) | 20 |
| Titanium | 327 (2) | 323 (2) | 75-125 | 0 | 20 | 839 | 934 | 11 | 20 |
| Vanadium | 102 | 103 | 75-125 | 0 | 20 | 26.3 | 26.6 | 1 | 20 |
| Zinc | 100 | 108 | 75-125 | 4 | 20 | 49.7 | 52.7 | 6 | 20 |
| Zirconium | 94 | 95 | 75-125 | 1 | 20 | 0.844 J | 1.05 J | 22* (1) | 20 |
| Batch number: 133540637001A | Sample number(s): 7312462-7312466 UNSPK: 7312462 BKG: 7312462 | | | | | | | | |
| Silver | 103 | 108 | 75-125 | 5 | 20 | 0.0410 J | 0.0495 J | 19 (1) | 20 |
| Strontium | 98 | 97 | 75-125 | 1 | 20 | 9.48 | 9.43 | 1 | 20 |
| Thallium | 117 | 119 | 75-125 | 1 | 20 | 0.210 | 0.260 | 21* (1) | 20 |
| Batch number: 133540637001B | Sample number(s): 7312462-7312466 UNSPK: 7312462 BKG: 7312462 | | | | | | | | |
| Selenium | 110 | 111 | 75-125 | 1 | 20 | 0.273 J | 0.268 J | 2 (1) | 20 |
| Batch number: 133540638001 | Sample number(s): 7312462-7312466 UNSPK: 7312462 BKG: 7312462 | | | | | | | | |
| 3a Mercury 7471A | 102 | 99 | 65-135 | 2 | 20 | 0.0105 J | 0.0161 U | 200* (1) | 20 |
| Batch number: 13347039401A | Sample number(s): 7312462,7312465-7312466 BKG: 7312462 | | | | | | | | |
| 15a pH by 9045D | | | | | | 6.47 | 6.45 | 0 | 3 |
| Batch number: 13352162401B | Sample number(s): 7312454-7312461 BKG: 7312454 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 15.2 | 13.9 | 9 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 15.2 | 13.9 | 9 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 15.2 | 13.9 | 9 | 20 |
| Batch number: 13352162401C | Sample number(s): 7312462-7312466 BKG: 7312462 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.7 | 3.8 | 2 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 3.7 | 3.8 | 2 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 3.7 | 3.8 | 2 | 20 |
| Batch number: 13352002 | Sample number(s): 7312454-7312456 UNSPK: 7312454 | | | | | | | | |
| 2378-TCDD | 83 | 82 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDD | 87 | 88 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDD | 91 | 93 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDD | 93 | 93 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDD | 89 | 91 | 40-135 | 3 | 20 | | | | |
| 1234678-HpCDD | 93 | 87 | 40-135 | 4 | 20 | | | | |
| OCDD | 109 | 78 | 40-135 | 14 | 20 | | | | |
| 2378-TCDF | 85 | 87 | 40-135 | 3 | 20 | | | | |
| 12378-PeCDF | 90 | 91 | 40-135 | 1 | 20 | | | | |
| 23478-PeCDF | 90 | 91 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 91 | 93 | 40-135 | 2 | 20 | | | | |
| 123678-HxCDF | 94 | 96 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 92 | 95 | 40-135 | 3 | 20 | | | | |
| 234678-HxCDF | 91 | 94 | 40-135 | 5 | 20 | | | | |
| 1234678-HpCDF | 92 | 94 | 40-135 | 2 | 20 | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 1234789-HpCDF | 92 | 94 | 40-135 | 2 | 20 | | | | |
| OCDF | 90 | 89 | 40-135 | 0 | 20 | | | | |
| Batch number: 13353005 | Sample number(s): 7312457-7312460,7312462-7312464,7312466 UNSPK: 7312462 | | | | | | | | |
| 2378-TCDD | 98 | 95 | 40-135 | 4 | 20 | | | | |
| 12378-PeCDD | 99 | 100 | 40-135 | 0 | 20 | | | | |
| 123478-HxCDD | 101 | 100 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDD | 101 | 102 | 40-135 | 0 | 20 | | | | |
| 123789-HxCDD | 99 | 99 | 40-135 | 2 | 20 | | | | |
| 1234678-HpCDD | 97 | 97 | 40-135 | 2 | 20 | | | | |
| OCDD | 90 | 84 | 40-135 | 7 | 20 | | | | |
| 2378-TCDF | 100 | 100 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDF | 98 | 99 | 40-135 | 0 | 20 | | | | |
| 23478-PeCDF | 101 | 100 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDF | 105 | 101 | 40-135 | 5 | 20 | | | | |
| 123678-HxCDF | 107 | 103 | 40-135 | 5 | 20 | | | | |
| 123789-HxCDF | 105 | 102 | 40-135 | 3 | 20 | | | | |
| 234678-HxCDF | 108 | 104 | 40-135 | 5 | 20 | | | | |
| 1234678-HpCDF | 104 | 102 | 40-135 | 3 | 20 | | | | |
| 1234789-HpCDF | 107 | 105 | 40-135 | 4 | 20 | | | | |
| OCDF | 106 | 101 | 40-135 | 6 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13352SLF026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7312454 | 79 | 84 | 101 |
| 7312455 | 67 | 71 | 91 |
| 7312456 | 70 | 73 | 86 |
| 7312457 | 94 | 88 | 107 |
| 7312458 | 95 | 93 | 110 |
| 7312459 | 100 | 85 | 108 |
| 7312460 | 86 | 86 | 98 |
| 7312461 | 96 | 91 | 112 |
| Blank | 89 | 92 | 110 |
| LCS | 83 | 84 | 102 |
| MS | 67 | 71 | 91 |
| MSD | 70 | 73 | 86 |
| Limits: | 54-129 | 59-125 | 61-125 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13354SLB026

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

## Surrogate Quality Control

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7312462 | 81 | 78 | 97 |
| 7312463 | 78 | 74 | 94 |
| 7312464 | 75 | 73 | 88 |
| 7312466 | 84 | 83 | 100 |
| Blank | 81 | 82 | 101 |
| LCS | 79 | 81 | 97 |
| MS | 78 | 74 | 94 |
| MSD | 75 | 73 | 88 |
| Limits: | 54-129 | 59-125 | 61-125 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 133480013A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7312454 | 80 | 87 |
| 7312455 | 84 | 92 |
| 7312456 | 88 | 101 |
| 7312457 | 78 | 84 |
| 7312458 | 84 | 99 |
| 7312459 | 100 | 98 |
| 7312460 | 77 | 92 |
| Blank | 102 | 111 |
| LCS | 90 | 95 |
| MS | 84 | 92 |
| MSD | 88 | 101 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 21a Herbicides by EPA 8151A
Batch number: 133500015A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7312454 | 101 |
| 7312455 | 104 |
| 7312456 | 108 |
| 7312457 | 100 |
| 7312458 | 99 |
| 7312459 | 92 |
| Blank | 84 |
| LCS | 96 |
| MS | 104 |
| MSD | 108 |
| Limits: | 50-150 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 133520007A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7312462 | 102 | 115 |
| 7312463 | 106 | 112 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7312464 | 104 | 116 |
| 7312466 | 95 | 105 |
| Blank | 104 | 115 |
| LCS | 109 | 125* |
| MS | 106 | 112 |
| MSD | 104 | 116 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 133530025A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7312460 | 125 | 115 |
| 7312461 | 108 | 89 |
| 7312462 | 112 | 92 |
| 7312463 | 113 | 93 |
| 7312464 | 113 | 93 |
| 7312466 | 103 | 85 |
| Blank | 105 | 87 |
| LCS | 109 | 96 |
| MS | 113 | 93 |
| MSD | 113 | 93 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13352002

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7312454 | 78 | 69 | 76 | 82 | 79 | 70 |
| 7312455 | 66 | 61 | 70 | 73 | 73 | 66 |
| 7312456 | 66 | 60 | 69 | 70 | 71 | 69 |
| Blank | 71 | 65 | 79 | 83 | 81 | 72 |
| MS | 66 | 61 | 70 | 73 | 73 | 66 |
| MSD | 66 | 60 | 69 | 70 | 71 | 69 |
| OPR | 66 | 60 | 71 | 78 | 75 | 69 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7312454 | 89 | 62 | 61 | 76 | 87 | 87 |
| 7312455 | 76 | 59 | 58 | 66 | 79 | 78 |
| 7312456 | 74 | 62 | 61 | 65 | 79 | 77 |
| Blank | 86 | 66 | 63 | 72 | 91 | 93 |
| MS | 76 | 59 | 58 | 66 | 79 | 78 |
| MSD | 74 | 62 | 61 | 65 | 79 | 77 |
| OPR | 86 | 59 | 54 | 68 | 85 | 87 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7312454 | 85 | 76 | 75 | 70 | 75 |
| 7312455 | 78 | 71 | 68 | 60 | 64 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

## Surrogate Quality Control

| | | | | | |
|---|---|---|---|---|---|
| 7312456 | 76 | 74 | 68 | 60 | 64 |
| Blank | 88 | 78 | 75 | 62 | 68 |
| MS | 78 | 71 | 68 | 60 | 64 |
| MSD | 76 | 74 | 68 | 60 | 64 |
| OPR | 84 | 76 | 70 | 56 | 66 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13353005

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7312457 | 59 | 70 | 72 | 76 | 75 | 73 |
| 7312458 | 51 | 58 | 68 | 72 | 71 | 72 |
| 7312459 | 65 | 70 | 73 | 77 | 76 | 58 |
| 7312460 | 60 | 69 | 72 | 77 | 74 | 71 |
| 7312462 | 54 | 61 | 68 | 76 | 73 | 73 |
| 7312463 | 61 | 67 | 73 | 79 | 75 | 75 |
| 7312464 | 54 | 61 | 68 | 74 | 69 | 68 |
| 7312466 | 54 | 62 | 67 | 74 | 68 | 66 |
| Blank | 51 | 61 | 60 | 66 | 62 | 62 |
| MS | 61 | 67 | 73 | 79 | 75 | 75 |
| MSD | 54 | 61 | 68 | 74 | 69 | 68 |
| OPR | 56 | 65 | 64 | 70 | 67 | 62 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7312457 | 86 | 71 | 70 | 72 | 77 | 77 |
| 7312458 | 84 | 77 | 79 | 59 | 74 | 74 |
| 7312459 | 87 | 71 | 70 | 72 | 77 | 78 |
| 7312460 | 86 | 73 | 73 | 72 | 75 | 76 |
| 7312462 | 91 | 70 | 68 | 65 | 78 | 77 |
| 7312463 | 92 | 74 | 76 | 70 | 78 | 79 |
| 7312464 | 88 | 67 | 69 | 64 | 75 | 74 |
| 7312466 | 92 | 64 | 63 | 67 | 73 | 75 |
| Blank | 84 | 58 | 56 | 66 | 68 | 69 |
| MS | 92 | 74 | 76 | 70 | 78 | 79 |
| MSD | 88 | 67 | 69 | 64 | 75 | 74 |
| OPR | 88 | 66 | 66 | 72 | 76 | 77 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7312457 | 76 | 79 | 80 | 56 | 71 |
| 7312458 | 72 | 80 | 86 | 49 | 58 |
| 7312459 | 77 | 77 | 77 | 61 | 73 |
| 7312460 | 74 | 79 | 78 | 57 | 70 |
| 7312462 | 76 | 81 | 81 | 50 | 63 |
| 7312463 | 80 | 82 | 85 | 56 | 68 |
| 7312464 | 74 | 77 | 80 | 51 | 64 |
| 7312466 | 72 | 76 | 77 | 50 | 65 |
| Blank | 68 | 71 | 69 | 45 | 63 |
| MS | 80 | 82 | 85 | 56 | 68 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440744
Reported: 01/08/14 at 09:12 AM

## Surrogate Quality Control

| | | | | | |
|---|---|---|---|---|---|
| MSD | 74 | 77 | 80 | 51 | 64 |
| OPR | 76 | 81 | 81 | 49 | 67 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

13013 1440744 7312454-66

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 12/12/2013
CarrierName: FedEx
AirbillNo:

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131212-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Total Nitrogen ASTM D5373 | TOC ASTM D5310 | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-540-NBZ-SB-0.0-0.5MS | 12/11/13 14:20 | SO | None | 6 - SS-Sleeve | 10 day | | | | | | | X | | X | | | | | | | X | X | | | | | | | | | | | | | | | | | MS/MSD |
| SL-840-NBZ-SB-0.0-0.5 | 12/11/13 14:40 | SO | None | 2 - SS-Sleeve | 10 day | | | | | | | X | | X | | | | | | | X | X | | | | | | | | | | | | | | | | | |
| SL-541-NBZ-SB-0.0-0.5 | 12/11/13 13:25 | SO | None | 2 - SS-Sleeve | 10 day | | | | | | | X | | X | | | | | | | X | X | | | | | | | | | | | | | | | | | |
| SL-542-NBZ-SB-0.0-0.5 | 12/11/13 12:35 | SO | None | 2 - SS-Sleeve | 10 day | | | | | | | X | | X | | | | | | | X | X | | | | | | | | | | | | | | | | | |
| SL-539-NBZ-SB-0.0-0.5 | 12/12/13 09:30 | SO | None | 2 - SS-Sleeve | 10 day | | | | | | | X | | X | | | | | | | | | X | | | X | | | | | | | | | | | | | |
| SL-543-NBZ-SB-0.0-0.5 | 12/12/13 13:40 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | X | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| SL-544-NBZ-SB-0.0-0.5MS | 12/12/13 14:20 | SO | None | 6 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | X | | | X | | | | | | | | | | | | | MS/MSD |
| SL-544-NBZ-SB-0.0-0.5MS | 12/12/13 14:20 | SO | None | 1 - 16 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | MS/MSD |
| SL-844-NBZ-SB-0.0-0.5 | 12/12/13 14:40 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | X | | | X | | | | | | | | | | | | | |
| SL-844-NBZ-SB-0.0-0.5 | 12/12/13 14:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12/12/2013 | 16000 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 12/13/13 | 1030 |

eurofins | Lancaster Laboratories

# Environmental Sample Administration Receipt Documentation Log

1440744

**Client/Project:** CDM Smith

**Date of Receipt:** 12/13/13

**Time of Receipt:** 1030

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT146 | 0.6 | TB | WI | Y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** Ø

**Paperwork Discrepancy/Unpacking Problems:**

did not receive STS-BIO-50-DOS_P01-3.0-3.0 12/12/13 13:15
(2-8oz glass)

**Unpacker Signature/Emp#:** 3647 **Date/Time:** 12/13/13 1115

Issued by Dept. 6042 Management

2174.06

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

January 08, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 12/14/2013
Group Number: 1440980
SDG: PH151
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-505-NBZ-SB-0.0-0.5 Soil | 7313727 |
| SL-521-NBZ-SB-0.0-0.5 Soil | 7313728 |
| SL-557-NBZ-SB-0.0-0.5 Soil | 7313729 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-505-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea STS

**LL Sample # SW 7313727**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 13:00 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

505-- SDG#: PH151-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.84 | J | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.4 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.3 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 4.0 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.3 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.1 | J | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 4.1 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 8.4 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 4.0 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.93 | J | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 5.6 | | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 7.9 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 20 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 6.2 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.5 | | 1.7 | 0.70 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 15 | J | 26 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 67 | | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 230 | | 52 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 10 | 5 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,900 | | 41.5 | 7.47 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.34 | J | 4.15 | 0.767 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.14 | | 4.15 | 0.726 | 1 |
| 06946 | Barium | 7440-39-3 | 89.4 | | 1.04 | 0.0342 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.570 | J | 1.04 | 0.0695 | 1 |
| 07914 | Boron | 7440-42-8 | 8.32 | J | 10.4 | 0.871 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.04 | U | 1.04 | 0.0788 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,940 | | 20.7 | 3.46 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.0 | | 3.11 | 0.166 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.00 | | 1.04 | 0.103 | 1 |
| 06953 | Copper | 7440-50-8 | 12.6 | | 2.07 | 0.301 | 1 |
| 01654 | Iron | 7439-89-6 | 21,800 | | 41.5 | 3.75 | 1 |
| 06955 | Lead | 7439-92-1 | 17.3 | | 3.11 | 0.518 | 1 |
| 01656 | Lithium | 7439-93-2 | 28.2 | | 4.1 | 0.35 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-505-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea STS**

**LL Sample # SW 7313727**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 13:00 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

505-- SDG#: PH151-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01657 | Magnesium | 7439-95-4 | 4,520 | | 10.4 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 333 | | 1.04 | 0.0861 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.247 | J | 2.07 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.4 | | 2.07 | 0.135 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 510 | | 10.4 | 3.00 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,710 | | 104 | 8.65 | 1 |
| 01667 | Sodium | 7440-23-5 | 68.6 | J | 104 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 3.11 | J | 10.4 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 818 | | 1.04 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 33.6 | | 1.04 | 0.135 | 1 |
| 06972 | Zinc | 7440-66-6 | 73.8 | | 4.15 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.09 | J | 5.18 | 0.871 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.427 | | 0.415 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0674 | J | 0.207 | 0.0270 | 2 |
| 06144 | Strontium | 7440-24-6 | 23.3 | | 1.04 | 0.176 | 5 |
| 06145 | Thallium | 7440-28-0 | 0.307 | | 0.207 | 0.0311 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0362 | | 0.0174 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.93 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 19.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-505-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea STS

**LL Sample # SW 7313727**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 13:00 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

505-- SDG#: PH151-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0807 | JQ | 1.05 | 0.0521 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.326 | JBQ | 5.24 | 0.0472 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.147 | JB | 5.24 | 0.0313 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.394 | JB | 5.24 | 0.0333 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.419 | JB | 5.24 | 0.0308 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 3.44 | JB | 5.24 | 0.0270 | 1 |
| 11031 | OCDD | 3268-87-9 | 24.0 | B | 10.5 | 0.0218 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.440 | JQ | 1.05 | 0.0652 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.718 | JB | 5.24 | 0.0324 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.608 | JB | 5.24 | 0.0296 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.224 | JB | 5.24 | 0.0284 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.239 | JBQ | 5.24 | 0.0274 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.202 | JB | 5.24 | 0.0280 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.272 | JBQ | 5.24 | 0.0253 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.08 | JB | 5.24 | 0.0280 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.125 | JBQ | 5.24 | 0.0315 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.79 | JB | 10.5 | 0.0277 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.395 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 73 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 82 | 23 - 140 |
| 13C12-OCDD | 79 | 17 - 157 |
| 13C12-2378-TCDF | 67 | 24 - 169 |
| 13C12-12378-PeCDF | 71 | 24 - 185 |
| 13C12-23478-PeCDF | 74 | 21 - 178 |
| 13C12-123478-HxCDF | 82 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 87 | 28 - 136 |
| 13C12-123789-HxCDF | 88 | 29 - 147 |
| 13C12-1234678-HpCDF | 84 | 28 - 143 |
| 13C12-1234789-HpCDF | 83 | 26 - 138 |
| 13C12-OCDF | 80 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-505-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea STS**

**LL Sample # SW 7313727**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 13:00 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

505-- SDG#: PH151-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-505-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea STS**

**LL Sample # SW 7313727**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 13:00 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

505-- SDG#: PH151-01

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13352SLF026 | 01/02/2014 06:42 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13352SLF026 | 12/19/2013 09:00 | Anna E Stager | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500024A | 12/19/2013 02:30 | Heather E Williams | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500024A | 12/17/2013 08:40 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13355001 | 12/24/2013 14:55 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13355001 | 12/21/2013 11:00 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:03 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:03 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:03 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:03 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:01 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133540637001B | 01/04/2014 00:31 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:31 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133540637001A | 01/07/2014 21:19 | John P Hook | 5 |
| 06145 | Thallium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:31 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133540638001 | 12/23/2013 10:06 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133540637001 | 12/22/2013 08:29 | James L Mertz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-505-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea STS**

**LL Sample # SW 7313727**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 13:00 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

505-- SDG#: PH151-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133540638001 | 12/22/2013 10:33 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13349039401A | 12/15/2013 04:40 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13354162401A | 12/20/2013 23:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-521-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea STS

**LL Sample # SW 7313728**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 09:35 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

521-- SDG#: PH151-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.75 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.90 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 28 | | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.1 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 11 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.79 | J | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.2 | J | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.7 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.5 | J | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.1 | | 1.7 | 0.69 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 4.2 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 27 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 57 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,000 | | 40.1 | 7.24 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.50 | J | 4.01 | 0.743 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.36 | | 4.01 | 0.703 | 1 |
| 06946 | Barium | 7440-39-3 | 74.8 | | 1.00 | 0.0331 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.660 | J | 1.00 | 0.0672 | 1 |
| 07914 | Boron | 7440-42-8 | 8.25 | J | 10.0 | 0.843 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.00 | U | 1.00 | 0.0763 | 1 |
| 01650 | Calcium | 7440-70-2 | 6,130 | | 20.1 | 3.35 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.1 | | 3.01 | 0.161 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.83 | | 1.00 | 0.0994 | 1 |
| 06953 | Copper | 7440-50-8 | 12.5 | | 2.01 | 0.291 | 1 |
| 01654 | Iron | 7439-89-6 | 22,900 | | 40.1 | 3.63 | 1 |
| 06955 | Lead | 7439-92-1 | 13.7 | | 3.01 | 0.502 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.2 | | 4.0 | 0.34 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-521-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea STS**

**LL Sample # SW 7313728**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 09:35 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

521-- SDG#: PH151-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01657 | Magnesium | 7439-95-4 | 5,690 | | 10.0 | 1.68 | 1 |
| 06958 | Manganese | 7439-96-5 | 332 | | 1.00 | 0.0833 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.176 | J | 2.01 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.4 | | 2.01 | 0.130 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 508 | | 10.0 | 2.90 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,130 | | 100 | 8.37 | 1 |
| 01667 | Sodium | 7440-23-5 | 65.8 | J | 100 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 2.82 | J | 10.0 | 0.221 | 1 |
| 06970 | Titanium | 7440-32-6 | 896 | | 1.00 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 38.2 | | 1.00 | 0.130 | 1 |
| 06972 | Zinc | 7440-66-6 | 67.1 | | 4.01 | 0.201 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.07 | J | 5.02 | 0.843 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.150 | J | 0.401 | 0.100 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0775 | J | 0.201 | 0.0261 | 2 |
| 06144 | Strontium | 7440-24-6 | 28.7 | | 1.00 | 0.171 | 5 |
| 06145 | Thallium | 7440-28-0 | 0.285 | | 0.201 | 0.0301 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0148 | J | 0.0172 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.68 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 19.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-521-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea STS**

**LL Sample # SW 7313728**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 09:35 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

521-- SDG#: PH151-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.0547 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.11 | U | 5.11 | 0.0421 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0637 | JBQ | 5.11 | 0.0389 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.283 | JB | 5.11 | 0.0388 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.286 | JBQ | 5.11 | 0.0376 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.19 | JB | 5.11 | 0.0307 | 1 |
| 11031 | OCDD | 3268-87-9 | 15.6 | B | 10.2 | 0.0253 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.161 | JQ | 1.02 | 0.0539 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.192 | JBQ | 5.11 | 0.0272 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.268 | JBQ | 5.11 | 0.0241 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.138 | JBQ | 5.11 | 0.0251 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.155 | JBQ | 5.11 | 0.0251 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0773 | JB | 5.11 | 0.0249 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.163 | JBQ | 5.11 | 0.0230 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.625 | JB | 5.11 | 0.0286 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0807 | JBQ | 5.11 | 0.0322 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.10 | JB | 10.2 | 0.0339 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0692 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 66 | 25 - 164 |
| 13C12-12378-PeCDD | 68 | 25 - 181 |
| 13C12-123478-HxCDD | 74 | 32 - 141 |
| 13C12-123678-HxCDD | 75 | 28 - 130 |
| 13C12-123789-HxCDD | 75 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 73 | 17 - 157 |
| 13C12-2378-TCDF | 60 | 24 - 169 |
| 13C12-12378-PeCDF | 64 | 24 - 185 |
| 13C12-23478-PeCDF | 67 | 21 - 178 |
| 13C12-123478-HxCDF | 74 | 26 - 152 |
| 13C12-123678-HxCDF | 75 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 79 | 29 - 147 |
| 13C12-1234678-HpCDF | 75 | 28 - 143 |
| 13C12-1234789-HpCDF | 76 | 26 - 138 |
| 13C12-OCDF | 73 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-521-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea STS**

**LL Sample # SW 7313728**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 09:35 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

521-- SDG#: PH151-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-521-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea STS**

**LL Sample # SW 7313728**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 09:35 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

521-- SDG#: PH151-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13352SLF026 | 12/31/2013 12:01 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13352SLF026 | 12/19/2013 09:00 | Anna E Stager | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133500024A | 12/18/2013 09:01 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133500024A | 12/17/2013 08:40 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13355001 | 12/24/2013 15:52 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13355001 | 12/21/2013 11:00 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:07 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:07 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:07 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:07 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:12 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133540637001B | 01/04/2014 00:38 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:38 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133540637001A | 01/07/2014 21:21 | John P Hook | 5 |
| 06145 | Thallium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:38 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133540638001 | 12/23/2013 10:08 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133540637001 | 12/22/2013 08:29 | James L Mertz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-521-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea STS**

**LL Sample # SW 7313728**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 09:35 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

521-- SDG#: PH151-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133540638001 | 12/22/2013 10:33 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13349039401A | 12/15/2013 04:40 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13354162401A | 12/20/2013 23:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-557-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea STS**

**LL Sample # SW 7313729**
**LL Group # 1440980**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/13/2013 10:55 by EL

Submitted: 12/14/2013 10:50
Reported: 01/08/2014 09:12

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

557-- SDG#: PH151-03*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 133540023A | 12/24/2013 03:39 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 133540023A | 12/21/2013 11:25 | Sally L Appleyard | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13354162401A | 12/20/2013 23:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440980
Reported: 01/08/14 at 09:12 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13352SLF026 | Sample number(s): 7313727-7313728 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 107 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 114 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 97 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 104 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 95 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 79-112 | | |
| Batch number: 133540023A | Sample number(s): 7313729 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 76 | 69 | 36-106 | 9 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 93 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 98 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 133500024A | Sample number(s): 7313727-7313728 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 76-115 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440980
Reported: 01/08/14 at 09:12 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 87 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 75 | | 60-115 | | |
| Batch number: 133540637001 | Sample number(s): 7313727-7313728 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 108 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 106 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 100 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 14.3 | J | 20.0 | 3.34 | mg/kg | 106 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 107 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 104 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 112 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 101 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 103 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 110 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 95 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 95 | | 80-120 | | |
| Tin | 1.62 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 100 | | 80-120 | | |
| Zinc | 0.768 | J | 4.00 | 0.200 | mg/kg | 106 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 100 | | 80-120 | | |
| Batch number: 133540637001A | Sample number(s): 7313727-7313728 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 111 | | 80-120 | | |
| Strontium | 0.111 | J | 0.400 | 0.0680 | mg/kg | 115 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 112 | | 80-120 | | |
| Batch number: 133540637001B | Sample number(s): 7313727-7313728 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 118 | | 80-120 | | |
| Batch number: 133540638001 | Sample number(s): 7313727-7313728 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 100 | | 85-120 | | |
| Batch number: 13349039401A | Sample number(s): 7313727-7313728 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 99 | | 90-110 | | |
| Batch number: 13354162401A | Sample number(s): 7313727-7313729 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440980
Reported: 01/08/14 at 09:12 AM

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13355001 | Sample number(s): 7313727-7313728 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0563 | ng/kg | 100 | | 67-158 | | |
| 12378-PeCDD | 0.112 | J | 5.00 | 0.0345 | ng/kg | 103 | | 70-142 | | |
| 123478-HxCDD | 0.0633 | J | 5.00 | 0.0237 | ng/kg | 105 | | 70-164 | | |
| 123678-HxCDD | 0.0646 | J | 5.00 | 0.0259 | ng/kg | 106 | | 76-134 | | |
| 123789-HxCDD | 0.0480 | J | 5.00 | 0.0231 | ng/kg | 104 | | 64-162 | | |
| 1234678-HpCDD | 0.0769 | J | 5.00 | 0.0264 | ng/kg | 102 | | 70-140 | | |
| OCDD | 0.301 | J | 10.0 | 0.0207 | ng/kg | 105 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0391 | ng/kg | 108 | | 75-158 | | |
| 12378-PeCDF | 0.0691 | J | 5.00 | 0.0202 | ng/kg | 106 | | 80-134 | | |
| 23478-PeCDF | 0.0714 | J | 5.00 | 0.0188 | ng/kg | 107 | | 68-160 | | |
| 123478-HxCDF | 0.0490 | J | 5.00 | 0.0166 | ng/kg | 110 | | 72-134 | | |
| 123678-HxCDF | 0.0663 | J | 5.00 | 0.0165 | ng/kg | 113 | | 84-130 | | |
| 123789-HxCDF | 0.0985 | J | 5.00 | 0.0174 | ng/kg | 122 | | 78-130 | | |
| 234678-HxCDF | 0.0478 | J | 5.00 | 0.0161 | ng/kg | 112 | | 70-156 | | |
| 1234678-HpCDF | 0.105 | J | 5.00 | 0.0107 | ng/kg | 113 | | 82-122 | | |
| 1234789-HpCDF | 0.0601 | J | 5.00 | 0.0129 | ng/kg | 109 | | 78-138 | | |
| OCDF | 0.141 | J | 10.0 | 0.0321 | ng/kg | 108 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0438 | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13352SLF026 | Sample number(s): 7313727-7313728 UNSPK: P312454 | | | | | | | | |
| Acenaphthene | 75 | 75 | 48-127 | 0 | 30 | | | | |
| Acenaphthylene | 74 | 74 | 49-121 | 1 | 30 | | | | |
| Anthracene | 76 | 79 | 52-126 | 4 | 30 | | | | |
| Benzo(a)anthracene | 82 | 86 | 44-143 | 4 | 30 | | | | |
| Benzo(a)pyrene | 83 | 86 | 44-140 | 4 | 30 | | | | |
| Benzo(b)fluoranthene | 102 | 106 | 26-142 | 3 | 30 | | | | |
| Benzo(e)pyrene | 80 | 86 | 70-130 | 7 | 30 | | | | |
| Benzo(g,h,i)perylene | 39 | 40 | 33-141 | 3 | 30 | | | | |
| Benzo(k)fluoranthene | 94 | 104 | 54-142 | 10 | 30 | | | | |
| Butylbenzylphthalate | 100 | 111 | 49-151 | 11 | 30 | | | | |
| Di-n-butylphthalate | 76 | 82 | 52-147 | 8 | 30 | | | | |
| Chrysene | 84 | 86 | 29-148 | 3 | 30 | | | | |
| Dibenz(a,h)anthracene | 49 | 50 | 20-137 | 2 | 30 | | | | |
| Diethylphthalate | 71 | 69 | 43-145 | 2 | 30 | | | | |
| Dimethylphthalate | 91 | 90 | 58-129 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 95 | 87 | 39-167 | 6 | 30 | | | | |
| Fluoranthene | 76 | 80 | 40-148 | 4 | 30 | | | | |
| Fluorene | 75 | 68 | 51-137 | 10 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 50 | 51 | 17-136 | 1 | 30 | | | | |
| 1-Methylnaphthalene | 89 | 88 | 50-131 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 90 | 87 | 35-152 | 3 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440980
Reported: 01/08/14 at 09:12 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | 82 | 77 | 31-148 | 5 | 30 | | | | |
| N-Nitrosodimethylamine | 87 | 84 | 48-113 | 3 | 30 | | | | |
| Di-n-octylphthalate | 147 | 167* | 52-162 | 12 | 30 | | | | |
| Phenanthrene | 78 | 80 | 29-142 | 2 | 30 | | | | |
| Pyrene | 90 | 97 | 26-143 | 8 | 30 | | | | |
| Batch number: 133540023A | Sample number(s): 7313729 UNSPK: 7313729 | | | | | | | | |
| PCB-1016 | 70 | 84 | 41-135 | 18 | 50 | | | | |
| PCB-1260 | 73 | 89 | 40-134 | 20 | 50 | | | | |
| Batch number: 133500024A | Sample number(s): 7313727-7313728 UNSPK: P307349 | | | | | | | | |
| EFH (C12-C14) | 101 | 94 | 49-123 | 8 | 20 | | | | |
| EFH (C15-C20) | 75 | 15* | 49-123 | 40* | 20 | | | | |
| EFH (C21-C30) | -40 (2) | -175 (2) | 49-123 | 40* | 20 | | | | |
| EFH (C30-C40) | -178 (2) | -294 (2) | 49-123 | 23* | 20 | | | | |
| EFH (C8-C11) | 79 | 82 | 49-123 | 4 | 20 | | | | |
| Batch number: 133540637001 | Sample number(s): 7313727-7313728 UNSPK: P312462 BKG: P312462 | | | | | | | | |
| Aluminum | 1159 (2) | 1359 (2) | 75-125 | 3 | 20 | 9,320 | 9,610 | 3 | 20 |
| Antimony | 66* | 57* | 75-125 | 16 | 20 | 3.85 U | 3.92 U | 0 (1) | 20 |
| Arsenic | 105 | 108 | 75-125 | 3 | 20 | 2.73 J | 2.37 J | 14 (1) | 20 |
| Barium | 98 | 106 | 75-125 | 6 | 20 | 62.6 | 62.4 | 0 | 20 |
| Beryllium | 102 | 100 | 75-125 | 2 | 20 | 0.346 J | 0.355 J | 2 (1) | 20 |
| Boron | 93 | 90 | 75-125 | 3 | 20 | 8.00 J | 7.40 J | 8 (1) | 20 |
| Cadmium | 99 | 101 | 75-125 | 2 | 20 | 0.447 J | 0.475 J | 6 (1) | 20 |
| Calcium | 133 (2) | 97 (2) | 75-125 | 6 | 20 | 2,020 | 2,030 | 1 | 20 |
| Chromium | 97 | 101 | 75-125 | 3 | 20 | 13.3 | 13.2 | 1 (1) | 20 |
| Cobalt | 97 | 98 | 75-125 | 1 | 20 | 4.29 | 4.41 | 3 (1) | 20 |
| Copper | 94 | 93 | 75-125 | 1 | 20 | 3.66 | 3.35 | 9 (1) | 20 |
| Iron | 600 (2) | 1470 (2) | 75-125 | 5 | 20 | 16,900 | 17,400 | 3 | 20 |
| Lead | 100 | 98 | 75-125 | 2 | 20 | 6.61 | 6.85 | 4 (1) | 20 |
| Lithium | 103 | 103 | 75-125 | 0 | 20 | 24.5 | 27.2 | 10 | 20 |
| Magnesium | 168 (2) | 299 (2) | 75-125 | 6 | 20 | 3,780 | 3,870 | 2 | 20 |
| Manganese | 118 (2) | 99 (2) | 75-125 | 3 | 20 | 266 | 277 | 4 | 20 |
| Molybdenum | 95 | 95 | 75-125 | 1 | 20 | 0.316 J | 0.209 J | 41* (1) | 20 |
| Nickel | 101 | 103 | 75-125 | 2 | 20 | 7.83 | 8.15 | 4 (1) | 20 |
| Phosphorus | 46* | 47* | 75-125 | 0 | 20 | 371 | 327 | 13 | 20 |
| Potassium | 108 | 125 | 75-125 | 4 | 20 | 2,670 | 2,870 | 7 | 20 |
| Sodium | 94 | 94 | 75-125 | 0 | 20 | 51.9 J | 56.5 J | 9 (1) | 20 |
| Tin | 92 | 92 | 75-125 | 0 | 20 | 2.24 J | 2.31 J | 3 (1) | 20 |
| Titanium | 327 (2) | 323 (2) | 75-125 | 0 | 20 | 839 | 934 | 11 | 20 |
| Vanadium | 102 | 103 | 75-125 | 0 | 20 | 26.3 | 26.6 | 1 | 20 |
| Zinc | 100 | 108 | 75-125 | 4 | 20 | 49.7 | 52.7 | 6 | 20 |
| Zirconium | 94 | 95 | 75-125 | 1 | 20 | 0.844 J | 1.05 J | 22* (1) | 20 |
| Batch number: 133540637001A | Sample number(s): 7313727-7313728 UNSPK: P312462 BKG: P312462 | | | | | | | | |
| Silver | 103 | 108 | 75-125 | 5 | 20 | 0.0410 J | 0.0495 J | 19 (1) | 20 |
| Strontium | 98 | 97 | 75-125 | 1 | 20 | 9.48 | 9.43 | 1 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440980
Reported: 01/08/14 at 09:12 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Thallium | 117 | 119 | 75-125 | 1 | 20 | 0.210 | 0.260 | 21* (1) | 20 |
| Batch number: 133540637001B | Sample number(s): 7313727-7313728 UNSPK: P312462 BKG: P312462 | | | | | | | | |
| Selenium | 110 | 111 | 75-125 | 1 | 20 | 0.273 J | 0.268 J | 2 (1) | 20 |
| Batch number: 133540638001 | Sample number(s): 7313727-7313728 UNSPK: P312462 BKG: P312462 | | | | | | | | |
| 3a Mercury 7471A | 102 | 99 | 65-135 | 2 | 20 | 0.0105 J | 0.0161 U | 200* (1) | 20 |
| Batch number: 13349039401A | Sample number(s): 7313727-7313728 BKG: 7313728 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.68 | 7.71 | 0 | 3 |
| Batch number: 13354162401A | Sample number(s): 7313727-7313729 BKG: 7313729 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.6 | 4.8 | 29* | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13352SLF026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7313727 | 70 | 64 | 81 |
| 7313728 | 79 | 77 | 93 |
| Blank | 89 | 92 | 110 |
| LCS | 83 | 84 | 102 |
| MS | 67 | 71 | 91 |
| MSD | 70 | 73 | 86 |
| Limits: | 54-129 | 59-125 | 61-125 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 133540023A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7313729 | 105 | 93 |
| Blank | 110 | 97 |
| LCS | 101 | 97 |
| LCSD | 109 | 106 |
| MS | 77 | 69 |
| MSD | 95 | 89 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 133500024A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1440980
Reported: 01/08/14 at 09:12 AM

## Surrogate Quality Control

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7313727 | 85 | 87 |
| 7313728 | 84 | 86 |
| Blank | 87 | 90 |
| LCS | 86 | 91 |
| MS | 83 | 81 |
| MSD | 86 | 89 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13355001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7313727 | 73 | 74 | 82 | 81 | 87 | 88 |
| 7313728 | 66 | 67 | 74 | 75 | 78 | 79 |
| Blank | 52 | 55 | 68 | 69 | 70 | 73 |
| OPR | 29 | 33 | 36 | 36 | 37 | 25 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7313727 | 84 | 83 | 80 | 73 | 83 | 81 |
| 7313728 | 75 | 76 | 73 | 68 | 74 | 75 |
| Blank | 73 | 72 | 72 | 56 | 70 | 69 |
| OPR | 37 | 35 | 34 | 32 | 37 | 37 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7313727 | 82 | 82 | 79 | 67 | 71 |
| 7313728 | 75 | 74 | 73 | 60 | 64 |
| Blank | 70 | 72 | 73 | 50 | 53 |
| OPR | 36 | 37 | 35 | 27 | 30 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith** A-13013

DateShipped: 12/13/2013 G-1440980

CarrierName: FedEx

AirbillNo: 797401915901 S-7313727-29

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20131213-02

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-505-NBZ-SB-0.0-0.5 | 12/13/13 13:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-505-NBZ-SB-0.0-0.5 | 12/13/13 13:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-521-NBZ-SB-0.0-0.5 | 12/13/13 09:35 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-521-NBZ-SB-0.0-0.5 | 12/13/13 09:35 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-557-NBZ-SB-0.0-0.5 | 12/13/13 10:55 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sly Myself | 12/13 | 2013 | 1600 | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | 1050 |

12/14/13

eurofins | Lancaster Laboratories

G-1440980

# Environmental Sample Administration
# Receipt Documentation Log

**Client/Project:** CDM

**Date of Receipt:** 12/14/13

**Time of Receipt:** 1050

**Source Code:** SO-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT121 | 1.0 | TB | WI | Y | B | |
| 2 | ↓ | 0.7 | ↓ | ↓ | ↓ | ↓ | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** 2308 **Date/Time:** 12/14/13 1126

Issued by Dept. 6042 Management

2174.06

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

# ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

January 09, 2014

Project: SSFL Phase 3 Sampling

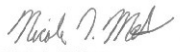
Submittal Date: 12/17/2013
Group Number: 1441366
SDG: PH155
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-517-NBZ-SB-0.0-0.5 Soil | 7315437 |
| SL-517-NBZ-SB-2.0-3.0 Soil | 7315438 |
| SL-518-NBZ-SB-0.0-0.5 Soil | 7315439 |
| SL-519-NBZ-SB-0.0-0.5 Soil | 7315440 |
| SL-520-NBZ-SB-0.0-0.5 Soil | 7315441 |
| TB2-121613 Water | 7315442 |
| EB2-121613 Water | 7315443 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-517-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7315437**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 13:40 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51700 SDG#: PH155-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.6 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.99 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.3 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.1 | J | 1.7 | 0.68 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.1 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 11 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 31 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 26,000 | | 41.3 | 7.44 | 1 |
| 06944 | Antimony | 7440-36-0 | 2.22 | J | 4.13 | 0.764 | 1 |
| 06935 | Arsenic | 7440-38-2 | 10.2 | | 4.13 | 0.723 | 1 |
| 06946 | Barium | 7440-39-3 | 123 | | 1.03 | 0.0341 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.18 | | 1.03 | 0.0692 | 1 |
| 07914 | Boron | 7440-42-8 | 9.81 | J | 10.3 | 0.867 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.03 | U | 1.03 | 0.0785 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,140 | | 20.6 | 3.45 | 1 |
| 06951 | Chromium | 7440-47-3 | 32.6 | | 3.10 | 0.165 | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.94 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 25.2 | | 2.06 | 0.299 | 1 |
| 01654 | Iron | 7439-89-6 | 38,300 | | 82.6 | 7.47 | 2 |
| 06955 | Lead | 7439-92-1 | 19.2 | | 3.10 | 0.516 | 1 |
| 01656 | Lithium | 7439-93-2 | 42.1 | | 4.1 | 0.35 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315437**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 13:40 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51700 SDG#: PH155-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01657 | Magnesium | 7439-95-4 | 8,270 | | 10.3 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 348 | | 1.03 | 0.0857 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.230 | J | 2.06 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 21.4 | | 2.06 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 595 | | 10.3 | 2.98 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,530 | | 103 | 8.61 | 1 |
| 01667 | Sodium | 7440-23-5 | 97.6 | J | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 4.06 | J | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,250 | | 1.03 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 64.9 | | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 108 | | 4.13 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.64 | J | 5.16 | 0.867 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.312 | J | 0.413 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.106 | J | 0.206 | 0.0268 | 2 |
| 06144 | Strontium | 7440-24-6 | 29.9 | | 1.03 | 0.176 | 5 |
| 06145 | Thallium | 7440-28-0 | 0.440 | | 0.206 | 0.0310 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0196 | | 0.0173 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.50 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 18.8 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.1 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-517-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7315437**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 13:40 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51700 SDG#: PH155-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0989 | JQ | 1.01 | 0.0432 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.318 | JBQ | 5.07 | 0.0330 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.110 | JBQ | 5.07 | 0.0287 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.166 | JB | 5.07 | 0.0315 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.191 | JB | 5.07 | 0.0289 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.913 | JB | 5.07 | 0.0244 | 1 |
| 11031 | OCDD | 3268-87-9 | 6.05 | JB | 10.1 | 0.0157 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.147 | J | 1.01 | 0.0398 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.408 | JB | 5.07 | 0.0200 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.369 | JB | 5.07 | 0.0179 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.222 | JBQ | 5.07 | 0.0193 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.199 | JB | 5.07 | 0.0190 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.234 | JB | 5.07 | 0.0217 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.155 | JBQ | 5.07 | 0.0185 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.310 | JB | 5.07 | 0.0158 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.132 | JB | 5.07 | 0.0190 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.643 | JB | 10.1 | 0.0276 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.232 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 66 | 25 - 164 |
| 13C12-12378-PeCDD | 71 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 81 | 28 - 130 |
| 13C12-1234678-HpCDD | 82 | 23 - 140 |
| 13C12-OCDD | 78 | 17 - 157 |
| 13C12-2378-TCDF | 65 | 24 - 169 |
| 13C12-12378-PeCDF | 69 | 24 - 185 |
| 13C12-23478-PeCDF | 71 | 21 - 178 |
| 13C12-123478-HxCDF | 82 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 86 | 28 - 136 |
| 13C12-123789-HxCDF | 82 | 29 - 147 |
| 13C12-1234678-HpCDF | 84 | 28 - 143 |
| 13C12-1234789-HpCDF | 80 | 26 - 138 |
| 13C12-OCDF | 77 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315437**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 13:40 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51700 SDG#: PH155-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315437**
**LL Group # 1441366**
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Collected: 12/16/2013 13:40 by E

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3201 Jermantown Road
Suite 400
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51700 SDG#: PH155-01

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13354SLB026 | 01/02/2014 09:27 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13354SLB026 | 12/23/2013 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133530025A | 12/23/2013 12:01 | Tracy A Cole | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133530025A | 12/20/2013 09:15 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13355001 | 12/25/2013 01:26 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13355001 | 12/21/2013 11:00 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:11 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:11 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:15 | Tara L Snyder | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:11 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:16 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133540637001B | 01/04/2014 00:40 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:40 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133540637001A | 01/07/2014 21:23 | John P Hook | 5 |
| 06145 | Thallium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:40 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133540638001 | 12/23/2013 10:14 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133540637001 | 12/22/2013 08:29 | James L Mertz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315437**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 13:40 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51700 SDG#: PH155-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133540638001 | 12/22/2013 10:33 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13351039402B | 12/17/2013 11:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13354162401B | 12/20/2013 23:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-517-NBZ-SB-2.0-3.0 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7315438**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 14:20 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51720 SDG#: PH155-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.44 | J | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 23.9 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.0 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 9.3 | J | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 23,100 | | 42.3 | 7.62 | 1 |
| 06944 | Antimony | 7440-36-0 | 2.25 | J | 4.23 | 0.782 | 1 |
| 06935 | Arsenic | 7440-38-2 | 9.97 | | 4.23 | 0.740 | 1 |
| 06946 | Barium | 7440-39-3 | 112 | | 1.06 | 0.0349 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.17 | | 1.06 | 0.0708 | 1 |
| 07914 | Boron | 7440-42-8 | 7.71 | J | 10.6 | 0.888 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.06 | U | 1.06 | 0.0803 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,070 | | 21.1 | 3.53 | 1 |
| 06951 | Chromium | 7440-47-3 | 30.0 | | 3.17 | 0.169 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-NBZ-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315438**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 14:20 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51720 SDG#: PH155-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06952 | Cobalt | 7440-48-4 | 11.3 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 24.2 | | 2.11 | 0.306 | 1 |
| 01654 | Iron | 7439-89-6 | 36,700 | | 84.5 | 7.65 | 2 |
| 06955 | Lead | 7439-92-1 | 18.1 | | 3.17 | 0.528 | 1 |
| 01656 | Lithium | 7439-93-2 | 41.3 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,910 | | 10.6 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 372 | | 1.06 | 0.0877 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.11 | U | 2.11 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 21.5 | | 2.11 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 500 | | 10.6 | 3.05 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,490 | | 106 | 8.81 | 1 |
| 01667 | Sodium | 7440-23-5 | 131 | | 106 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 3.79 | J | 10.6 | 0.232 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,030 | | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 56.3 | | 1.06 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 103 | | 4.23 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.14 | J | 5.28 | 0.888 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.305 | J | 0.423 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0914 | J | 0.211 | 0.0275 | 2 |
| 06144 | Strontium | 7440-24-6 | 22.0 | | 1.06 | 0.180 | 5 |
| 06145 | Thallium | 7440-28-0 | 0.429 | | 0.211 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0144 | J | 0.0168 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.91 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 18.6 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-517-NBZ-SB-2.0-3.0 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7315438**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 14:20 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51720 SDG#: PH155-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0455 JQ | 1.06 | 0.0415 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0440 JB | 5.28 | 0.0257 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0457 JBQ | 5.28 | 0.0207 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0364 JB | 5.28 | 0.0217 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0539 JBQ | 5.28 | 0.0199 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.0841 JBQ | 5.28 | 0.0178 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.516 JB | 10.6 | 0.0185 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0363 JQ | 1.06 | 0.0289 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0726 JBQ | 5.28 | 0.0145 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0428 JB | 5.28 | 0.0136 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0513 JBQ | 5.28 | 0.0129 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0436 JBQ | 5.28 | 0.0128 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0587 JBQ | 5.28 | 0.0126 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0254 JBQ | 5.28 | 0.0118 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0717 JBQ | 5.28 | 0.00971 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0429 JB | 5.28 | 0.0111 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.146 JBQ | 10.6 | 0.0236 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0610 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 71 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 88 | 23 - 140 |
| 13C12-OCDD | 83 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 70 | 24 - 185 |
| 13C12-23478-PeCDF | 72 | 21 - 178 |
| 13C12-123478-HxCDF | 83 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 86 | 28 - 136 |
| 13C12-123789-HxCDF | 92 | 29 - 147 |
| 13C12-1234678-HpCDF | 88 | 28 - 143 |
| 13C12-1234789-HpCDF | 89 | 26 - 138 |
| 13C12-OCDF | 83 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-NBZ-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315438**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 14:20 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51720 SDG#: PH155-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-NBZ-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315438**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 14:20 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51720 SDG#: PH155-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13354SLB026 | 01/02/2014 10:00 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13354SLB026 | 12/23/2013 06:30 | Olivia Arosemena | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 13347A16B | 12/27/2013 17:15 | Marie D Beamenderfer | 23.9 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201335133463 | 12/17/2013 16:10 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201335133463 | 12/17/2013 16:10 | Larry E Bevins | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133530025A | 12/23/2013 12:22 | Tracy A Cole | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133530025A | 12/20/2013 09:15 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13355001 | 12/25/2013 02:22 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13355001 | 12/21/2013 11:00 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:18 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:18 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:22 | Tara L Snyder | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:18 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:19 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133540637001B | 01/04/2014 00:43 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:43 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133540637001A | 01/07/2014 21:24 | John P Hook | 5 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-517-NBZ-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315438**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 14:20 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51720 SDG#: PH155-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:43 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133540638001 | 12/23/2013 10:16 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133540637001 | 12/22/2013 08:29 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133540638001 | 12/22/2013 10:33 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13351039402B | 12/17/2013 11:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13354162401B | 12/20/2013 23:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-518-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7315439**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 11:25 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-518- SDG#: PH155-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.3 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 13 | J | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.0 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 59 | | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 110 | | 52 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 14 | J | 26 | 10 | 5 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,700 | | 40.2 | 7.25 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.73 | J | 4.02 | 0.745 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.49 | | 4.02 | 0.704 | 1 |
| 06946 | Barium | 7440-39-3 | 77.7 | | 1.01 | 0.0332 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.675 | J | 1.01 | 0.0674 | 1 |
| 07914 | Boron | 7440-42-8 | 6.14 | J | 10.1 | 0.845 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.01 | U | 1.01 | 0.0765 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,730 | | 20.1 | 3.36 | 1 |
| 06951 | Chromium | 7440-47-3 | 20.2 | | 3.02 | 0.161 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.03 | | 1.01 | 0.0996 | 1 |
| 06953 | Copper | 7440-50-8 | 14.8 | | 2.01 | 0.292 | 1 |
| 01654 | Iron | 7439-89-6 | 24,200 | | 40.2 | 3.64 | 1 |
| 06955 | Lead | 7439-92-1 | 13.3 | | 3.02 | 0.503 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.8 | | 4.0 | 0.34 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-518-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315439**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 11:25 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-518- SDG#: PH155-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01657 | Magnesium | 7439-95-4 | 5,520 | | 10.1 | 1.68 | 1 |
| 06958 | Manganese | 7439-96-5 | 293 | | 1.01 | 0.0835 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.256 | J | 2.01 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.7 | | 2.01 | 0.131 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 497 | | 10.1 | 2.91 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,210 | | 101 | 8.39 | 1 |
| 01667 | Sodium | 7440-23-5 | 60.7 | J | 101 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 3.05 | J | 10.1 | 0.221 | 1 |
| 06970 | Titanium | 7440-32-6 | 942 | | 1.01 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.1 | | 1.01 | 0.131 | 1 |
| 06972 | Zinc | 7440-66-6 | 67.7 | | 4.02 | 0.201 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.88 | J | 5.03 | 0.845 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.227 | J | 0.402 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0584 | J | 0.201 | 0.0262 | 2 |
| 06144 | Strontium | 7440-24-6 | 24.5 | | 1.01 | 0.171 | 5 |
| 06145 | Thallium | 7440-28-0 | 0.322 | | 0.201 | 0.0302 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0126 | J | 0.0172 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.32 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 18 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-518-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7315439**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 11:25 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-518- SDG#: PH155-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0432 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0876 | JBQ | 5.18 | 0.0346 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0699 | JBQ | 5.18 | 0.0292 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.259 | JB | 5.18 | 0.0313 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.297 | JBQ | 5.18 | 0.0282 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.12 | JB | 5.18 | 0.0291 | 1 |
| 11031 | OCDD | 3268-87-9 | 13.6 | B | 10.4 | 0.0246 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.151 | J | 1.04 | 0.0561 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.142 | JB | 5.18 | 0.0294 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.380 | JB | 5.18 | 0.0270 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.155 | JB | 5.18 | 0.0232 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.165 | JB | 5.18 | 0.0234 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.154 | JB | 5.18 | 0.0238 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.158 | JBQ | 5.18 | 0.0209 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.605 | JB | 5.18 | 0.0241 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.135 | JB | 5.18 | 0.0284 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.950 | JB | 10.4 | 0.0272 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.240 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 62 | 25 - 164 |
| 13C12-12378-PeCDD | 64 | 25 - 181 |
| 13C12-123478-HxCDD | 73 | 32 - 141 |
| 13C12-123678-HxCDD | 74 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 71 | 23 - 140 |
| 13C12-OCDD | 66 | 17 - 157 |
| 13C12-2378-TCDF | 60 | 24 - 169 |
| 13C12-12378-PeCDF | 62 | 24 - 185 |
| 13C12-23478-PeCDF | 64 | 21 - 178 |
| 13C12-123478-HxCDF | 73 | 26 - 152 |
| 13C12-123678-HxCDF | 73 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 78 | 29 - 147 |
| 13C12-1234678-HpCDF | 75 | 28 - 143 |
| 13C12-1234789-HpCDF | 70 | 26 - 138 |
| 13C12-OCDF | 70 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-518-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315439**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 11:25 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-518- SDG#: PH155-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-518-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315439**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 11:25 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-518- SDG#: PH155-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13354SLB026 | 01/02/2014 10:33 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13354SLB026 | 12/23/2013 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133530025A | 12/23/2013 13:05 | Tracy A Cole | 5 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133530025A | 12/20/2013 09:15 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13355001 | 12/25/2013 03:19 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13355001 | 12/21/2013 11:00 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:26 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:26 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:26 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:26 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:23 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133540637001B | 01/04/2014 00:45 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:45 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133540637001A | 01/07/2014 21:30 | John P Hook | 5 |
| 06145 | Thallium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:45 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133540638001 | 12/23/2013 10:18 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133540637001 | 12/22/2013 08:29 | James L Mertz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-518-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315439**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 11:25 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-518- SDG#: PH155-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133540638001 | 12/22/2013 10:33 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13351039402B | 12/17/2013 11:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13354162401B | 12/20/2013 23:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-519-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7315440**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 12:10 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-519- SDG#: PH155-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 0.97 | J | 1.7 | 0.67 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.0 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.70 | J | 1.7 | 0.67 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.82 | J | 1.7 | 0.67 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.68 | J | 1.7 | 0.67 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.8 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 18 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 42 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,500 | | 39.2 | 7.06 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.46 | J | 3.92 | 0.725 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.76 | | 3.92 | 0.686 | 1 |
| 06946 | Barium | 7440-39-3 | 64.6 | | 0.980 | 0.0323 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.579 | J | 0.980 | 0.0656 | 1 |
| 07914 | Boron | 7440-42-8 | 5.54 | J | 9.80 | 0.823 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.980 | U | 0.980 | 0.0745 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,240 | | 19.6 | 3.27 | 1 |
| 06951 | Chromium | 7440-47-3 | 15.9 | | 2.94 | 0.157 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.05 | | 0.980 | 0.0970 | 1 |
| 06953 | Copper | 7440-50-8 | 11.6 | | 1.96 | 0.284 | 1 |
| 01654 | Iron | 7439-89-6 | 20,200 | | 39.2 | 3.55 | 1 |
| 06955 | Lead | 7439-92-1 | 11.5 | | 2.94 | 0.490 | 1 |
| 01656 | Lithium | 7439-93-2 | 16.9 | | 3.9 | 0.33 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315440**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 12:10 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-519- SDG#: PH155-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01657 | Magnesium | 7439-95-4 | 5,350 | | 9.80 | 1.64 | 1 |
| 06958 | Manganese | 7439-96-5 | 246 | | 0.980 | 0.0813 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.226 | J | 1.96 | 0.167 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.63 | | 1.96 | 0.127 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 447 | | 9.80 | 2.83 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,580 | | 98.0 | 8.17 | 1 |
| 01667 | Sodium | 7440-23-5 | 71.2 | J | 98.0 | 16.4 | 1 |
| 06969 | Tin | 7440-31-5 | 2.57 | J | 9.80 | 0.216 | 1 |
| 06970 | Titanium | 7440-32-6 | 812 | | 0.980 | 0.167 | 1 |
| 06971 | Vanadium | 7440-62-2 | 35.8 | | 0.980 | 0.127 | 1 |
| 06972 | Zinc | 7440-66-6 | 52.6 | | 3.92 | 0.196 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.03 | J | 4.90 | 0.823 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.181 | J | 0.392 | 0.0980 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0429 | J | 0.196 | 0.0255 | 2 |
| 06144 | Strontium | 7440-24-6 | 24.6 | | 0.980 | 0.167 | 5 |
| 06145 | Thallium | 7440-28-0 | 0.301 | | 0.196 | 0.0294 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0165 | U | 0.0165 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.56 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 19 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.8 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-519-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7315440**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 12:10 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-519- SDG#: PH155-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0387 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.13 | U | 5.13 | 0.0360 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0614 | JBQ | 5.13 | 0.0329 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.191 | JB | 5.13 | 0.0341 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.258 | JB | 5.13 | 0.0324 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.45 | JB | 5.13 | 0.0258 | 1 |
| 11031 | OCDD | 3268-87-9 | 10.0 | JB | 10.3 | 0.0218 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0786 | JQ | 1.03 | 0.0440 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.128 | JBQ | 5.13 | 0.0206 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.188 | JBQ | 5.13 | 0.0186 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0821 | JBQ | 5.13 | 0.0208 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.112 | JB | 5.13 | 0.0202 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.174 | JBQ | 5.13 | 0.0213 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0664 | JB | 5.13 | 0.0199 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.364 | JB | 5.13 | 0.0172 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0896 | JBQ | 5.13 | 0.0212 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.824 | JB | 10.3 | 0.0298 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0841 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 66 | 25 - 164 |
| 13C12-12378-PeCDD | 66 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 78 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 63 | 24 - 169 |
| 13C12-12378-PeCDF | 65 | 24 - 185 |
| 13C12-23478-PeCDF | 66 | 21 - 178 |
| 13C12-123478-HxCDF | 77 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 80 | 28 - 136 |
| 13C12-123789-HxCDF | 83 | 29 - 147 |
| 13C12-1234678-HpCDF | 79 | 28 - 143 |
| 13C12-1234789-HpCDF | 73 | 26 - 138 |
| 13C12-OCDF | 76 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315440**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 12:10 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-519- SDG#: PH155-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315440**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 12:10 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-519- SDG#: PH155-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13354SLB026 | 01/02/2014 11:06 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13354SLB026 | 12/23/2013 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133530025A | 12/23/2013 17:21 | Tracy A Cole | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133530025A | 12/20/2013 09:15 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13355001 | 12/25/2013 04:15 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13355001 | 12/21/2013 11:00 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:30 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:30 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:30 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:30 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:27 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133540637001B | 01/04/2014 00:47 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:47 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133540637001A | 01/07/2014 21:31 | John P Hook | 5 |
| 06145 | Thallium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:47 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133540638001 | 12/23/2013 10:20 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133540637001 | 12/22/2013 08:29 | James L Mertz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-519-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315440**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 12:10 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-519- SDG#: PH155-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133540638001 | 12/22/2013 10:33 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13351039402B | 12/17/2013 11:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13354162401B | 12/20/2013 23:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-520-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315441**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 10:30 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-520- SDG#: PH155-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.33 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.68 | J | 1.7 | 0.67 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.5 | J | 1.7 | 0.67 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.3 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.3 | J | 1.7 | 0.33 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.3 | J | 1.7 | 0.67 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.3 | J | 1.7 | 0.67 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.95 | J | 1.7 | 0.67 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.3 | J | 1.7 | 0.67 | 1 |

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials with the exception of:
2-methylnaphthalene .68 ug/kg
fluorene .93 ug/kg
benzo(g,h,i)perylene .68 ug/kg
were detected in the re-extraction.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.1 | J | 5.0 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 11 | | 5.0 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 23 | | 10 | 4.0 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 8,940 | | 39.8 | 7.18 | 1 |
| 06944 | Antimony | 7440-36-0 | 1.15 | J | 3.98 | 0.737 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.88 | | 3.98 | 0.697 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-520-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315441**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 10:30 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-520- SDG#: PH155-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06946 | Barium | 7440-39-3 | 48.0 | | 0.995 | 0.0328 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.393 | J | 0.995 | 0.0667 | 1 |
| 07914 | Boron | 7440-42-8 | 5.50 | J | 9.95 | 0.836 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.995 | U | 0.995 | 0.0756 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,060 | | 19.9 | 3.32 | 1 |
| 06951 | Chromium | 7440-47-3 | 10.9 | | 2.99 | 0.159 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.23 | | 0.995 | 0.0985 | 1 |
| 06953 | Copper | 7440-50-8 | 8.38 | | 1.99 | 0.289 | 1 |
| 01654 | Iron | 7439-89-6 | 14,800 | | 39.8 | 3.60 | 1 |
| 06955 | Lead | 7439-92-1 | 9.28 | | 2.99 | 0.498 | 1 |
| 01656 | Lithium | 7439-93-2 | 10.5 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,970 | | 9.95 | 1.66 | 1 |
| 06958 | Manganese | 7439-96-5 | 185 | | 0.995 | 0.0826 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.259 | J | 1.99 | 0.169 | 1 |
| 06961 | Nickel | 7440-02-0 | 6.88 | | 1.99 | 0.129 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 332 | | 9.95 | 2.88 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,750 | | 99.5 | 8.30 | 1 |
| 01667 | Sodium | 7440-23-5 | 58.3 | J | 99.5 | 16.6 | 1 |
| 06969 | Tin | 7440-31-5 | 2.44 | J | 9.95 | 0.219 | 1 |
| 06970 | Titanium | 7440-32-6 | 647 | | 0.995 | 0.169 | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.7 | | 0.995 | 0.129 | 1 |
| 06972 | Zinc | 7440-66-6 | 39.9 | | 3.98 | 0.199 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.80 | J | 4.98 | 0.836 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.153 | J | 0.398 | 0.0995 | 2 |
| 06142 | Silver | 7440-22-4 | 0.199 | U | 0.199 | 0.0259 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.9 | | 0.398 | 0.0677 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.231 | | 0.199 | 0.0299 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0168 | U | 0.0168 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.17 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 19.5 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-520-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7315441**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 10:30 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-520- SDG#: PH155-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.997 | U | 0.997 | 0.0386 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0334 | JBQ | 4.99 | 0.0326 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0646 | JB | 4.99 | 0.0258 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.355 | JB | 4.99 | 0.0257 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.578 | JB | 4.99 | 0.0258 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.27 | JB | 4.99 | 0.0203 | 1 |
| 11031 | OCDD | 3268-87-9 | 9.90 | JB | 9.97 | 0.0157 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.102 | J | 0.997 | 0.0396 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.210 | JBQ | 4.99 | 0.0199 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.176 | JBQ | 4.99 | 0.0188 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0827 | JBQ | 4.99 | 0.0182 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.131 | JBQ | 4.99 | 0.0179 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0645 | JB | 4.99 | 0.0195 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.110 | JBQ | 4.99 | 0.0176 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.342 | JBQ | 4.99 | 0.0154 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0671 | JBQ | 4.99 | 0.0182 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.593 | JBQ | 9.97 | 0.0222 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.132 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 81 | 17 - 157 |
| 13C12-2378-TCDF | 65 | 24 - 169 |
| 13C12-12378-PeCDF | 69 | 24 - 185 |
| 13C12-23478-PeCDF | 70 | 21 - 178 |
| 13C12-123478-HxCDF | 82 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 84 | 28 - 136 |
| 13C12-123789-HxCDF | 82 | 29 - 147 |
| 13C12-1234678-HpCDF | 85 | 28 - 143 |
| 13C12-1234789-HpCDF | 81 | 26 - 138 |
| 13C12-OCDF | 80 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-520-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315441**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 10:30 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-520- SDG#: PH155-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-520-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315441**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 10:30 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-520- SDG#: PH155-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13354SLB026 | 01/02/2014 11:39 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13354SLB026 | 12/23/2013 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133530025A | 12/23/2013 12:43 | Tracy A Cole | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 133530025A | 12/20/2013 09:15 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13355001 | 12/25/2013 05:12 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 13355001 | 12/21/2013 11:00 | Chin F Ly | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:33 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:33 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:33 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 133540637001 | 12/27/2013 04:33 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 133540637001 | 12/26/2013 11:31 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 133540637001B | 01/04/2014 00:50 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:50 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:50 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 133540637001A | 01/04/2014 00:50 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 133540638001 | 12/23/2013 10:22 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 133540637001 | 12/22/2013 08:29 | James L Mertz | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-520-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7315441**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 10:30 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-520- SDG#: PH155-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 133540638001 | 12/22/2013 10:33 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 13351039402B | 12/17/2013 11:00 | Carolyn M Mastropietro | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13354162401B | 12/20/2013 23:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-121613 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7315442**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 08:00 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-TB2- SDG#: PH155-06TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13356A20A | 12/22/2013 09:59 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13356A20A | 12/22/2013 09:59 | Marie D Beamenderfer | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121613 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7315443**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 15:30 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB2 SDG#: PH155-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | |
| 12971 | Acenaphthene | 83-32-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.23 | J | 1.1 | 0.053 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.35 | J | 1.1 | 0.053 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 2.2 | | 1.1 | 0.053 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.053 | U | 0.053 | 0.032 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 0.060 | J | 1.1 | 0.053 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.053 | U | 0.053 | 0.032 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.053 | U | 0.053 | 0.011 | 1 |

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.099 | U | 0.099 | 0.050 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.099 | U | 0.099 | 0.050 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.099 | U | 0.099 | 0.050 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.50 | U | 0.50 | 0.099 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.099 | U | 0.099 | 0.050 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 | U | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00076 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121613 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7315443**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 15:30 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB2 SDG#: PH155-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01750 | Calcium | 7440-70-2 | 0.400 U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 5.6 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121613 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7315443**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 15:30 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB2 SDG#: PH155-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 2.00 | U | 2.00 | 0.820 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 10.0 | U | 10.0 | 0.593 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 10.0 | U | 10.0 | 0.357 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 10.0 | U | 10.0 | 0.371 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 0.456 | JBQ | 10.0 | 0.376 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.943 | JB | 10.0 | 0.531 | 1 |
| 10915 | OCDD | 3268-87-9 | 2.16 | JBQ | 20.0 | 0.488 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 0.772 | JBQ | 2.00 | 0.520 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.658 | JBQ | 10.0 | 0.343 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.493 | JBQ | 10.0 | 0.319 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.388 | JB | 10.0 | 0.255 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 10.0 | U | 10.0 | 0.256 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.581 | JBQ | 10.0 | 0.314 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.331 | JBQ | 10.0 | 0.243 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.721 | JBQ | 10.0 | 0.129 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 10.0 | U | 10.0 | 0.169 | 1 |
| 10915 | OCDF | 39001-02-0 | 1.24 | JBQ | 20.0 | 0.728 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0482 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 39 | 25 - 164 |
| 13C12-12378-PeCDD | 37 | 25 - 181 |
| 13C12-123478-HxCDD | 46 | 32 - 141 |
| 13C12-123678-HxCDD | 45 | 28 - 130 |
| 13C12-123789-HxCDD | 44 | 28 - 130 |
| 13C12-1234678-HpCDD | 42 | 23 - 140 |
| 13C12-OCDD | 37 | 17 - 157 |
| 13C12-2378-TCDF | 39 | 24 - 169 |
| 13C12-12378-PeCDF | 38 | 24 - 185 |
| 13C12-23478-PeCDF | 38 | 21 - 178 |
| 13C12-123478-HxCDF | 47 | 26 - 152 |
| 13C12-123678-HxCDF | 48 | 26 - 123 |
| 13C12-234678-HxCDF | 47 | 28 - 136 |
| 13C12-123789-HxCDF | 45 | 29 - 147 |
| 13C12-1234678-HpCDF | 44 | 28 - 143 |
| 13C12-1234789-HpCDF | 40 | 26 - 138 |
| 13C12-OCDF | 39 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121613 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7315443**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 15:30 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB2 SDG#: PH155-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121613 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7315443**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 15:30 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB2 SDG#: PH155-07EB*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13354WAH026 | 12/22/2013 11:29 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 13354WAH026 | 12/20/2013 17:00 | Seth A Farrier | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 13356A20A | 12/22/2013 10:21 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13356A20A | 12/22/2013 10:21 | Marie D Beamenderfer | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 133520004A | 12/19/2013 15:04 | Tracy A Cole | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 133520004A | 12/18/2013 18:15 | JoElla L Rice | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 13354003 | 12/24/2013 08:18 | Nelson H Risser | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 13354003 | 12/20/2013 12:45 | Brett M Weidman | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 133530635003 | 12/23/2013 13:23 | Eric L Eby | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 133530639001B | 12/23/2013 21:57 | John P Hook | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 133530639001A | 12/23/2013 21:57 | John P Hook | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 133530639001A | 12/23/2013 21:57 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-121613 Water**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # WW 7315443**
**LL Group # 1441366**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/16/2013 15:30 by E

Submitted: 12/17/2013 10:10
Reported: 01/09/2014 08:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--EB2 SDG#: PH155-07EB*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06045 | Thallium | SW-846 6020A | 1 | 133530639001A | 12/23/2013 21:57 | John P Hook | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 133605713003 | 12/27/2013 10:24 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 133530635003 | 12/21/2013 06:55 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 133530639001 | 12/21/2013 07:00 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 133605713003 | 12/27/2013 08:00 | Damary Valentin | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 13352003202A | 12/18/2013 18:43 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1441366
Reported: 01/09/14 at 08:01 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13354SLB026 | Sample number(s): 7315437-7315441 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 90 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 91 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 94 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 94 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 94 | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 87 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 90 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-112 | | |
| Batch number: 13354WAH026 | Sample number(s): 7315443 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 99 | 77-118 | 1 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 107 | 80-123 | 1 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 99 | 78-123 | 2 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 98 | 73-127 | 1 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 97 | 72-120 | 2 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 106 | 104 | 79-136 | 1 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 93 | 91 | 70-130 | 1 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 103 | 102 | 64-130 | 1 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 99 | 73-131 | 2 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 99 | 96 | 40-138 | 3 | 30 |
| Di-n-butylphthalate | 0.16 | J | 1.0 | 0.050 | ug/l | 108 | 105 | 64-141 | 2 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 98 | 76-125 | 1 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 96 | 58-131 | 6 | 30 |
| Diethylphthalate | 0.18 | J | 1.0 | 0.050 | ug/l | 111 | 108 | 64-128 | 3 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 103 | 103 | 23-139 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1441366
Reported: 01/09/14 at 08:01 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 0.53 | J | 1.0 | 0.050 | ug/l | 121 | 124 | 70-143 | 3 | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 97 | 79-124 | 1 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 103 | 74-115 | 1 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 97 | 62-130 | 4 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 109 | 107 | 80-126 | 2 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 109 | 81-124 | 1 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 103 | 101 | 75-120 | 2 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 81 | 80 | 36-120 | 1 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 92 | 78 | 57-145 | 17 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 98 | 97 | 75-120 | 1 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 103 | 71-130 | 2 | 30 |
| Batch number: 13347A16B | Sample number(s): 7315438 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 83 | 87 | 67-119 | 4 | 30 |
| Batch number: 13356A20A | Sample number(s): 7315442-7315443 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 97 | 98 | 75-135 | 1 | 30 |
| Batch number: 133520004A | Sample number(s): 7315443 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 81 | 78 | 67-109 | 4 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 89 | 86 | 71-119 | 3 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 89 | 86 | 75-117 | 3 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 78 | 73 | 44-134 | 7 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 64 | 61 | 55-86 | 5 | 30 |
| Batch number: 133530025A | Sample number(s): 7315437-7315441 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 93 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 96 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 97 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 76 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 76 | | 60-115 | | |
| Batch number: 133530635003 | Sample number(s): 7315443 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0828 | mg/l | 100 | 100 | 90-112 | 0 | 20 |
| Antimony | 0.0400 | U | 0.0400 | 0.0053 | mg/l | 105 | 105 | 88-111 | 1 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 102 | 102 | 90-113 | 0 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 103 | 102 | 90-110 | 1 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 100 | 99 | 90-111 | 0 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0084 | mg/l | 97 | 97 | 90-110 | 0 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00076 | mg/l | 104 | 103 | 90-112 | 1 | 20 |
| Calcium | 0.400 | U | 0.400 | 0.0334 | mg/l | 100 | 99 | 90-112 | 1 | 20 |
| Chromium | 0.0300 | U | 0.0300 | 0.0016 | mg/l | 102 | 101 | 90-110 | 1 | 20 |
| Cobalt | 0.0100 | U | 0.0100 | 0.0013 | mg/l | 104 | 103 | 90-110 | 1 | 20 |
| Copper | 0.0200 | U | 0.0200 | 0.0027 | mg/l | 104 | 103 | 90-112 | 1 | 20 |
| Iron | 0.400 | U | 0.400 | 0.0430 | mg/l | 104 | 99 | 90-112 | 4 | 20 |
| Lead | 0.0300 | U | 0.0300 | 0.0047 | mg/l | 106 | 105 | 88-110 | 1 | 20 |
| Lithium | 0.0400 | U | 0.0400 | 0.0047 | mg/l | 102 | 101 | 90-110 | 1 | 20 |
| Magnesium | 0.200 | U | 0.200 | 0.0167 | mg/l | 99 | 98 | 89-110 | 1 | 20 |
| Manganese | 0.0100 | U | 0.0100 | 0.00083 | mg/l | 104 | 102 | 90-110 | 1 | 20 |
| Molybdenum | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 105 | 104 | 90-110 | 0 | 20 |
| Nickel | 0.0200 | U | 0.0200 | 0.0015 | mg/l | 106 | 105 | 90-111 | 1 | 20 |
| Phosphorus | 0.200 | U | 0.200 | 0.0418 | mg/l | 101 | 100 | 90-110 | 1 | 20 |
| Potassium | 1.00 | U | 1.00 | 0.0980 | mg/l | 96 | 96 | 90-110 | 0 | 20 |
| Sodium | 2.00 | U | 2.00 | 0.167 | mg/l | 98 | 98 | 87-114 | 1 | 20 |
| Tin | 0.0400 | U | 0.0400 | 0.0029 | mg/l | 102 | 102 | 90-110 | 0 | 20 |
| Titanium | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 102 | 102 | 90-113 | 0 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1441366
Reported: 01/09/14 at 08:01 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Vanadium | 0.0100 U | 0.0100 | 0.0020 | mg/l | 104 | 103 | 90-110 | 1 | 20 |
| Zinc | 0.0400 U | 0.0400 | 0.0020 | mg/l | 100 | 100 | 90-110 | 0 | 20 |
| Zirconium | 0.100 U | 0.100 | 0.0084 | mg/l | 101 | 101 | 90-110 | 0 | 20 |
| Batch number: 133530639001A | Sample number(s): 7315443 | | | | | | | | |
| Silver | 0.0010 U | 0.0010 | 0.00011 | mg/l | 103 | 104 | 90-115 | 1 | 20 |
| Strontium | 0.0020 U | 0.0020 | 0.00034 | mg/l | 103 | 106 | 90-110 | 3 | 20 |
| Thallium | 0.0010 U | 0.0010 | 0.00015 | mg/l | 99 | 95 | 90-115 | 4 | 20 |
| Batch number: 133530639001B | Sample number(s): 7315443 | | | | | | | | |
| Selenium | 0.0040 U | 0.0040 | 0.00050 | mg/l | 104 | 106 | 90-120 | 2 | 20 |
| Batch number: 133540637001 | Sample number(s): 7315437-7315441 | | | | | | | | |
| Aluminum | 40.0 U | 40.0 | 7.21 | mg/kg | 108 | | 80-120 | | |
| Antimony | 4.00 U | 4.00 | 0.740 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 U | 4.00 | 0.700 | mg/kg | 106 | | 80-120 | | |
| Barium | 1.00 U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 10.0 U | 10.0 | 0.840 | mg/kg | 100 | | 80-120 | | |
| Cadmium | 1.00 U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 14.3 J | 20.0 | 3.34 | mg/kg | 106 | | 80-120 | | |
| Chromium | 3.00 U | 3.00 | 0.160 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 U | 1.00 | 0.0990 | mg/kg | 107 | | 80-120 | | |
| Copper | 2.00 U | 2.00 | 0.290 | mg/kg | 104 | | 80-120 | | |
| Iron | 40.0 U | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 U | 3.00 | 0.500 | mg/kg | 112 | | 80-120 | | |
| Lithium | 4.0 U | 4.0 | 0.34 | mg/kg | 101 | | 80-120 | | |
| Magnesium | 10.0 U | 10.0 | 1.67 | mg/kg | 103 | | 80-120 | | |
| Manganese | 1.00 U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 U | 2.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Nickel | 2.00 U | 2.00 | 0.130 | mg/kg | 110 | | 80-120 | | |
| Phosphorus | 10.0 U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | 100. | 8.34 | mg/kg | 95 | | 80-120 | | |
| Sodium | 100 U | 100. | 16.7 | mg/kg | 95 | | 80-120 | | |
| Tin | 1.62 J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 U | 1.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Vanadium | 1.00 U | 1.00 | 0.130 | mg/kg | 100 | | 80-120 | | |
| Zinc | 0.768 J | 4.00 | 0.200 | mg/kg | 106 | | 80-120 | | |
| Zirconium | 5.00 U | 5.00 | 0.840 | mg/kg | 100 | | 80-120 | | |
| Batch number: 133540637001A | Sample number(s): 7315437-7315441 | | | | | | | | |
| Silver | 0.200 U | 0.200 | 0.0260 | mg/kg | 111 | | 80-120 | | |
| Strontium | 0.111 J | 0.400 | 0.0680 | mg/kg | 115 | | 80-120 | | |
| Thallium | 0.200 U | 0.200 | 0.0300 | mg/kg | 112 | | 80-120 | | |
| Batch number: 133540637001B | Sample number(s): 7315437-7315441 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 118 | | 80-120 | | |
| Batch number: 133540638001 | Sample number(s): 7315437-7315441 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 100 | | 85-120 | | |
| Batch number: 133605713003 | Sample number(s): 7315443 | | | | | | | | |
| 3b Mercury 7470A | 0.00020 U | 0.00020 | 0.00006 0 | mg/l | 107 | 104 | 90-115 | 3 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1441366
Reported: 01/09/14 at 08:01 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13351039402B | Sample number(s): 7315437-7315441 | | | | | | | | |
| 15a pH by 9045D | | | | | 101 | | 95-105 | | |
| Batch number: 13352003202A | Sample number(s): 7315443 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | 100 | | 90-110 | | |
| Batch number: 13354162401B | Sample number(s): 7315437-7315441 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13354003 | Sample number(s): 7315443 | | | | | | | | |
| 2378-TCDD | 0.513 J | 2.00 | 0.492 | pg/l | 101 | | 60-150 | | |
| 12378-PeCDD | 0.520 J | 10.0 | 0.320 | pg/l | 101 | | 60-150 | | |
| 123478-HxCDD | 0.265 J | 10.0 | 0.222 | pg/l | 103 | | 60-150 | | |
| 123678-HxCDD | 10.0 U | 10.0 | 0.230 | pg/l | 105 | | 60-150 | | |
| 123789-HxCDD | 0.528 J | 10.0 | 0.226 | pg/l | 102 | | 60-150 | | |
| 1234678-HpCDD | 1.14 J | 10.0 | 0.219 | pg/l | 102 | | 60-150 | | |
| OCDD | 2.27 J | 20.0 | 0.249 | pg/l | 102 | | 60-150 | | |
| 2378-TCDF | 0.357 J | 2.00 | 0.279 | pg/l | 100 | | 60-150 | | |
| 12378-PeCDF | 0.464 J | 10.0 | 0.185 | pg/l | 104 | | 60-150 | | |
| 23478-PeCDF | 0.499 J | 10.0 | 0.175 | pg/l | 104 | | 60-150 | | |
| 123478-HxCDF | 0.275 J | 10.0 | 0.171 | pg/l | 105 | | 60-150 | | |
| 123678-HxCDF | 0.463 J | 10.0 | 0.163 | pg/l | 105 | | 60-150 | | |
| 123789-HxCDF | 0.645 J | 10.0 | 0.187 | pg/l | 105 | | 60-150 | | |
| 234678-HxCDF | 0.341 J | 10.0 | 0.164 | pg/l | 107 | | 60-150 | | |
| 1234678-HpCDF | 0.673 J | 10.0 | 0.0679 | pg/l | 103 | | 60-150 | | |
| 1234789-HpCDF | 0.654 J | 10.0 | 0.0848 | pg/l | 105 | | 60-150 | | |
| OCDF | 1.88 J | 20.0 | 0.336 | pg/l | 100 | | 60-150 | | |
| Batch number: 13355001 | Sample number(s): 7315437-7315441 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0563 | ng/kg | 100 | | 67-158 | | |
| 12378-PeCDD | 0.112 J | 5.00 | 0.0345 | ng/kg | 103 | | 70-142 | | |
| 123478-HxCDD | 0.0633 J | 5.00 | 0.0237 | ng/kg | 105 | | 70-164 | | |
| 123678-HxCDD | 0.0646 J | 5.00 | 0.0259 | ng/kg | 106 | | 76-134 | | |
| 123789-HxCDD | 0.0480 J | 5.00 | 0.0231 | ng/kg | 104 | | 64-162 | | |
| 1234678-HpCDD | 0.0769 J | 5.00 | 0.0264 | ng/kg | 102 | | 70-140 | | |
| OCDD | 0.301 J | 10.0 | 0.0207 | ng/kg | 105 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0391 | ng/kg | 108 | | 75-158 | | |
| 12378-PeCDF | 0.0691 J | 5.00 | 0.0202 | ng/kg | 106 | | 80-134 | | |
| 23478-PeCDF | 0.0714 J | 5.00 | 0.0188 | ng/kg | 107 | | 68-160 | | |
| 123478-HxCDF | 0.0490 J | 5.00 | 0.0166 | ng/kg | 110 | | 72-134 | | |
| 123678-HxCDF | 0.0663 J | 5.00 | 0.0165 | ng/kg | 113 | | 84-130 | | |
| 123789-HxCDF | 0.0985 J | 5.00 | 0.0174 | ng/kg | 122 | | 78-130 | | |
| 234678-HxCDF | 0.0478 J | 5.00 | 0.0161 | ng/kg | 112 | | 70-156 | | |
| 1234678-HpCDF | 0.105 J | 5.00 | 0.0107 | ng/kg | 113 | | 82-122 | | |
| 1234789-HpCDF | 0.0601 J | 5.00 | 0.0129 | ng/kg | 109 | | 78-138 | | |
| OCDF | 0.141 J | 10.0 | 0.0321 | ng/kg | 108 | | 63-170 | | |
| Batch number: 13354003 | Sample number(s): 7315443 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0271 | | | pg/l | | | | | |
| Batch number: 13355001 | Sample number(s): 7315437-7315441 | | | | | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1441366
Reported: 01/09/14 at 08:01 AM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| TEQ WHO 2005 - EDLx0.0 | 0.0438 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | | DUP Conc | | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13354SLB026 | Sample number(s): 7315437-7315441 UNSPK: P312462 | | | | | | | | | | |
| Acenaphthene | 84 | 79 | 48-127 | 7 | 30 | | | | | | |
| Acenaphthylene | 85 | 80 | 49-121 | 6 | 30 | | | | | | |
| Anthracene | 86 | 82 | 52-126 | 5 | 30 | | | | | | |
| Benzo(a)anthracene | 91 | 87 | 44-143 | 4 | 30 | | | | | | |
| Benzo(a)pyrene | 88 | 86 | 44-140 | 3 | 30 | | | | | | |
| Benzo(b)fluoranthene | 95 | 92 | 26-142 | 2 | 30 | | | | | | |
| Benzo(e)pyrene | 89 | 85 | 70-130 | 4 | 30 | | | | | | |
| Benzo(g,h,i)perylene | 53 | 53 | 33-141 | 1 | 30 | | | | | | |
| Benzo(k)fluoranthene | 101 | 96 | 54-142 | 5 | 30 | | | | | | |
| Butylbenzylphthalate | 96 | 92 | 49-151 | 4 | 30 | | | | | | |
| Di-n-butylphthalate | 85 | 81 | 52-147 | 4 | 30 | | | | | | |
| Chrysene | 91 | 88 | 29-148 | 4 | 30 | | | | | | |
| Dibenz(a,h)anthracene | 61 | 60 | 20-137 | 1 | 30 | | | | | | |
| Diethylphthalate | 91 | 87 | 43-145 | 5 | 30 | | | | | | |
| Dimethylphthalate | 94 | 89 | 58-129 | 6 | 30 | | | | | | |
| Bis(2-Ethylhexyl)phthalate | 99 | 92 | 39-167 | 8 | 30 | | | | | | |
| Fluoranthene | 86 | 82 | 40-148 | 4 | 30 | | | | | | |
| Fluorene | 90 | 85 | 51-137 | 6 | 30 | | | | | | |
| Indeno(1,2,3-cd)pyrene | 62 | 61 | 17-136 | 1 | 30 | | | | | | |
| 1-Methylnaphthalene | 99 | 92 | 50-131 | 7 | 30 | | | | | | |
| 2-Methylnaphthalene | 98 | 92 | 35-152 | 7 | 30 | | | | | | |
| Naphthalene | 87 | 81 | 31-148 | 6 | 30 | | | | | | |
| N-Nitrosodimethylamine | 83 | 78 | 48-113 | 6 | 30 | | | | | | |
| Di-n-octylphthalate | 117 | 111 | 52-162 | 6 | 30 | | | | | | |
| Phenanthrene | 85 | 82 | 29-142 | 4 | 30 | | | | | | |
| Pyrene | 88 | 84 | 26-143 | 4 | 30 | | | | | | |
| Batch number: 133530025A | Sample number(s): 7315437-7315441 UNSPK: P312462 | | | | | | | | | | |
| EFH (C12-C14) | 95 | 93 | 49-123 | 1 | 20 | | | | | | |
| EFH (C15-C20) | 115 | 113 | 49-123 | 0 | 20 | | | | | | |
| EFH (C21-C30) | 49 | 83 | 49-123 | 19 | 20 | | | | | | |
| EFH (C30-C40) | 28* | 74 | 49-123 | 19 | 20 | | | | | | |
| EFH (C8-C11) | 84 | 82 | 49-123 | 2 | 20 | | | | | | |
| Batch number: 133540637001 | Sample number(s): 7315437-7315441 UNSPK: P312462 BKG: P312462 | | | | | | | | | | |
| Aluminum | 1159 (2) | 1359 (2) | 75-125 | 3 | 20 | 9,320 | | 9,610 | | 3 | 20 |
| Antimony | 66* | 57* | 75-125 | 16 | 20 | 3.85 | U | 3.92 | U | 0 (1) | 20 |
| Arsenic | 105 | 108 | 75-125 | 3 | 20 | 2.73 | J | 2.37 | J | 14 (1) | 20 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1441366
Reported: 01/09/14 at 08:01 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 98 | 106 | 75-125 | 6 | 20 | 62.6 | 62.4 | 0 | 20 |
| Beryllium | 102 | 100 | 75-125 | 2 | 20 | 0.346 J | 0.355 J | 2 (1) | 20 |
| Boron | 93 | 90 | 75-125 | 3 | 20 | 8.00 J | 7.40 J | 8 (1) | 20 |
| Cadmium | 99 | 101 | 75-125 | 2 | 20 | 0.447 J | 0.475 J | 6 (1) | 20 |
| Calcium | 133 (2) | 97 (2) | 75-125 | 6 | 20 | 2,020 | 2,030 | 1 | 20 |
| Chromium | 97 | 101 | 75-125 | 3 | 20 | 13.3 | 13.2 | 1 (1) | 20 |
| Cobalt | 97 | 98 | 75-125 | 1 | 20 | 4.29 | 4.41 | 3 (1) | 20 |
| Copper | 94 | 93 | 75-125 | 1 | 20 | 3.66 | 3.35 | 9 (1) | 20 |
| Iron | 600 (2) | 1470 (2) | 75-125 | 5 | 20 | 16,900 | 17,400 | 3 | 20 |
| Lead | 100 | 98 | 75-125 | 2 | 20 | 6.61 | 6.85 | 4 (1) | 20 |
| Lithium | 103 | 103 | 75-125 | 0 | 20 | 24.5 | 27.2 | 10 | 20 |
| Magnesium | 168 (2) | 299 (2) | 75-125 | 6 | 20 | 3,780 | 3,870 | 2 | 20 |
| Manganese | 118 (2) | 99 (2) | 75-125 | 3 | 20 | 266 | 277 | 4 | 20 |
| Molybdenum | 95 | 95 | 75-125 | 1 | 20 | 0.316 J | 0.209 J | 41* (1) | 20 |
| Nickel | 101 | 103 | 75-125 | 2 | 20 | 7.83 | 8.15 | 4 (1) | 20 |
| Phosphorus | 46* | 47* | 75-125 | 0 | 20 | 371 | 327 | 13 | 20 |
| Potassium | 108 | 125 | 75-125 | 4 | 20 | 2,670 | 2,870 | 7 | 20 |
| Sodium | 94 | 94 | 75-125 | 0 | 20 | 51.9 J | 56.5 J | 9 (1) | 20 |
| Tin | 92 | 92 | 75-125 | 0 | 20 | 2.24 J | 2.31 J | 3 (1) | 20 |
| Titanium | 327 (2) | 323 (2) | 75-125 | 0 | 20 | 839 | 934 | 11 | 20 |
| Vanadium | 102 | 103 | 75-125 | 0 | 20 | 26.3 | 26.6 | 1 | 20 |
| Zinc | 100 | 108 | 75-125 | 4 | 20 | 49.7 | 52.7 | 6 | 20 |
| Zirconium | 94 | 95 | 75-125 | 1 | 20 | 0.844 J | 1.05 J | 22* (1) | 20 |
| Batch number: 133540637001A | Sample number(s): 7315437-7315441 UNSPK: P312462 BKG: P312462 | | | | | | | | |
| Silver | 103 | 108 | 75-125 | 5 | 20 | 0.0410 J | 0.0495 J | 19 (1) | 20 |
| Strontium | 98 | 97 | 75-125 | 1 | 20 | 9.48 | 9.43 | 1 | 20 |
| Thallium | 117 | 119 | 75-125 | 1 | 20 | 0.210 | 0.260 | 21* (1) | 20 |
| Batch number: 133540637001B | Sample number(s): 7315437-7315441 UNSPK: P312462 BKG: P312462 | | | | | | | | |
| Selenium | 110 | 111 | 75-125 | 1 | 20 | 0.273 J | 0.268 J | 2 (1) | 20 |
| Batch number: 133540638001 | Sample number(s): 7315437-7315441 UNSPK: P312462 BKG: P312462 | | | | | | | | |
| 3a Mercury 7471A | 102 | 99 | 65-135 | 2 | 20 | 0.0105 J | 0.0161 U | 200* (1) | 20 |
| Batch number: 13351039402B | Sample number(s): 7315437-7315441 BKG: P313703 | | | | | | | | |
| 15a pH by 9045D | | | | | | 6.62 | 6.62 | 0 | 3 |
| Batch number: 13352003202A | Sample number(s): 7315443 BKG: P315001 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 8.1 | 8.1 | 1 | 3 |
| Batch number: 13354162401B | Sample number(s): 7315437-7315441 BKG: 7315439 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.5 | 3.6 | 2 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1441366
Reported: 01/09/14 at 08:01 AM

## Surrogate Quality Control

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13354SLB026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7315437 | 77 | 76 | 95 |
| 7315438 | 75 | 76 | 91 |
| 7315439 | 74 | 77 | 95 |
| 7315440 | 63 | 62 | 78 |
| 7315441 | 59 | 58* | 74 |
| Blank | 81 | 82 | 101 |
| LCS | 79 | 81 | 97 |
| MS | 78 | 74 | 94 |
| MSD | 75 | 73 | 88 |
| Limits: | 54-129 | 59-125 | 61-125 |

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 13354WAH026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7315443 | 102 | 101 | 107 |
| Blank | 100 | 104 | 102 |
| LCS | 106 | 108 | 117 |
| LCSD | 100 | 102 | 111 |
| Limits: | 44-137 | 62-141 | 51-136 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 13347A16B

| | Trifluorotoluene-F |
|---|---|
| 7315438 | 86 |
| Blank | 89 |
| LCS | 96 |
| LCSD | 99 |
| Limits: | 50-142 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 13356A20A

| | Trifluorotoluene-F |
|---|---|
| 7315442 | 79 |
| 7315443 | 78 |
| Blank | 77 |
| LCS | 82 |
| LCSD | 82 |
| Limits: | 63-135 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 133520004A

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1441366
Reported: 01/09/14 at 08:01 AM

## Surrogate Quality Control

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7315443 | 85 | 78 |
| Blank | 81 | 79 |
| LCS | 85 | 87 |
| LCSD | 82 | 83 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 133530025A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7315437 | 103 | 87 |
| 7315438 | 105 | 85 |
| 7315439 | 98 | 82 |
| 7315440 | 112 | 90 |
| 7315441 | 100 | 84 |
| Blank | 105 | 87 |
| LCS | 109 | 96 |
| MS | 113 | 93 |
| MSD | 113 | 93 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 13354003

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7315443 | 39 | 38 | 47 | 48 | 47 | 45 |
| Blank | 54 | 56 | 72 | 74 | 71 | 75 |
| OPR | 64 | 65 | 79 | 78 | 77 | 74 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7315443 | 44 | 40 | 39 | 37 | 46 | 45 |
| Blank | 74 | 66 | 64 | 53 | 71 | 71 |
| OPR | 72 | 67 | 67 | 63 | 75 | 75 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7315443 | 44 | 42 | 37 | 39 | 38 |
| Blank | 69 | 69 | 62 | 54 | 58 |
| OPR | 74 | 70 | 65 | 63 | 65 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 13355001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7315437 | 66 | 71 | 82 | 82 | 86 | 82 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1441366
Reported: 01/09/14 at 08:01 AM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7315438 | 70 | 72 | 83 | 84 | 86 | 92 |
| 7315439 | 62 | 64 | 73 | 73 | 77 | 78 |
| 7315440 | 66 | 66 | 77 | 77 | 80 | 83 |
| 7315441 | 70 | 70 | 82 | 84 | 84 | 82 |
| Blank | 52 | 55 | 68 | 69 | 70 | 73 |
| OPR | 29 | 33 | 36 | 36 | 37 | 25 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |
| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
| 7315437 | 84 | 80 | 77 | 71 | 83 | 80 |
| 7315438 | 88 | 89 | 83 | 71 | 84 | 87 |
| 7315439 | 75 | 70 | 70 | 64 | 73 | 74 |
| 7315440 | 79 | 73 | 76 | 66 | 78 | 78 |
| 7315441 | 85 | 81 | 80 | 70 | 83 | 86 |
| Blank | 73 | 72 | 72 | 56 | 70 | 69 |
| OPR | 37 | 35 | 34 | 32 | 37 | 37 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |
| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
| 7315437 | 81 | 82 | 78 | 65 | 69 | |
| 7315438 | 86 | 88 | 83 | 69 | 70 | |
| 7315439 | 73 | 71 | 66 | 60 | 62 | |
| 7315440 | 78 | 74 | 77 | 63 | 65 | |
| 7315441 | 83 | 83 | 81 | 65 | 69 | |
| Blank | 70 | 72 | 73 | 50 | 53 | |
| OPR | 36 | 37 | 35 | 27 | 30 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

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(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

A-13013
G-1441366
S-7315437-43

**CDM Smith**

DateShipped: 12/16/2013
CarrierName: FedEx
AirbillNo: 797420630910

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20131216-06
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-517-NBZ-SB-0.0-0.5 | 12/16/13 13:40 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-517-NBZ-SB-0.0-0.5 | 12/16/13 13:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-517-NBZ-SB-2.0-3.0 | 12/16/13 14:20 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-517-NBZ-SB-2.0-3.0 | 12/16/13 14:20 | SO | None | 1 - 16 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-517-NBZ-SB-2.0-3.0 | 12/16/13 14:20 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-518-NBZ-SB-0.0-0.5 | 12/16/13 11:25 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-518-NBZ-SB-0.0-0.5 | 12/16/13 11:25 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-519-NBZ-SB-0.0-0.5 | 12/16/13 12:10 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-519-NBZ-SB-0.0-0.5 | 12/16/13 12:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-520-NBZ-SB-0.0-0.5 | 12/16/13 10:30 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-520-NBZ-SB-0.0-0.5 | 12/16/13 10:30 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| TB2-121613 | 12/16/13 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 12/16/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

[signature] 121713
1010

# SSFL Phase 3 Chain of Custody

**CDM Smith** A-13013

DateShipped: 12/16/2013 G-1441366

CarrierName: FedEx S-7315437-43

AirbillNo: 797420630910

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20131216-01

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate. Nitrite. TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB2-121613 | 12/16/13 15:30 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | EB2-121613 is NBZ |
| EB2-121613 | 12/16/13 15:30 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-121613 | 12/16/13 15:30 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-121613 | 12/16/13 15:30 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| EB2-121613 | 12/16/13 15:30 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| EB2-121613 | 12/16/13 15:30 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Stef Myrel

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stef Myrel | 12/16/ | 20131600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Brian Dyer | 12/17/13 | 1010 |

COC Rev 3

COC: 20131216-01, Page 1 of 1 1 of 1

eurofins | Lancaster Laboratories

G-1441366

# Environmental Sample Administration Receipt Documentation Log

**Client/Project:** CDM

**Date of Receipt:** 121213

**Time of Receipt:** 1010

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT146 | 0.7 | TB | WI | Y | B | |
| 2 | ↓ | 0.5 | ↓ | ↓ | ↓ | ↓ | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** 0

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** Brianela Darely 2299 **Date/Time:** 121213 1048

Issued by Dept. 6042 Management

2174.06

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

# Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

January 06, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 12/18/2013
Group Number: 1441693
SDG: PH157
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-551-NBZ-SB-0.0-0.5 Soil | 7316781 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

| | | |
|---|---|---|
| ELECTRONIC COPY TO | Eurofins Lancaster Labs Env | Attn: Nicole Maljovec |
| ELECTRONIC COPY TO | Data Package Group | |

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: SL-551-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7316781**
**LL Group # 1441693**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 12/17/2013 11:25

Submitted: 12/18/2013 10:45
Reported: 01/06/2014 15:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55100 SDG#: PH157-01*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.3 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.96 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.4 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.88 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 0.88 | J | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 13 | J | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.7 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.2 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.86 | J | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.1 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.0 | | 1.7 | 0.68 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.1 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 13354SLB026 | 01/03/2014 04:50 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 13354SLB026 | 12/23/2013 06:30 | Olivia Arosemena | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 13354162401B | 12/20/2013 23:00 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1441693
Reported: 01/06/14 at 03:54 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13354SLB026 | Sample number(s): 7316781 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 90 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 91 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 94 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 94 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 94 | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 87 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 90 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-112 | | |
| Batch number: 13354162401B | Sample number(s): 7316781 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 13354SLB026 | Sample number(s): 7316781 UNSPK: P312462 | | | | | | | | |
| Acenaphthene | 84 | 79 | 48-127 | 7 | 30 | | | | |
| Acenaphthylene | 85 | 80 | 49-121 | 6 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1441693
Reported: 01/06/14 at 03:54 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Anthracene | 86 | 82 | 52-126 | 5 | 30 | | | | |
| Benzo(a)anthracene | 91 | 87 | 44-143 | 4 | 30 | | | | |
| Benzo(a)pyrene | 88 | 86 | 44-140 | 3 | 30 | | | | |
| Benzo(b)fluoranthene | 95 | 92 | 26-142 | 2 | 30 | | | | |
| Benzo(e)pyrene | 89 | 85 | 70-130 | 4 | 30 | | | | |
| Benzo(g,h,i)perylene | 53 | 53 | 33-141 | 1 | 30 | | | | |
| Benzo(k)fluoranthene | 101 | 96 | 54-142 | 5 | 30 | | | | |
| Butylbenzylphthalate | 96 | 92 | 49-151 | 4 | 30 | | | | |
| Di-n-butylphthalate | 85 | 81 | 52-147 | 4 | 30 | | | | |
| Chrysene | 91 | 88 | 29-148 | 4 | 30 | | | | |
| Dibenz(a,h)anthracene | 61 | 60 | 20-137 | 1 | 30 | | | | |
| Diethylphthalate | 91 | 87 | 43-145 | 5 | 30 | | | | |
| Dimethylphthalate | 94 | 89 | 58-129 | 6 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 99 | 92 | 39-167 | 8 | 30 | | | | |
| Fluoranthene | 86 | 82 | 40-148 | 4 | 30 | | | | |
| Fluorene | 90 | 85 | 51-137 | 6 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 62 | 61 | 17-136 | 1 | 30 | | | | |
| 1-Methylnaphthalene | 99 | 92 | 50-131 | 7 | 30 | | | | |
| 2-Methylnaphthalene | 98 | 92 | 35-152 | 7 | 30 | | | | |
| Naphthalene | 87 | 81 | 31-148 | 6 | 30 | | | | |
| N-Nitrosodimethylamine | 83 | 78 | 48-113 | 6 | 30 | | | | |
| Di-n-octylphthalate | 117 | 111 | 52-162 | 6 | 30 | | | | |
| Phenanthrene | 85 | 82 | 29-142 | 4 | 30 | | | | |
| Pyrene | 88 | 84 | 26-143 | 4 | 30 | | | | |
| Batch number: 13354162401B Sample number(s): 7316781 BKG: P315439 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.5 | 3.6 | 2 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 13354SLB026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7316781 | 72 | 72 | 92 |
| Blank | 81 | 82 | 101 |
| LCS | 79 | 81 | 97 |
| MS | 78 | 74 | 94 |
| MSD | 75 | 73 | 88 |
| Limits: | 54-129 | 59-125 | 61-125 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 12/17/2013

CarrierName: FedEx

AirbillNo: 797427634817

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20131217-01

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc.Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-551-NBZ-SB-0.0-0.5 | 12/17/13 11:25 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 12/17/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 12/18/13 | 1045 |

COC Rev 3

COC: 20131217-01, Page 1 of 1

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G-1441693

# Environmental Sample Administration
# Receipt Documentation Log

**Client/Project:** CDM Smith

**Date of Receipt:** 12/18/13

**Time of Receipt:** 1045

**Source Code:** 50-1

**Shipping Container Sealed:** (YES) NO

**Custody Seal Present * :** (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

**Package:** (Chilled) Not Chilled

| Temperature of Shipping Containers | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cooler # | Thermometer ID | Temperature (°C) | Temp Bottle (TB) or Surface Temp (ST) | Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP) | Ice Present? Y/N | Loose (L) Bagged Ice (B) or NA | Comments |
| 1 | DT146 | 0.6 | TB | WI | Y | B | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

**Number of Trip Blanks received NOT listed on chain of custody:** Ø

**Paperwork Discrepancy/Unpacking Problems:**

**Unpacker Signature/Emp#:** 3647 **Date/Time:** 12/18/13 1126

Issued by Dept. 6042 Management

2174.06

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

# Appendix C
# Data Usability Assessment Report and Data Validation Reports
**(On CD)**

# Appendix C
# Data Usability Assessment Report

The purpose of this data usability and assessment report (DUAR) is to summarize the data validation performed on the data sets for Subarea 7 and NBZ samples collected, and determine whether the sample results meet the Data Quality Objectives (DQOs) outlined in the *Master Field Sampling Plan for Chemical Data Gap Investigation Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Federal Programs Corporation [CDM Smith] 2012a) (Master FSP) and *Addendum No. 6 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California, Subarea 7* (CDM Smith 2012b) (Addendum to the Master FSP), and *Addendum No. 9 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Northern Buffer Zone, Santa Susana Field Laboratory, Ventura County, California, Subarea 5D* (CDM Smith 2013) (Addendum to the Master FSP).

The Master FSP is Appendix A of *Work Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2012b) (Work Plan), which also includes Appendix B, Quality Assurance Project Plan (QAPP); Appendix C, Worker Safety and Health Program; and Appendix D, Standard Operating Procedures (SOPs).

## C.1 Usability Summary

For this data usability assessment, 18 data sets were reviewed for Subarea 7 and 11 data sets were reviewed for NBZ. A data set consists of 20 or fewer samples grouped together by analytical method for analyses depending on the time and date of when the samples were received by the laboratory. A data set is called a sample delivery group (SDG). The analyses performed are discussed in Section 2.5 of the Subarea 7 and NBZ Technical Memorandum (TM).

Samples were collected and analyzed in accordance with the Master FSP (CDM Smith 2012a). Deviations were encountered during the field investigation for the Subarea 7 and NBZ sampling activities and are discussed in detail in Section 2.7 of the Subarea 7 and NBZ TM.

The validated data for Subarea 7 samples are usable as reported except for the rejected data. One pesticide result (Endosulfan I) was rejected. For all Subarea 7 data, 0.013 percent of the results were rejected. No data were rejected for Phase 3 NBZ samples.

The validated data for Phase 3 Subarea 7 and NBZ samples are usable as reported with the exception of the one rejected result. This rejected result and any impact to project objectives and goals are being evaluated in the data gap review process. Specific details are provided in the validation reports in this appendix and below.

## C.2 Data Validation Procedures

Data were validated by the independent data validation firm Laboratory Data Consultants, Inc. All data validation was conducted in accordance with *U.S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA 2004), *EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA 2008), and *EPA Contract Laboratory Program National Functional Guidelines for Chlorinated Dioxin/Furan Data Review* (EPA 2005).

The data validation strategy was to validate 10 percent of the data according to EPA Level IV protocols (all QC parameters and raw data) and the remaining 90 percent according to EPA Level III (all QC parameters except calibrations and raw data) protocols. The Level IV determination also included reviewing 10 percent for each laboratory and each method. In order to achieve this, the validators chose appropriate samples in each SDG. Hence, not all samples in some of the SDGs were Level IV validated but they received a mixture of Level IV and Level III review.

Table C-1 shows all SDGs that include Subarea 7 and NBZ samples and which SDGs were validated as Level III or Level IV. Some SDGs contain samples from other subareas but all samples in an SDG were validated together.

In order to evaluate the quality of the laboratory and the validation firm, CDM Smith chemists reviewed 10 percent of the Subarea 7 and NBZ sample SDGs. The purpose of the review was to identify any quality control issues with the laboratory not identified by the validation firm or any discrepancies in validation procedures by the validation firm. No additional qualifiers were applied to the data based on CDM Smith's review.

## C.3 Quality Assurance Objectives

Quality assurance (QA) objectives for measurement data are expressed in terms of precision, accuracy, representativeness, comparability, completeness, and sensitivity (PARCCS). The QA objectives provide a mechanism for evaluating and measuring data quality.

A review of the collected data is necessary to determine if data quality objectives established in the Master FSP (CDM Smith 2012a) have been met. The following data measurement tasks were evaluated:

- Specification and adherence to analytical method and reporting limit requirements
- Identification of the appropriate laboratory analytical QC requirements and verification that QC requirements were met
- Verification that measurement performance criteria (representativeness and completeness) for the data were met
- Verification that field procedures were followed, deviations were documented, and determination of impact on data quality from these deviations

The data validation review determines if the collected data are of sufficient quality to support their intended use.

## C.4 Summary of Field and Laboratory QA Activities

CDM Smith completed sampling activities in Subarea 7 and NBZ in accordance with the approved Master FSP (CDM Smith 2012a) and discussed in the Subarea 7 and NBZ TM. A total of 92 soil samples in Subarea 7 and 74 samples in NBZ were collected and analyzed from the locations in Subarea 7 and NBZ. Tables 2-1 and 2-2 in the Subarea 7 and NBZ TM provide a summary of the samples collected and the laboratory analyses requested.

An index of samples associated with each SDG is presented at the beginning of the data validation reports presented in this appendix. The Master FSP (CDM Smith 2012a) defined the procedures to be followed and the data quality requirements for the field sampling events.

## C.5 Field Quality QA/QC

The MS/MSDs and field duplicates field QC samples were collected at a frequency of approximately 1 per 20 samples (5 percent). During sampling in Subarea 7, a total of six field duplicate/MS/MSD samples were collected equating to approximately 15 percent. On an individual method basis, the five percent goal was met or exceeded for all analyses.

In NBZ, a total of seven field QC samples (field duplicate and MS/MSD samples) were collected equating to approximately ten percent. On an individual method basis, the five percent goal was met or exceeded for all analyses. Field duplicate and MS/MSD samples met the frequency requirements detailed in the Master FSP (CDM Smith 2012a).

Fourteen equipment rinsate blank samples were collected for Subarea 7 and NBZ. The equipment rinsate blank results are presented in Tables C-2 and C-3.

Three field blanks were collected during sampling for Subarea 7 and NBZ. The results for these samples are presented in Tables C-4 and C-5.

Seventeen trip blank samples were shipped with the Subarea 7 and NBZ samples. The results for these samples are presented in Tables C-6 and C-7. Data qualifications based on blank detections are discussed in Section C.7.3 and in the Appendix C validation reports.

Temperature blanks were included with each shipment of samples. Based on validation results, all temperature blanks for Subarea 7 and NBZ met criteria.

As stated previously, on an individual method basis, the five percent goal was met or exceeded for all analyses. Field duplicate and MS/MSD samples met the frequency requirements detailed in the Master FSP (CDM Smith 2012a) for the Phase 3 Subarea 7 and NBZ sampling program. Further, field QA/QC objectives were attained through the use of appropriate sampling techniques and collection of the required number and frequency of QC samples.

# C.6 Laboratory Quality QA/QC

Analytical QA/QC was assessed by laboratory QC checks, method blanks, sample custody tracking, sample preservation, adherence to holding times, laboratory control samples (LCSs), MSs, calibration recoveries, surrogates, tuning criteria, second column confirmations, internal standards, serial dilutions, laboratory duplicates, and interference check standards. The majority of the laboratory QC sample criteria met project requirements as indicated in the data validation reports in this appendix with the appropriate qualifiers applied. One result was rejected for Subarea 7 and is discussed below. No results were rejected for NBZ.

# C.7 Data Quality Indicators

This section summarizes the validation performed. Individual SDG validation reports with specific sample detail are provided in this appendix.

Achievement of the DQOs was determined in part by the use of data quality indicators (DQIs) as described in the Master FSP (CDM Smith 2012a). These DQIs for measurement data are expressed in terms of PARCCS. The DQIs provide a mechanism for ongoing control to evaluate and measure data quality throughout the project. These criteria are defined in the sections below.

## C.7.1 Precision

Precision is a quantitative term that estimates the reproducibility of a set of replicate measurements under a given set of conditions. It is defined as a measurement of mutual agreement between measurements of the same property and is expressed in terms of relative percent difference (RPD) between duplicate determinations.

RPD is calculated as follows:

$$\textbf{RPD = absolute value [(C1-C2)/\{(C1+C2)/2)\}] x 100\%}$$

Where:

C1 = concentration of primary sample
C2 = concentration of duplicate sample

Field and analytical precision were determined from the review of the field duplicate results. The sample results were compared by calculating their RPDs. The field duplicate samples were collected in the same manner as the original samples but were collected in separate, individual containers, given separate sample identifiers, and treated as individual samples by the laboratory.

Laboratory duplicate RPD control limits are presented in the Work Plan (CDM Smith 2012c) or are laboratory specific. For laboratory duplicates, if one or both of the sample results were less than two times the RL, a control limit of the absolute difference equal to the RL value was used for comparison.

The field duplicate RPD criterion is 50 percent. Field duplicates for this project were validated using the following: If one result is non-detect and the other result is above the RL, the RPD result is shown as 200 percent and the field duplicate sample and parent sample results are qualified as estimated "J" or "UJ." If the field duplicate RPD was above the 50 percent criterion (and both sample results were above the RL), the field duplicate and parent sample results for that analyte were qualified as estimated "J."

Qualifiers were applied to applicable sample analyte results during the validation process based on laboratory and field duplicate precision results. Details are discussed in the laboratory validation reports in this appendix. Tables C-8 and C-9 show the field duplicate pairs and RPD results for Subarea 7 and NBZ. RPD results outside of criteria are highlighted.

No analyte results were qualified for Subarea 7 or NBZ based on laboratory precision criteria.

Field duplicate precision criteria for Phase 3 Subarea 7 samples required the qualification of the following analytes:

- 48 dioxin results
- 27 metal results
- 1 mercury result
- 10 TPH GRO/EFH results
- 3 pesticide results
- 3 PCB/PCT results
- 32 SVOC SIM results

For Phase 3 NBZ samples the following analytes were qualified due to field duplicate precision:

- 25 dioxin results
- 1 nitrate result
- 6 metal results
- 4 TPH GRO/EFH results
- 4 pesticide result s
- 2 herbicide results
- 31 SVOC SIM results

No results were rejected based on field duplicate precision criteria. All field duplicate RPD results are presented in Appendix C. In summary, sample results that have been qualified as estimated "J/UJ" due to precision criteria are usable for project decisions with a degree of caution.

There is no discernable pattern or reason for the laboratory and field sample RPD exceedances identified. No field sampling issues were identified from the RPD results that were outside of criteria and the exceedances are reasonable for this type of sampling activity.

## C.7.2 Accuracy

Accuracy is the degree of agreement between a measurement and the accepted reference or true value and is a measure of the bias in a system. Accuracy of the data was assessed by comparing LCS recovery, MS recovery, calibration recovery, Inductively Coupled Plasma (ICP) interferences, and by performing serial dilution checks during metals analyses. Accuracy is expressed as percent recovery (%R), which is calculated by:

$$\textbf{Percent Recovery} = \frac{\textbf{(Total Analyte Found – Analyte Originally Present)}}{\textbf{Analyte Added}} \textbf{ x 100}$$

Analytical accuracy for the entire data collection activity is difficult to assess because several sources of error exist. Errors can be introduced by any of the following:

- Sampling procedure
- Field contamination
- Sample preservation and handling
- Sample matrix
- Sample preparation
- Analytical techniques

Accuracy is maintained to the extent possible by adhering to the approved analytical method and field and analytical standard operating procedures.

Qualifiers were applied to applicable sample analyte results during the validation process based on laboratory accuracy results and are discussed in detail in the laboratory validation reports in Appendix C.

The following Subarea 7 individual analyte results were qualified as estimated "J/UJ" based on accuracy criteria:

- 4 dioxin results, 247 metal results, 10 TPH GRO/EFH results, 2 pesticide results, and 17 SVOC SIM results due to MS recoveries
- 29 metal analyte results due to serial dilutions
- 30 TPH GRO/EFH results and 1 pesticide result for LCS recoveries
- 9 PCB/PCT results for surrogate recoveries
- 5 dioxins and 1 pesticide result for second column confirmation results

The following individual analyte result was rejected "R" based on accuracy criteria:

- 1 pesticide result (Endosulfan I) based on MSs

The following NBZ individual analyte results were qualified as estimated "J/UJ" based on accuracy criteria:

- 4 nitrate results, 26 metals, and 2 TPH GRO/EFH results results due to MSs

- 2 herbicide results and 1 SVOC SIM result due to LCSs
- 2 pesticide results due to confirmation column results
- 1 pesticide results based on calibration criteria

Sample preservation, handling, and holding times are additional measures of accuracy of the data. All sample preservation, holding times and handling criteria were met.

Sample results that have been qualified as estimated "J/UJ" due to accuracy criteria are usable for project decisions. Sample results that have been rejected are not usable for project decisions.

## C.7.3 Blank Contamination

Field blanks (e.g., equipment and trip) and laboratory method blanks are analyzed to identify possible sources of contamination. Contamination of a sample can be introduced by field sample collection methods, sample handling, preparation, and/or analysis. The laboratory validation reports in this appendix and summarized below discuss the results qualified based on field and laboratory blank contamination.

The following individual analyte results were qualified as nondetect "U" based on blank contamination for the Subarea 7 samples:

- 297 dioxin results (20.6% of all dioxin results)
- 134 metal results (5.6% of all metal results)

The following individual analyte results were qualified as nondetect "U" based on blank contamination for the NBZ samples:

- 319 dioxin results (59% of all dioxin results)
- 19 metal results (4.2% of all metal results)

For the dioxins, MDLs for this analysis are very low, reported in nanogram per kilogram (ng/kg) or parts per trillion, resulting in numerous results qualified as estimated "J." Many of these estimated values have been subsequently qualified as non-detect "U" because the compound was detected in related laboratory blanks. In the laboratory blanks, low level detections of dioxin analytes are somewhat inevitable because of the nature and universal extent of the compounds. The dioxin levels found in the blanks are well below site-related action levels. Therefore, the resulting qualification of associated sample results as not detected or "U" does not falsely diminish identification of site-related contaminants.

Tables C-2 through C-7 provide a summary of chemicals observed in the equipment, field and trip blank samples. Most of the equipment blanks, field blanks and trip blanks detected compounds were below the RLs but above the MDLs. ASTM International Type II water is not typically certified “clean” to the low RLs established for the low level methods used for the co-located sampling program.

A review of the Phase 3 equipment blanks for Subarea 7 and NBZ was also performed. In general, a variety of analytes were detected above their respective RLs. All Phase 3 equipment blanks will continue to be monitored to determine if these low level detections are consistent, thus indicating a possible deficiency in decontamination procedures and/or source water impacts that need to be addressed and corrected.

For Subarea 7, 103 metal results and 6 SVOC SIM results were qualified based on field/equipment blanks results. For NBZ, 11 metal results were also qualified based on field/equipment blank criteria. To date, chemical detections in equipment blank samples appear to be random occurrences.

Trip blank results are presented in Tables C-6 and C-7. All the trip blank results were nondetect.

## C.7.4 Representativeness, Comparability, and Sensitivity

Representativeness, comparability, and sensitivity are achieved by using EPA-approved sampling procedures and analytical methodologies. By following the procedures described in the Work Plan (CDM Smith 2012c) for this sampling event and future sampling events, sample analysis should yield results representative of environmental conditions at the time of sampling. Similarly, reasonable comparability of analytical results for this and future sampling events can be achieved if approved EPA analytical methods and standardized reporting units are employed.

### C.7.4.1 Representativeness

Representativeness is a qualitative term that expresses the degree to which the sample data accurately and precisely represent the environmental conditions corresponding to the location and depth interval of sample collection. Requirements and procedures for sample collection are designed to maximize sample representativeness.

Representativeness also can be monitored by reviewing field documentation and/or by performing field audits. For this report, a detailed review was performed on the COC forms, field data collection forms, laboratory sample confirmation logs, and data validation packages. Laboratory QA/QC requirements were included in the Master FSP (CDM Smith 2012a) and laboratory statements of work (SOWs) to ensure that the laboratory analytical results were representative of true field conditions.

Field sampling accuracy was attained through strict adherence to the approved Master FSP (CDM Smith 2012a) and by using approved standard operating procedures for field data collection. Based on this, the data should represent as near as possible the actual field conditions at the time of sampling.

Representativeness has been achieved by the performed field work and laboratory analyses. The analytical data generated, that have not been rejected, are viewed to be a representative characterization of the project area.

### C.7.4.2 Comparability

Comparability is a qualitative term that expresses the confidence with which a data set can be compared with another. Strict adherence to standard sample collection procedures, analytical detection limits, and analytical methods assures that data from like samples and sample conditions are comparable. This comparability is independent of laboratory personnel, data reviewers, or sampling personnel. Comparability criteria are met for the project if, based on data review, the sample collection and analytical procedures are determined to have been followed, or defined to show that variations did not affect the values reported.

To ensure comparability of data generated for the site, standard sample collection procedures and Department of Toxic Substances Control (DTSC)-approved analytical methods were utilized by CDM Smith. The sample analyses were performed by Eurofins Lancaster Laboratories. Utilizing such procedures and methods enables the current data to be comparable with previous and future data sets generated with similar methods.

### C.7.4.3 Sensitivity

Sensitivity is related to the ability to compare analytical results with project-specific levels of interest, such as risk-based screening levels or action levels. Analytical detection limits for the various sample analytes should be below the level of interest to allow an effective comparison.

***Detection Limits***

Each analytical method used during the sampling events was selected because it had potential to achieve RLs established for this project. RLs were established for each analyte in consultation with the laboratory to achieve analytical results at or below regulatory comparison criteria.

The method detection limit (MDL) is defined as the concentration of an analyte that produces a signal with a 99 percent confidence that the concentration is above that of a blank but that that concentration cannot be accurately quantified. A blank is a sample that does not contain measurable concentrations of the analyte of concern. Tested by statistical performance, calibration samples, and LCSs, MDLs represent the best fundamental measurement of instrument sensitivity and the basis for establishing RLs.

The laboratory RL is typically about 3 to 5 times higher than the MDL and is a laboratory-specific number. The actual sample RL is variable based on the sample matrix, moisture content, and other sample-specific factors. When a sample has to be diluted before analysis, either because of matrix problems or to bring the instrument response within the linear dynamic range, the RL is raised by a factor corresponding to the dilution factor.

In reporting environmental sample results, laboratories follow protocols that help ensure that the result reported is at the lowest level and is defensible, taking into account the ability of the instrument to differentiate a signal generated by the analyte from the background instrument noise, imprecision added to the detection capabilities of the analyte due to the sample processing manipulations (MDLs) and sample matrix affects, and adjustments made

to the detection limits based on difficulties encountered in analyzing the sample (dilution factors, etc.).

The result for an analyte is flagged with a "U" if that analyte was not detected, or qualified with a "J" flag if blank or other QC results fall outside the appropriate tolerance limits. If an analyte is present at a concentration between the MDL and the RL, the analytical result is flagged with a "J," indicating an estimated quantity. Qualifying the result as an estimated concentration reflects increased uncertainty in the reported value.

The following analyses and individual analyte sample results were qualified as estimated "J" due to the sample results being reported as detected below the RL for Subarea 7 samples:

- Method 1613B (Dioxins)
  - 766 individual analyte results
- Methods 6010C/6020A (Metals)
  - 466 individual analyte results
- Methods 7199 (Hexavalent Chromium)
  - 1 individual analyte results
- Methods 7471B (Mercury)
  - 32 individual analyte results
- Method 8015B (TPH GRO/EFH)
  - 42 individual analyte results
- Method 8081B (Pesticides)
  - 10 individual analyte results
- Method 8082A (PCBs)
  - 25 individual analyte results
- Method 8270C SIM (SVOCs)
  - 380 individual analyte results

The following analyses and individual analyte sample results were qualified as estimated "J" due to the sample results being reported as detected below the RL for NBZ samples:

- Method 1613B (Dioxins)
  - 116 individual analyte results
- Method 300 (Nitrate)
  - 2 individual analyte result
- Methods 6010C/6020A (Metals)
  - 96 individual analyte results
- Methods 7471B (Mercury)

  - 7 individual analyte results

- Method 8015M (TPH GRO/EFH)
  - 35 individual analyte results

- Method 8081B (Pesticides)
  - 40 individual analyte results

- Method 8082A (PCBs)
  - 35 individual analyte results

- Method 8151A (Herbicides)
  - 5 individual analyte results

- Method 8270D (SVOCs)
  - 147 individual analyte results

For the data validated in the Subarea 7 and NBZ TM, RLs for a majority of the sample results were low enough to compare to the RLs stated in the Master FSP (CDM Smith 2012a). RLs above those stated in the Master FSP (CDM Smith 2012a) will be evaluated on a case by case basis to see if resampling is required.

# C.8 Review of Selected Validation Reports

CDM Smith performed a review of 10 percent of the validation reports identified in Table C-1. This review involved comparing the validation report results against the laboratory data packages as well as the validation guidance documents. All validation report results that were reviewed were verified against the laboratory data packages and determined that validation documents were followed as required.

# C.9 Data Completeness

Completeness of the data collection program is defined as the percentage of samples planned for collection as listed in the Master FSP (CDM Smith 2012a) versus the actual number of samples collected during the field program (see equation A).

Completeness for acceptable data is defined as the percentage of acceptable data obtained judged to be valid versus the total quantity of data generated (see equation B). Acceptable data include both data that pass all the QC criteria (unqualified data) and data that may not pass all the QC criteria but had appropriate corrective actions taken (qualified but usable data).

A. $$\%\text{Completeness} = C_x \frac{100}{n}$$

Where:

C = actual number of samples collected
n = total number of samples planned

B. $$\%Completeness = Vx\frac{100}{n'}$$

Where:

V = number of measurements judged valid
n' = total number of measurements made

The overall completeness goal, as defined in the Master FSP (CDM Smith 2012a), for these sampling events was 90 percent for each analytical test for all project data.

A total of 168 soil samples including the field duplicates were collected and analyzed. Some locations required only a subsurface sample while other locations required both a surface and a subsurface sample. The number of subsurface samples to be collected at each location was not pre-determined because the total depth of each boring varies depending on the local geology. One sample was not collected in NBZ as it was inaccessible and unsafe to sample. The completeness goal for the actual number of samples collected compared to the number of samples planned is considered acceptable as a sample was collected from each location (depending on shallow refusal).

The completeness goal achieved for acceptable data was 99.98 percent for Subarea 7 and 100 percent for NBZ for the number of measurements judged to be valid versus the total number of measurements made for all samples analyzed.

The following Phase 3 Subarea 7 individual analyte results were rejected per analyses:

- Method 8081B
  - 1 out of 189 individual herbicide analyte results (0.529 %)

Tables C-10 and C-11 summarize all results that were estimated or rejected for Phase 3 Subarea 7 and NBZ respectively.

The completeness goals for both the locations sampled and the number of measurements judged to be valid were met or are planned to be met.

Sampling deviations from procedures described in the Master FSP (CDM Smith 2012a) are discussed in Section 2.7 of the Subarea 7 and NBZ Phase 3 TM. Deviations did not impact DQOs for this sampling event. The data reported are suitable for their intended use for characterization of Area IV of SSFL. The DQIs identified in the Master FSP (CDM Smith 2012a) met appropriate criteria. The completeness goals for both the locations sampled and the number of measurements judged to be valid were met or will be met. The achievement of the completeness goals for the data indicates a sufficient amount of usable data has been generated for project decisions.

# C.10 Assessment of Data Usability and Reconciliation with WP/FSAP Goals

Over 99 percent of the data validated for Subarea 7 and NBZ Phase 3, are suitable for their intended use for site characterization. Sample results that were qualified as estimated are usable for project decisions. Rejected sample results are not suitable for project use. The

rejected analyte results do not impact achievement of the overall project objectives. The RLs reported generally met the expected limits proposed by the analytical laboratories in their subcontract agreements with CDM Smith.

Field duplicate precision also met criteria a majority of the time. RPDs were outside criteria predominantly when the sample results were close to the RL and/or below the project required action limits. Decisions based on results close to the RL should be made with a degree of caution. The achievement of the completeness goals for number of samples collected, and the number of sample results acceptable for use provides sufficient quality data to support project decisions.

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**Table C1 – Sample Delivery Groups and Validation Levels for Subarea 7 and Northern Buffer Zone**

| Subarea 7 SDGs | | |
|---|---|---|
| Sample Delivery Group | Level of Validation Performed | CDM Smith Review |
| PH027 | Level IV | |
| PH028 | Level II | |
| PH029 | Level III | |
| PH030 | Level III | |
| PH031 | Level IV | Yes |
| PH032 | Level III | |
| PH033 | Level III | |
| PH034 | Level III | |
| PH035 | Level III | |
| PH036 | Level III | |
| PH037 | Level III | |
| PH038 | Level III | |
| PH039 | Level IV | |
| PH040 | Level III | Yes |
| PH045 | Level III | |
| PH046 | Level IV | |
| PH049 | Level IV | |
| PH121 | Level III | |
| **NBZ SDGs** | | |
| Sample Delivery Group | Level of Validation Performed | CDM Smith Review |
| PH138 | Level III | |
| PH139 | Level IV | |
| PH140 | Level III | |
| PH141 | Level III | |
| PH142 | Level IV | Yes |
| PH143 | Level III | |
| PH146 | Level III | |
| PH148 | Level III | |
| PH151 | Level III | |
| PH155 | Level III | Yes |
| PH157 | Level III | |

Table C2- - Subarea 7 - Equipment Blank Samples

| | Sample Name: | EB-041113 | | EB-041213 | | EB-041813 | | EB-041913 | | EB-042413 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Location: | 7_DG_EB | | 7_DG_EB | | 7_DG_EB | | 7_DG_EB | | 7_DG_EB | |
| | Sample Date: | 04/11/2013 | | 04/12/2013 | | 04/18/2013 | | 04/19/2013 | | 04/24/2013 | |
| | Sample Type: | EB | | EB | | EB | | EB | | EB | |
| | Lab: | LL | | LL | | LL | | LL | | LL | |
| Analyte | Analytic Method | Units | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.74 | U | | | 9.71 | U | | | 9.65 | U |
| 1,2,3,4,6,7,8-HPCDF | 1613B | pg/L | 9.74 | U | | | 9.71 | U | | | 9.65 | U |
| 1,2,3,4,7,8,9-HPCDF | 1613B | pg/L | 9.74 | U | | | 9.71 | U | | | 9.65 | U |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 0.322 | J | | | 9.71 | U | | | 9.65 | U |
| 1,2,3,4,7,8-HXCDF | 1613B | pg/L | 9.74 | U | | | 0.235 | J | | | 9.65 | U |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.74 | U | | | 9.71 | U | | | 9.65 | U |
| 1,2,3,6,7,8-HXCDF | 1613B | pg/L | 9.74 | U | | | 9.71 | U | | | 9.65 | U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.74 | U | | | 9.71 | U | | | 9.65 | U |
| 1,2,3,7,8,9-HXCDF | 1613B | pg/L | 9.74 | U | | | 9.71 | U | | | 9.65 | U |
| 1,2,3,7,8-Pentachlorodibenzofuran | 1613B | pg/L | 9.74 | U | | | 9.71 | U | | | 9.65 | U |
| 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.74 | U | | | 9.71 | U | | | 9.65 | U |
| 1-Methylnaphthalene | 8270D SIM | µg/L | 0.02 | J | | | 0.014 | J | | | 0.054 | U |
| 2,3,4,6,7,8-HXCDF | 1613B | pg/L | 9.74 | U | | | 9.71 | U | | | 9.65 | U |
| 2,3,4,7,8-PECDF | 1613B | pg/L | 9.74 | U | | | 9.71 | U | | | 9.65 | U |
| 2,3,7,8-TCDD | 1613B | pg/L | 1.95 | U | | | 1.94 | U | | | 1.93 | U |
| 2,3,7,8-Tetrachlorodibenzofuran | 1613B | pg/L | 1.95 | U | | | 1.94 | U | | | 1.93 | U |
| 2-Methylnaphthalene | 8270D SIM | µg/L | 0.027 | J | | | 0.018 | J | | | 0.011 | J |
| 4,4'-DDD | 8081B | µg/L | | | | | 0.017 | U | 0.016 | U | 0.017 | U |
| 4,4'-DDE | 8081B | µg/L | | | | | 0.017 | U | 0.016 | U | 0.017 | U |
| 4,4'-DDT | 8081B | µg/L | | | | | 0.017 | U | 0.016 | U | 0.017 | U |
| Acenaphthene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Acenaphthylene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Aldrin | 8081B | µg/L | | | | | 0.0085 | U | 0.0081 | U | 0.0084 | U |
| Alpha-Bhc | 8081B | µg/L | | | | | 0.0085 | U | 0.0081 | U | 0.0084 | U |
| Aluminum | 6010C | mg/L | 0.4 | U | | | 0.4 | U | | | 0.4 | U |
| Anthracene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Antimony | 6010C | mg/L | 0.04 | U | | | 0.04 | U | | | 0.04 | U |
| Aroclor 1016 | 8082A | µg/L | 0.43 | U | | | 0.42 | U | | | 0.42 | U |
| Aroclor 1221 | 8082A | µg/L | 0.43 | U | | | 0.42 | U | | | 0.42 | U |
| Aroclor 1232 | 8082A | µg/L | 0.43 | U | | | 0.42 | U | | | 0.42 | U |
| Aroclor 1242 | 8082A | µg/L | 0.43 | U | | | 0.42 | U | | | 0.42 | U |
| Aroclor 1248 | 8082A | µg/L | 0.43 | U | | | 0.42 | U | | | 0.42 | U |
| Aroclor 1254 | 8082A | µg/L | 0.43 | U | | | 0.42 | U | | | 0.42 | U |
| Aroclor 1260 | 8082A | µg/L | 0.43 | U | | | 0.42 | U | | | 0.42 | U |
| Aroclor 1262 | 8082A | µg/L | 0.43 | U | | | 0.42 | U | | | 0.42 | U |
| Aroclor 1268 | 8082A | µg/L | 0.43 | U | | | 0.42 | U | | | 0.42 | U |
| Aroclor 5432 | 8082A | µg/L | 0.43 | U | | | 0.42 | U | | | 0.42 | U |
| Aroclor 5442 | 8082A | µg/L | 0.43 | U | | | 0.42 | U | | | 0.42 | U |
| Aroclor 5460 | 8082A | µg/L | 0.43 | U | | | 0.42 | U | | | 0.42 | U |
| Arsenic | 6010C | mg/L | 0.04 | U | | | 0.04 | U | | | 0.04 | U |
| Barium | 6010C | mg/L | 0.01 | U | | | 0.01 | U | | | 0.01 | U |
| Benzo(a)anthracene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Benzo(a)pyrene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Benzo(b)fluoranthene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Benzo(e)pyrene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Benzo(g,h,i)perylene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Benzo(k)fluoranthene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Beryllium | 6010C | mg/L | 0.01 | U | | | 0.01 | U | | | 0.01 | U |
| Beta-Bhc | 8081B | µg/L | | | | | 0.0085 | U | 0.0081 | U | 0.0084 | U |
| Bis(2-ethylhexyl)phthalate | 8270D SIM | µg/L | 1.1 | U | | | 1 | U | | | 1.1 | U |
| Boron | 6010C | mg/L | 0.1 | U | | | 0.1 | U | | | 0.0319 | J |
| Butylbenzylphthalate | 8270D SIM | µg/L | 1.1 | U | | | 1 | U | | | 1.1 | U |
| Cadmium | 6010C | mg/L | 0.01 | U | | | 0.01 | U | | | 0.01 | U |
| Calcium | 6010C | mg/L | 0.131 | J | | | 0.4 | U | | | 0.4 | U |
| Chlordane | 8081B | µg/L | | | | | 0.42 | U | 0.4 | U | 0.42 | U |
| Chromium | 6010C | mg/L | 0.03 | U | | | 0.03 | U | | | 0.03 | U |
| Chromium (Hexavalent Compounds) | 7199 | µg/L | 10 | U | | | | | | | | |
| Chrysene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Cobalt | 6010C | mg/L | 0.01 | U | | | 0.01 | U | | | 0.01 | U |
| Copper | 6010C | mg/L | 0.02 | U | | | 0.02 | U | | | 0.02 | U |
| Delta-Bhc | 8081B | µg/L | | | | | 0.0085 | U | 0.0081 | U | 0.0084 | U |
| Dibenzo(a,h)anthracene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Dieldrin | 8081B | µg/L | | | | | 0.017 | U | 0.016 | U | 0.017 | U |
| Diethylphthalate | 8270D SIM | µg/L | 0.24 | J | | | 0.071 | J | | | 0.089 | J |
| Dimethylphthalate | 8270D SIM | µg/L | 1.1 | U | | | 1 | U | | | 1.1 | U |
| Di-n-butylphthalate | 8270D SIM | µg/L | 0.16 | J | | | 0.11 | J | | | 0.15 | J |
| Di-n-octylphthalate | 8270D SIM | µg/L | 1.1 | UJ | | | 1 | U | | | 1.1 | U |
| EFH (C12-C14) | 8015M | mg/L | 0.57 | U | | | 0.62 | U | | | 0.58 | UJ |
| EFH (C15-C20) | 8015M | mg/L | 0.57 | U | | | 0.62 | U | | | 0.58 | UJ |
| EFH (C21-C30) | 8015M | mg/L | 0.57 | U | | | 0.62 | U | | | 0.58 | UJ |
| EFH (C30-C40) | 8015M | mg/L | 0.57 | U | | | 0.62 | UJ | | | 0.58 | UJ |
| EFH (C8-C11) | 8015M | mg/L | 0.57 | UJ | | | 0.62 | UJ | | | 0.58 | UJ |
| Endosulfan I | 8081B | µg/L | | | | | 0.0085 | U | 0.0081 | U | 0.0084 | U |
| Endosulfan II | 8081B | µg/L | | | | | 0.017 | U | 0.016 | U | 0.017 | U |
| Endosulfan Sulfate | 8081B | µg/L | | | | | 0.017 | U | 0.016 | U | 0.017 | U |
| Endrin | 8081B | µg/L | | | | | 0.017 | U | 0.016 | U | 0.017 | U |
| Endrin Aldehyde | 8081B | µg/L | | | | | 0.085 | U | 0.081 | U | 0.084 | U |
| Endrin Ketone | 8081B | µg/L | | | | | 0.017 | U | 0.016 | U | 0.017 | U |
| Fluoranthene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Fluorene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Formaldehyde | 8315A | µg/L | | | 50 | UJ | | | | | | |
| Gamma-Bhc (Lindane) | 8081B | µg/L | | | | | 0.0085 | U | 0.0081 | U | 0.0084 | U |
| Gasoline Range Organics (C5-C12) | 8015M | µg/L | 50 | U | | | 50 | U | | | 50 | U |
| Heptachlor | 8081B | µg/L | | | | | 0.0085 | U | 0.0081 | U | 0.0084 | U |
| Heptachlor Epoxide | 8081B | µg/L | | | | | 0.0085 | U | 0.0081 | U | 0.0084 | U |
| Indeno(1,2,3-cd)pyrene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Iron | 6010C | mg/L | 0.4 | U | | | 0.4 | U | | | 0.4 | U |
| Lead | 6010C | mg/L | 0.03 | U | | | 0.03 | U | | | 0.03 | U |
| Lithium | 6010C | mg/L | 0.04 | U | | | 0.04 | U | | | 0.04 | U |
| Magnesium | 6010C | mg/L | 0.2 | U | | | 0.2 | U | | | 0.2 | U |
| Manganese | 6010C | mg/L | 0.0012 | J | | | 0.01 | U | | | 0.01 | U |
| Mercury | 7470A | mg/L | 0.0002 | U | | | 0.0002 | U | | | 0.0002 | U |
| Methoxychlor | 8081B | µg/L | | | | | 0.085 | U | 0.081 | U | 0.084 | U |
| Mirex | 8081B | µg/L | | | | | 0.21 | U | 0.2 | U | 0.21 | U |
| Molybdenum | 6010C | mg/L | 0.02 | U | | | 0.02 | U | | | 0.02 | U |
| Naphthalene | 8270D SIM | µg/L | 0.13 | | | | 0.086 | | | | 0.053 | J |
| Nickel | 6010C | mg/L | 0.02 | U | | | 0.02 | U | | | 0.02 | U |
| N-Nitrosodimethylamine | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| OCDD | 1613B | pg/L | 19.5 | U | | | 19.4 | U | | | 19.3 | U |
| OCDF | 1613B | pg/L | 19.5 | U | | | 19.4 | U | | | 19.3 | U |
| pH | 9040C | pH | 7.1 | | | | 6.5 | | | | 5.7 | |
| Phenanthrene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Phosphorus | 6010C | mg/L | 0.2 | U | | | 0.2 | U | | | 0.2 | U |
| Potassium | 6010C | mg/L | 1 | U | | | 1 | U | | | 1 | U |
| Pyrene | 8270D SIM | µg/L | 0.055 | U | | | 0.051 | U | | | 0.054 | U |
| Selenium | 6020A | mg/L | 0.004 | U | | | 0.004 | U | | | 0.004 | U |
| Silver | 6020A | mg/L | 0.001 | U | | | 0.001 | U | | | 0.001 | U |
| Sodium | 6010C | mg/L | 2 | U | | | 2 | U | | | 0.228 | J |
| Strontium | 6020A | mg/L | 0.002 | U | | | 0.00028 | J | | | 0.002 | U |
| TCDD TEQ | 1613B | pg/L | 0.0875 | | | | 0.00502 | | | | 0.0969 | |
| Technical Toxaphene | 8081B | µg/L | | | | | 2.5 | U | 2.4 | U | 2.5 | U |
| Thallium | 6020A | mg/L | 0.001 | U | | | 0.001 | U | | | 0.001 | U |
| Tin | 6010C | mg/L | 0.0024 | J | | | 0.04 | U | | | 0.0035 | J |
| Titanium | 6010C | mg/L | 0.02 | U | | | 0.02 | U | | | 0.02 | U |
| Vanadium | 6010C | mg/L | 0.01 | U | | | 0.01 | U | | | 0.01 | U |
| Zinc | 6010C | mg/L | 0.0041 | J | | | 0.04 | U | | | 0.04 | U |
| Zirconium | 6010C | mg/L | 0.1 | U | | | 0.1 | U | | | 0.1 | U |

Notes:
ug/L - microgram per liter
mg/L - milligram per liter
ng/L - nanogram per liter
pg/L - picogram per liter
U - Compound not detected above the reporting limit

Table C2- - Subarea 7 - Equipment Blank Samples

| | Sample Name: | | EB1-060313 | | EB2-060313 | | EB2-100213 | |
|---|---|---|---|---|---|---|---|---|
| | Location: | | 7_DG_EB | | 7_DG_EB | | 7_DG_EB | |
| | Sample Date: | | 06/03/2013 | | 06/03/2013 | | 10/02/2013 | |
| | Sample Type: | | EB | | EB | | EB | |
| | Lab: | | LL | | LL | | LL | |
| Analyte | Analytic Method | Units | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 1,2,3,4,6,7,8-HPCDF | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 1,2,3,4,7,8,9-HPCDF | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 1,2,3,4,7,8-HXCDF | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 1,2,3,6,7,8-HXCDF | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 1,2,3,7,8,9-HXCDF | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 1,2,3,7,8-Pentachlorodibenzofuran | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 1-Methylnaphthalene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| 2,3,4,6,7,8-HXCDF | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 2,3,4,7,8-PECDF | 1613B | pg/L | 10.2 | U | 10.1 | U | 9.67 | U |
| 2,3,7,8-TCDD | 1613B | pg/L | 2.04 | U | 2.02 | U | 1.93 | U |
| 2,3,7,8-Tetrachlorodibenzofuran | 1613B | pg/L | 0.112 | J | 2.02 | U | 1.93 | U |
| 2-Methylnaphthalene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| 4,4'-DDD | 8081B | µg/L | 0.017 | U | 0.016 | U | | |
| 4,4'-DDE | 8081B | µg/L | 0.017 | U | 0.016 | U | | |
| 4,4'-DDT | 8081B | µg/L | 0.017 | U | 0.016 | U | | |
| Acenaphthene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Acenaphthylene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Aldrin | 8081B | µg/L | 0.0083 | U | 0.0082 | U | | |
| Alpha-Bhc | 8081B | µg/L | 0.0083 | U | 0.0082 | U | | |
| Aluminum | 6010C | mg/L | 0.4 | U | 0.4 | U | 0.4 | U |
| Anthracene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Antimony | 6010C | mg/L | 0.04 | U | 0.04 | U | 0.04 | U |
| Aroclor 1016 | 8082A | µg/L | 0.41 | U | 0.41 | U | 0.42 | U |
| Aroclor 1221 | 8082A | µg/L | 0.41 | U | 0.41 | U | 0.42 | U |
| Aroclor 1232 | 8082A | µg/L | 0.41 | U | 0.41 | U | 0.42 | U |
| Aroclor 1242 | 8082A | µg/L | 0.41 | U | 0.41 | U | 0.42 | U |
| Aroclor 1248 | 8082A | µg/L | 0.41 | U | 0.41 | U | 0.42 | U |
| Aroclor 1254 | 8082A | µg/L | 0.41 | U | 0.41 | U | 0.42 | U |
| Aroclor 1260 | 8082A | µg/L | 0.41 | U | 0.41 | U | 0.42 | U |
| Aroclor 1262 | 8082A | µg/L | 0.41 | U | 0.41 | U | 0.42 | U |
| Aroclor 1268 | 8082A | µg/L | 0.41 | U | 0.41 | U | 0.42 | U |
| Aroclor 5432 | 8082A | µg/L | 0.41 | U | 0.41 | U | 0.42 | U |
| Aroclor 5442 | 8082A | µg/L | 0.41 | U | 0.41 | U | 0.42 | U |
| Aroclor 5460 | 8082A | µg/L | 0.41 | U | 0.41 | U | 0.42 | U |
| Arsenic | 6010C | mg/L | 0.04 | U | 0.04 | U | 0.04 | U |
| Barium | 6010C | mg/L | 0.01 | U | 0.01 | U | 0.01 | U |
| Benzo(a)anthracene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Benzo(a)pyrene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Benzo(b)fluoranthene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Benzo(e)pyrene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Benzo(g,h,i)perylene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Benzo(k)fluoranthene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Beryllium | 6010C | mg/L | 0.01 | U | 0.01 | U | 0.01 | U |
| Beta-Bhc | 8081B | µg/L | 0.0083 | U | 0.0082 | U | | |
| Bis(2-ethylhexyl)phthalate | 8270D SIM | µg/L | 1.1 | U | 1 | U | 0.41 | J |
| Boron | 6010C | mg/L | 0.1 | U | 0.1 | U | 0.1 | U |
| Butylbenzylphthalate | 8270D SIM | µg/L | 1.1 | U | 1 | U | 1.1 | UJ |
| Cadmium | 6010C | mg/L | 0.01 | U | 0.01 | U | 0.01 | U |
| Calcium | 6010C | mg/L | 0.4 | U | 0.4 | U | 0.4 | U |
| Chlordane | 8081B | µg/L | 0.41 | U | 0.41 | U | | |
| Chromium | 6010C | mg/L | 0.03 | U | 0.03 | U | 0.03 | U |
| Chromium (Hexavalent Compounds) | 7199 | µg/L | | | | | | |
| Chrysene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Cobalt | 6010C | mg/L | 0.01 | U | 0.01 | U | 0.01 | U |
| Copper | 6010C | mg/L | 0.02 | U | 0.02 | U | 0.02 | U |
| Delta-Bhc | 8081B | µg/L | 0.0083 | U | 0.0082 | U | | |
| Dibenzo(a,h)anthracene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | U |
| Dieldrin | 8081B | µg/L | 0.017 | U | 0.016 | U | | |
| Diethylphthalate | 8270D SIM | µg/L | 1.1 | U | 1 | U | 0.29 | J |
| Dimethylphthalate | 8270D SIM | µg/L | 1.1 | U | 1 | U | 1.1 | UJ |
| Di-n-butylphthalate | 8270D SIM | µg/L | 1.1 | U | 1 | U | 0.25 | J |
| Di-n-octylphthalate | 8270D SIM | µg/L | 1.1 | U | 1 | U | 1.1 | U |
| EFH (C12-C14) | 8015M | mg/L | 0.098 | U | 0.1 | U | 0.096 | U |
| EFH (C15-C20) | 8015M | mg/L | 0.098 | U | 0.1 | U | 0.096 | U |
| EFH (C21-C30) | 8015M | mg/L | 0.098 | U | 0.1 | U | 0.096 | U |
| EFH (C30-C40) | 8015M | mg/L | 0.49 | U | 0.5 | U | 0.48 | U |
| EFH (C8-C11) | 8015M | mg/L | 0.098 | UJ | 0.1 | UJ | 0.096 | UJ |
| Endosulfan I | 8081B | µg/L | 0.0083 | U | 0.0082 | U | | |
| Endosulfan II | 8081B | µg/L | 0.017 | U | 0.016 | U | | |
| Endosulfan Sulfate | 8081B | µg/L | 0.017 | U | 0.016 | U | | |
| Endrin | 8081B | µg/L | 0.017 | U | 0.016 | U | | |
| Endrin Aldehyde | 8081B | µg/L | 0.083 | U | 0.082 | U | | |
| Endrin Ketone | 8081B | µg/L | 0.017 | U | 0.016 | U | | |
| Fluoranthene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Fluorene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Formaldehyde | 8315A | µg/L | | | | | | |
| Gamma-Bhc (Lindane) | 8081B | µg/L | 0.0083 | U | 0.0082 | U | | |
| Gasoline Range Organics (C5-C12) | 8015M | µg/L | 50 | U | 50 | U | 50 | U |
| Heptachlor | 8081B | µg/L | 0.0083 | U | 0.0082 | U | | |
| Heptachlor Epoxide | 8081B | µg/L | 0.0083 | U | 0.0082 | U | | |
| Indeno(1,2,3-cd)pyrene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | U |
| Iron | 6010C | mg/L | 0.4 | U | 0.4 | U | 0.4 | U |
| Lead | 6010C | mg/L | 0.03 | U | 0.03 | U | 0.03 | U |
| Lithium | 6010C | mg/L | 0.04 | U | 0.04 | U | 0.04 | U |
| Magnesium | 6010C | mg/L | 0.2 | U | 0.2 | U | 0.2 | U |
| Manganese | 6010C | mg/L | 0.01 | U | 0.01 | U | 0.01 | U |
| Mercury | 7470A | mg/L | 0.0002 | U | 0.0002 | U | 0.0002 | U |
| Methoxychlor | 8081B | µg/L | 0.083 | UJ | 0.082 | UJ | | |
| Mirex | 8081B | µg/L | 0.21 | U | 0.21 | U | | |
| Molybdenum | 6010C | mg/L | 0.02 | U | 0.02 | U | 0.02 | U |
| Naphthalene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Nickel | 6010C | mg/L | 0.02 | U | 0.02 | U | 0.02 | U |
| N-Nitrosodimethylamine | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | U |
| OCDD | 1613B | pg/L | 20.4 | U | 20.2 | U | 19.3 | U |
| OCDF | 1613B | pg/L | 20.4 | U | 20.2 | U | 19.3 | U |
| pH | 9040C | pH | 5.2 | | 5 | | 7.1 | |
| Phenanthrene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Phosphorus | 6010C | mg/L | 0.2 | U | 0.2 | U | 0.2 | U |
| Potassium | 6010C | mg/L | 1 | U | 1 | U | 1 | U |
| Pyrene | 8270D SIM | µg/L | 0.053 | U | 0.052 | U | 0.053 | UJ |
| Selenium | 6020A | mg/L | 0.004 | U | 0.004 | U | 0.004 | U |
| Silver | 6020A | mg/L | 0.001 | U | 0.001 | U | 0.001 | U |
| Sodium | 6010C | mg/L | 2 | U | 2 | U | 2 | U |
| Strontium | 6020A | mg/L | 0.002 | U | 0.002 | U | 0.002 | U |
| TCDD TEQ | 1613B | pg/L | 0.0744 | | 0.0162 | | 0.0608 | |
| Technical Toxaphene | 8081B | µg/L | 2.5 | U | 2.5 | U | | |
| Thallium | 6020A | mg/L | 0.001 | U | 0.001 | U | 0.001 | U |
| Tin | 6010C | mg/L | 0.04 | U | 0.04 | U | 0.04 | U |
| Titanium | 6010C | mg/L | 0.02 | U | 0.02 | U | 0.02 | U |
| Vanadium | 6010C | mg/L | 0.01 | U | 0.01 | U | 0.01 | U |
| Zinc | 6010C | mg/L | 0.04 | U | 0.04 | U | 0.04 | U |
| Zirconium | 6010C | mg/L | 0.1 | U | 0.1 | U | 0.1 | U |

Notes:
ug/L - microgram per liter
mg/L - milligram per liter
ng/L - nanogram per liter
pg/L - picogram per liter
U - Compound not detected above the reporting limit

**Table C3 - Northern Buffer Zone - Equipment Blank Samples**

| | Sample Name: | EB1-120513 | | EB1-121113 | | EB2-120513 | | EB2-121113 | | EB2-121613 | | EB3-120513 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Location: | NBZ_DG_EB | | NBZ_DG_EB | | NBZ_DG_EB | | NBZ_DG_EB | | NBZ_DG_EB | | NBZ_DG_EB | |
| | Sample Date: | 12/05/2013 | | 12/11/2013 | | 12/05/2013 | | 12/11/2013 | | 12/16/2013 | | 12/05/2013 | |
| | Sample Type: | EB | | EB | | EB | | EB | | EB | | EB | |
| | Lab: | LL | | LL | | LL | | LL | | LL | | LL | |
| Analyte | Analytic Method | Units | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.91 | U | 9.65 | U | 9.74 | U | 9.54 | U | 10 | U | 0.436 | J |
| 1,2,3,4,6,7,8-HPCDF | 1613B | pg/L | 9.91 | U | 9.65 | U | 9.74 | U | 9.54 | U | 10 | U | 9.8 | U |
| 1,2,3,4,7,8,9-HPCDF | 1613B | pg/L | 9.91 | U | 9.65 | U | 9.74 | U | 9.54 | U | 10 | U | 9.8 | U |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.91 | U | 0.289 | J | 9.74 | U | 9.54 | U | 10 | U | 9.8 | U |
| 1,2,3,4,7,8-HXCDF | 1613B | pg/L | 9.91 | U | 9.65 | U | 9.74 | U | 9.54 | U | 10 | U | 0.225 | J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.91 | U | 9.65 | U | 9.74 | U | 0.285 | J | 10 | U | 9.8 | U |
| 1,2,3,6,7,8-HXCDF | 1613B | pg/L | 9.91 | U | 9.65 | U | 9.74 | U | 9.54 | U | 10 | U | 9.8 | U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.91 | U | 9.65 | U | 9.74 | U | 9.54 | U | 10 | U | 9.8 | U |
| 1,2,3,7,8,9-HXCDF | 1613B | pg/L | 9.91 | U | 0.258 | J | 9.74 | U | 9.54 | U | 10 | U | 0.39 | J |
| 1,2,3,7,8-Pentachlorodibenzofuran | 1613B | pg/L | 0.646 | J | 9.65 | U | 9.74 | U | 9.54 | U | 10 | U | 0.499 | J |
| 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.91 | U | 0.46 | J | 9.74 | U | 9.54 | U | 10 | U | 0.635 | J |
| 1-Methylnaphthalene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| 2,2-Dichlor-Propionic Acid | 8151A | µg/L | | | | | 1.2 | U | 1.2 | U | | | 1.2 | U |
| 2,3,4,6,7,8-HXCDF | 1613B | pg/L | 9.91 | U | 9.65 | U | 9.74 | U | 9.54 | U | 10 | U | 9.8 | U |
| 2,3,4,7,8-PECDF | 1613B | pg/L | 9.91 | U | 0.658 | J | 9.74 | U | 0.258 | J | 10 | U | 9.8 | U |
| 2,3,7,8-TCDD | 1613B | pg/L | 1.98 | U | 1.93 | U | 1.95 | U | 1.91 | U | 2 | U | 1.96 | U |
| 2,3,7,8-Tetrachlorodibenzofuran | 1613B | pg/L | 1.98 | U | 0.622 | J | 1.95 | U | 1.91 | U | 2 | U | 1.96 | U |
| 2,4,5-T | 8151A | µg/L | | | | | 0.049 | U | 0.05 | U | | | 0.049 | U |
| 2,4-D | 8151A | µg/L | | | | | 0.49 | U | 0.5 | U | | | 0.49 | U |
| 2,4-DB | 8151A | µg/L | | | | | 0.98 | U | 1 | U | | | 0.97 | U |
| 2-Methylnaphthalene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| 4,4'-DDD | 8081B | µg/L | 0.017 | U | 0.018 | U | 0.016 | U | 0.016 | U | | | 0.016 | U |
| 4,4'-DDE | 8081B | µg/L | 0.017 | U | 0.018 | U | 0.016 | U | 0.016 | U | | | 0.016 | U |
| 4,4'-DDT | 8081B | µg/L | 0.017 | U | 0.018 | U | 0.016 | U | 0.016 | U | | | 0.016 | U |
| Acenaphthene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Acenaphthylene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Aldrin | 8081B | µg/L | 0.0083 | U | 0.009 | U | 0.0081 | U | 0.0082 | U | | | 0.008 | U |
| Alpha-Bhc | 8081B | µg/L | 0.0083 | U | 0.009 | U | 0.0081 | U | 0.0082 | U | | | 0.008 | U |
| Aluminum | 6010C | mg/L | | | 0.4 | U | 0.4 | U | 0.4 | U | 0.4 | U | 0.4 | U |
| Anthracene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Antimony | 6010C | mg/L | | | 0.04 | U | 0.04 | U | 0.04 | U | 0.04 | U | 0.04 | U |
| Aroclor 1016 | 8082A | µg/L | 0.41 | U | | | | | 0.41 | U | | | 0.4 | UJ |
| Aroclor 1221 | 8082A | µg/L | 0.41 | U | | | | | 0.41 | U | | | 0.4 | UJ |
| Aroclor 1232 | 8082A | µg/L | 0.41 | U | | | | | 0.41 | U | | | 0.4 | UJ |
| Aroclor 1242 | 8082A | µg/L | 0.41 | U | | | | | 0.41 | U | | | 0.4 | UJ |
| Aroclor 1248 | 8082A | µg/L | 0.41 | U | | | | | 0.41 | U | | | 0.4 | UJ |
| Aroclor 1254 | 8082A | µg/L | 0.41 | U | | | | | 0.41 | U | | | 0.4 | UJ |
| Aroclor 1260 | 8082A | µg/L | 0.41 | U | | | | | 0.41 | U | | | 0.4 | UJ |
| Aroclor 1262 | 8082A | µg/L | 0.41 | U | | | | | 0.41 | U | | | 0.4 | UJ |
| Aroclor 1268 | 8082A | µg/L | 0.41 | U | | | | | 0.41 | U | | | 0.4 | UJ |
| Aroclor 5432 | 8082A | µg/L | 0.41 | UJ | | | | | 0.41 | U | | | 0.4 | UJ |
| Aroclor 5442 | 8082A | µg/L | 0.41 | UJ | | | | | 0.41 | U | | | 0.4 | UJ |
| Aroclor 5460 | 8082A | µg/L | 0.41 | UJ | | | | | 0.41 | U | | | 0.4 | UJ |
| Arsenic | 6010C | mg/L | | | 0.04 | U | 0.04 | U | 0.04 | U | 0.04 | U | 0.04 | U |
| Barium | 6010C | mg/L | | | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U |
| Benzo(a)anthracene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Benzo(a)pyrene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Benzo(b)fluoranthene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Benzo(e)pyrene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Benzo(g,h,i)perylene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Benzo(k)fluoranthene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Beryllium | 6010C | mg/L | | | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U |
| Beta-Bhc | 8081B | µg/L | 0.0083 | U | 0.009 | U | 0.0081 | U | 0.0082 | U | | | 0.008 | U |
| Bis(2-ethylhexyl)phthalate | 8270D SIM | µg/L | 1.1 | UJ | 2.2 | | 1 | UJ | 1 | U | 1.1 | U | 1 | UJ |
| Boron | 6010C | mg/L | | | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U |
| Butylbenzylphthalate | 8270D SIM | µg/L | 1.1 | U | 1 | U | 1 | U | 1 | U | 1.1 | U | 1 | U |
| Cadmium | 6010C | mg/L | | | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U |
| Calcium | 6010C | mg/L | | | 0.4 | U | 0.4 | U | 0.4 | U | 0.4 | U | 0.4 | U |
| Chlordane | 8081B | µg/L | 0.41 | U | 0.45 | U | 0.41 | U | 0.41 | U | | | 0.4 | U |
| Chromium | 6010C | mg/L | | | 0.03 | U | 0.03 | U | 0.03 | U | 0.03 | U | 0.03 | U |
| Chrysene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Cobalt | 6010C | mg/L | | | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U |
| Copper | 6010C | mg/L | | | 0.02 | U | 0.02 | U | 0.02 | U | 0.02 | U | 0.02 | U |
| Cyanide | 9012B | mg/L | | | | | | | | | | | 0.01 | U |
| Delta-Bhc | 8081B | µg/L | 0.0083 | U | 0.009 | U | 0.0081 | U | 0.0082 | U | | | 0.008 | U |
| Dibenzo(a,h)anthracene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Dicamba | 8151A | µg/L | | | | | 0.29 | U | 0.3 | U | | | 0.29 | U |
| Dichlorprop | 8151A | µg/L | | | | | 0.49 | U | 0.5 | U | | | 0.49 | U |
| Dieldrin | 8081B | µg/L | 0.017 | U | 0.018 | U | 0.016 | U | 0.016 | U | | | 0.016 | U |
| Diethylphthalate | 8270D SIM | µg/L | 0.5 | J | 0.15 | J | 0.5 | J | 0.16 | J | 1.1 | U | 0.51 | J |
| Dimethylphthalate | 8270D SIM | µg/L | 1.1 | U | 1 | U | 1 | U | 1 | U | 1.1 | U | 1 | U |
| Di-n-butylphthalate | 8270D SIM | µg/L | 1.1 | U | 0.13 | J | 1 | U | 0.13 | J | 1.1 | U | 1 | U |
| Dinitrobutyl Phenol | 8151A | µg/L | | | | | 0.49 | U | 0.5 | U | | | 0.49 | U |
| Di-n-octylphthalate | 8270D SIM | µg/L | 1.1 | U | 1 | U | 1 | U | 1 | U | 0.06 | J | 1 | U |
| EFH (C12-C14) | 8015M | mg/L | 0.1 | U | 0.1 | U | 0.097 | U | 0.1 | U | 0.099 | U | 0.1 | U |
| EFH (C15-C20) | 8015M | mg/L | 0.1 | U | 0.1 | U | 0.097 | U | 0.1 | U | 0.099 | U | 0.1 | U |
| EFH (C21-C30) | 8015M | mg/L | 0.1 | U | 0.1 | U | 0.097 | U | 0.1 | U | 0.099 | U | 0.1 | U |
| EFH (C30-C40) | 8015M | mg/L | 0.51 | U | 0.51 | U | 0.49 | U | 0.51 | U | 0.5 | U | 0.52 | U |
| EFH (C8-C11) | 8015M | mg/L | 0.1 | U | 0.1 | U | 0.097 | U | 0.1 | U | 0.099 | U | 0.1 | U |
| Endosulfan I | 8081B | µg/L | 0.0083 | U | 0.009 | U | 0.0081 | U | 0.0082 | U | | | 0.008 | U |
| Endosulfan II | 8081B | µg/L | 0.017 | U | 0.018 | U | 0.016 | U | 0.016 | U | | | 0.016 | U |
| Endosulfan Sulfate | 8081B | µg/L | 0.017 | U | 0.018 | U | 0.016 | U | 0.016 | U | | | 0.016 | U |
| Endrin | 8081B | µg/L | 0.017 | U | 0.018 | UJ | 0.016 | U | 0.016 | UJ | | | 0.016 | U |
| Endrin Aldehyde | 8081B | µg/L | 0.083 | U | 0.09 | U | 0.081 | U | 0.082 | U | | | 0.08 | U |
| Endrin Ketone | 8081B | µg/L | 0.017 | U | 0.018 | U | 0.016 | U | 0.016 | U | | | 0.016 | U |
| Fluoranthene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.012 | J | 0.053 | U | 0.05 | U |
| Fluorene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Gamma-Bhc (Lindane) | 8081B | µg/L | 0.0083 | U | 0.009 | U | 0.0081 | U | 0.0082 | U | | | 0.008 | U |
| Gasoline Range Organics (C5-C12) | 8015M | µg/L | | | 50 | U | | | 50 | U | 50 | U | | |
| Heptachlor | 8081B | µg/L | 0.0083 | U | 0.009 | U | 0.0081 | U | 0.0082 | U | | | 0.008 | U |
| Heptachlor Epoxide | 8081B | µg/L | 0.0083 | U | 0.009 | U | 0.0081 | U | 0.0082 | U | | | 0.008 | U |
| Indeno(1,2,3-cd)pyrene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Iron | 6010C | mg/L | | | 0.4 | U | 0.4 | U | 0.4 | U | 0.4 | U | 0.4 | U |
| Lead | 6010C | mg/L | | | 0.03 | U | 0.03 | U | 0.03 | U | 0.03 | U | 0.03 | U |
| Lithium | 6010C | mg/L | | | 0.04 | U | 0.04 | U | 0.04 | U | 0.04 | U | 0.04 | U |
| Magnesium | 6010C | mg/L | | | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U |
| Manganese | 6010C | mg/L | | | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U |
| MCPA | 8151A | µg/L | | | | | 200 | U | 200 | U | | | 190 | U |
| MCPP | 8151A | µg/L | | | | | 200 | U | 200 | U | | | 190 | U |
| Mercury | 7470A | mg/L | | | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U | 0.0002 | U |
| Methoxychlor | 8081B | µg/L | 0.083 | U | 0.09 | U | 0.081 | U | 0.082 | U | | | 0.08 | U |
| Mirex | 8081B | µg/L | 0.041 | U | 0.045 | U | 0.041 | U | 0.041 | U | | | 0.04 | U |
| Molybdenum | 6010C | mg/L | | | 0.02 | U | 0.02 | U | 0.02 | U | 0.02 | U | 0.02 | U |
| Naphthalene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Nickel | 6010C | mg/L | | | 0.02 | U | 0.02 | U | 0.02 | U | 0.02 | U | 0.02 | U |
| Nitrate | 300.0 | mg/L | | | | | | | 0.1 | U | | | | |
| N-Nitrosodimethylamine | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| OCDD | 1613B | pg/L | 19.8 | U | 19.3 | U | 19.5 | U | 19.1 | U | 20 | U | 19.6 | U |
| OCDF | 1613B | pg/L | 19.8 | U | 19.3 | U | 19.5 | U | 19.1 | U | 20 | U | 19.6 | U |
| pH | 9040C | pH | 6 | | 6.9 | | 5.7 | | 6.4 | | 5.6 | | 5.6 | |
| Phenanthrene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.051 | U | 0.053 | U | 0.05 | U |
| Phosphorus | 6010C | mg/L | | | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U |
| Potassium | 6010C | mg/L | | | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| Pyrene | 8270D SIM | µg/L | 0.053 | U | 0.05 | U | 0.052 | U | 0.049 | J | 0.053 | U | 0.05 | U |
| Selenium | 6020A | mg/L | | | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U | 0.004 | U |
| Silver | 6020A | mg/L | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U |
| Silvex (2,4,5-TP) | 8151A | µg/L | | | | | 0.049 | U | 0.05 | U | | | 0.049 | U |
| Sodium | 6010C | mg/L | | | 2 | U | 2 | U | 2 | U | 2 | U | 2 | U |
| Strontium | 6020A | mg/L | | | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U | 0.002 | U |
| TCDD TEQ | 1613B | pg/L | 0.0004 | | 0.0289 | | 0 | U | 0.0023 | | 0.0482 | | 0.039 | |
| Technical Toxaphene | 8081B | µg/L | 0.83 | U | 0.9 | U | 0.81 | U | 0.82 | U | | | 0.8 | U |
| Thallium | 6020A | mg/L | | | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U | 0.001 | U |
| Tin | 6010C | mg/L | | | 0.04 | U | 0.04 | U | 0.04 | U | 0.04 | U | 0.04 | U |
| Titanium | 6010C | mg/L | | | 0.02 | U | 0.02 | U | 0.02 | U | 0.02 | U | 0.02 | U |
| Vanadium | 6010C | mg/L | | | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U | 0.01 | U |

**Table C3 - Northern Buffer Zone - Equipment Blank Samples**

| | | | Sample Name: | | EB1-120513 | | EB1-121113 | | EB2-120513 | | EB2-121113 | | EB2-121613 | | EB3-120513 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Location: | | NBZ_DG_EB | | NBZ_DG_EB | | NBZ_DG_EB | | NBZ_DG_EB | | NBZ_DG_EB | | NBZ_DG_EB | |
| | | | Sample Date: | | 12/05/2013 | | 12/11/2013 | | 12/05/2013 | | 12/11/2013 | | 12/16/2013 | | 12/05/2013 | |
| | | | Sample Type: | | EB | | EB | | EB | | EB | | EB | | EB | |
| | | | Lab: | | LL | | LL | | LL | | LL | | LL | | LL | |
| Analyte | Analytic Method | Units | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer |
| Zinc | 6010C | mg/L | | | 0.04 | U | 0.04 | U | 0.003 | J | 0.04 | U | 0.04 | U | | |
| Zirconium | 6010C | mg/L | | | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U | 0.1 | U | | |

Notes:
ug/L - microgram per liter
mg/L - milligram per liter
ng/L - nanogram per liter
pg/L - picogram per liter
U - Compound not detected above the reporting limit

**Table C4 - Subarea 7 - Field Blanks**

| | | Sample Name: | FB-041113 | | FB-041613 | |
|---|---|---|---|---|---|---|
| | | Location: | FIELD BLANK | | FIELD BLANK | |
| | | Sample Date: | 04/11/2013 | | 04/16/2013 | |
| | | Sample Type: | FB | | FB | |
| | | Lab: | LL | | LL | |
| Analyte | Analytic Method | Units | Concentration | Final Qualifer | Concentration | Final Qualifer |
| 1,1,1,2-Tetrachloroethane | 8260B | µg/L | 5 | U | 5 | U |
| 1,1,1-Trichloroethane | 8260B | µg/L | 5 | U | 5 | U |
| 1,1,2,2-Tetrachloroethane | 8260B | µg/L | 5 | U | 5 | U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 8260B | µg/L | 5 | U | 5 | U |
| 1,1,2-Trichloroethane | 8260B | µg/L | 5 | U | 5 | U |
| 1,1-Dichloroethane | 8260B | µg/L | 5 | U | 5 | U |
| 1,1-Dichloroethene | 8260B | µg/L | 5 | U | 5 | U |
| 1,1-Dichloropropene | 8260B | µg/L | 5 | U | 5 | U |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.76 | U | 9.71 | U |
| 1,2,3,4,6,7,8-HPCDF | 1613B | pg/L | 9.76 | U | 9.71 | U |
| 1,2,3,4,7,8,9-HPCDF | 1613B | pg/L | 9.76 | U | 9.71 | U |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 0.125 | J | 9.71 | U |
| 1,2,3,4,7,8-HXCDF | 1613B | pg/L | 9.76 | U | 0.257 | J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.76 | U | 9.71 | U |
| 1,2,3,6,7,8-HXCDF | 1613B | pg/L | 9.76 | U | 9.71 | U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.76 | U | 9.71 | U |
| 1,2,3,7,8,9-HXCDF | 1613B | pg/L | 9.76 | U | 9.71 | U |
| 1,2,3,7,8-Pentachlorodibenzofuran | 1613B | pg/L | 9.76 | U | 9.71 | U |
| 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.76 | U | 9.71 | U |
| 1,2,3-Trichlorobenzene | 8260B | µg/L | 5 | U | 5 | U |
| 1,2,3-Trichloropropane | 8260B | µg/L | 5 | U | 5 | U |
| 1,2,4-Trichlorobenzene | 8260B | µg/L | 5 | U | 5 | U |
| 1,2,4-Trimethylbenzene | 8260B | µg/L | 5 | U | 5 | U |
| 1,2-Dibromo-3-chloropropane | 8260B | µg/L | 5 | U | 5 | U |
| 1,2-Dibromoethane | 8260B | µg/L | 5 | U | 5 | U |
| 1,2-Dichlorobenzene | 8260B | µg/L | 5 | U | 5 | U |
| 1,2-Dichloroethane | 8260B | µg/L | 5 | U | 5 | U |
| 1,2-Dichloropropane | 8260B | µg/L | 5 | U | 5 | U |
| 1,3,5-Trimethylbenzene | 8260B | µg/L | 5 | U | 5 | U |
| 1,3,5-Trinitrobenzene | 8330A | µg/L | 0.6 | UJ | 0.6 | U |
| 1,3-Dichlorobenzene | 8260B | µg/L | 5 | U | 5 | U |
| 1,3-Dichloropropane | 8260B | µg/L | 5 | U | 5 | U |
| 1,4-Dichlorobenzene | 8260B | µg/L | 5 | U | 5 | U |
| 1,4-Dioxane | 8260B SIM | µg/L | 2 | U | 2 | U |
| 1-Chlorohexane | 8260B | µg/L | 5 | U | 5 | U |
| 1-Methylnaphthalene | 8270D SIM | µg/L | 0.019 | J | 0.052 | U |
| 2,2-Dichloropropane | 8260B | µg/L | 5 | U | 5 | U |
| 2,2-Dichlor-Propionic Acid | 8151A | µg/L | 1.2 | U | 1.2 | UJ |
| 2,3,4,6,7,8-HXCDF | 1613B | pg/L | 9.76 | U | 9.71 | U |
| 2,3,4,7,8-PECDF | 1613B | pg/L | 9.76 | U | 9.71 | U |
| 2,3,7,8-TCDD | 1613B | pg/L | 1.95 | U | 1.94 | U |
| 2,3,7,8-Tetrachlorodibenzofuran | 1613B | pg/L | 1.95 | U | 1.94 | U |
| 2,4,5-T | 8151A | µg/L | 0.049 | U | 0.049 | UJ |
| 2,4,6-Trinitrotoluene | 8330A | µg/L | 0.6 | UJ | 0.6 | U |
| 2,4-D | 8151A | µg/L | 0.49 | U | 0.49 | U |
| 2,4-DB | 8151A | µg/L | 0.98 | U | 0.98 | U |
| 2,4-Diamino-6-nitrotoluene | 8330A | µg/L | 0.6 | U | 0.6 | U |
| 2,4-Dinitrotoluene | 8330A | µg/L | 0.6 | UJ | 0.6 | U |
| 2,6-Diamino-4-nitrotoluene | 8330A | µg/L | 0.6 | U | 0.6 | U |
| 2,6-Dinitrotoluene | 8330A | µg/L | 0.6 | U | 0.6 | U |
| 2-Amino-4,6-Dinitrotoluene | 8330A | µg/L | 0.6 | UJ | 0.6 | U |
| 2-Butanone (MEK) | 8260B | µg/L | 10 | U | 10 | U |
| 2-Chloro-1,1,1-trifluoroethane | 8260B | µg/L | 5 | U | 5 | U |
| 2-Chloroethyl Vinyl Ether | 8260B | µg/L | 10 | U | 10 | U |
| 2-Chlorotoluene | 8260B | µg/L | 5 | U | 5 | U |
| 2-Hexanone | 8260B | µg/L | 10 | U | 10 | U |
| 2-Methylnaphthalene | 8270D SIM | µg/L | 0.024 | J | 0.012 | J |
| 2-Nitrotoluene | 8330A | µg/L | 0.6 | UJ | 0.6 | U |
| 2-Phenylbutane | 8260B | µg/L | 5 | U | 5 | U |
| 2-Propanol | 8015C | µg/L | 1000 | UJ | 1000 | UJ |
| 3-Nitrotoluene | 8330A | µg/L | 1.2 | UJ | 1.2 | U |
| 4,4'-DDD | 8081B | µg/L | 0.016 | U | 0.017 | U |
| 4,4'-DDE | 8081B | µg/L | 0.016 | U | 0.017 | U |
| 4,4'-DDT | 8081B | µg/L | 0.016 | U | 0.017 | U |
| 4-Amino-2,6-Dinitrotoluene | 8330A | µg/L | 0.6 | U | 0.6 | U |
| 4-Chlorotoluene | 8260B | µg/L | 5 | U | 5 | U |
| 4-Methyl-2-pentanone (MIBK) | 8260B | µg/L | 10 | U | 10 | U |
| 4-Nitrotoluene | 8330A | µg/L | 1.2 | UJ | 1.2 | U |
| Acenaphthene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Acenaphthylene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Acetone | 8260B | µg/L | 20 | U | 20 | U |
| Acrolein | 8260B | µg/L | 100 | U | 100 | U |
| Acrylonitrile | 8260B | µg/L | 20 | U | 20 | U |
| Aldrin | 8081B | µg/L | 0.0081 | U | 0.0086 | U |
| Alpha-Bhc | 8081B | µg/L | 0.0081 | U | 0.0086 | U |
| Aluminum | 6010C | mg/L | 0.4 | U | 0.4 | U |
| Anthracene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Antimony | 6010C | mg/L | 0.04 | U | 0.04 | U |
| Aroclor 1016 | 8082A | µg/L | 0.4 | U | 0.43 | U |
| Aroclor 1221 | 8082A | µg/L | 0.4 | U | 0.43 | U |
| Aroclor 1232 | 8082A | µg/L | 0.4 | U | 0.43 | U |
| Aroclor 1242 | 8082A | µg/L | 0.4 | U | 0.43 | U |
| Aroclor 1248 | 8082A | µg/L | 0.4 | U | 0.43 | U |
| Aroclor 1254 | 8082A | µg/L | 0.4 | U | 0.43 | U |
| Aroclor 1260 | 8082A | µg/L | 0.4 | U | 0.43 | U |
| Aroclor 1262 | 8082A | µg/L | 0.4 | U | 0.43 | U |
| Aroclor 1268 | 8082A | µg/L | 0.4 | U | 0.43 | U |
| Aroclor 5432 | 8082A | µg/L | 0.4 | U | 0.43 | U |
| Aroclor 5442 | 8082A | µg/L | 0.4 | U | 0.43 | U |
| Aroclor 5460 | 8082A | µg/L | 0.4 | U | 0.43 | U |
| Arsenic | 6010C | mg/L | 0.04 | U | 0.04 | U |
| Barium | 6010C | mg/L | 0.01 | U | 0.01 | U |
| Benzene | 8260B | µg/L | 5 | U | 5 | U |
| Benzo(a)anthracene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Benzo(a)pyrene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Benzo(b)fluoranthene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Benzo(e)pyrene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Benzo(g,h,i)perylene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Benzo(k)fluoranthene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Beryllium | 6010C | mg/L | 0.01 | U | 0.01 | U |
| Beta-Bhc | 8081B | µg/L | 0.0081 | U | 0.0086 | U |
| Bis(2-ethylhexyl)phthalate | 8270D SIM | µg/L | 1 | U | 1 | U |
| Boron | 6010C | mg/L | 0.1 | U | 0.1 | U |
| Bromobenzene | 8260B | µg/L | 5 | U | 5 | U |
| Bromochloromethane | 8260B | µg/L | 5 | U | 5 | U |
| Bromodichloromethane | 8260B | µg/L | 5 | U | 5 | U |
| Bromoform | 8260B | µg/L | 5 | U | 5 | U |
| Bromomethane | 8260B | µg/L | 5 | U | 5 | U |
| Butylbenzylphthalate | 8270D SIM | µg/L | 1 | U | 1 | U |
| Cadmium | 6010C | mg/L | 0.01 | U | 0.01 | U |
| Calcium | 6010C | mg/L | 0.4 | U | 0.4 | U |
| Carbon Disulfide | 8260B | µg/L | 5 | U | 5 | U |
| Carbon Tetrachloride | 8260B | µg/L | 5 | U | 5 | U |
| Chlordane | 8081B | µg/L | 0.4 | U | 0.43 | U |
| Chlorobenzene | 8260B | µg/L | 5 | U | 5 | U |
| Chloroethane | 8260B | µg/L | 5 | U | 5 | U |
| Chloroform | 8260B | µg/L | 5 | U | 3 | J |
| Chloromethane | 8260B | µg/L | 5 | U | 5 | U |
| Chlorotrifluoroethylene | 8260B | µg/L | 5 | U | 5 | U |
| Chromium | 6010C | mg/L | 0.03 | U | 0.03 | U |
| Chromium (Hexavalent Compounds) | 7199 | µg/L | 10 | U | 10 | U |
| Chrysene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| cis-1,2-Dichloroethene | 8260B | µg/L | 5 | U | 5 | U |
| cis-1,3-Dichloropropene | 8260B | µg/L | 5 | U | 5 | U |
| Cobalt | 6010C | mg/L | 0.01 | U | 0.01 | U |
| Copper | 6010C | mg/L | 0.02 | U | 0.02 | U |
| Cyanide | 9012B | mg/L | 0.01 | U | 0.01 | U |
| Cymene | 8260B | µg/L | 5 | U | 5 | U |
| Delta-Bhc | 8081B | µg/L | 0.0081 | U | 0.0086 | U |
| Di isopropyl Ether | 8260B | µg/L | 5 | U | 5 | U |
| Dibenzo(a,h)anthracene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Dibromochloromethane | 8260B | µg/L | 5 | U | 5 | U |

**Table C4 - Subarea 7 - Field Blanks**

| | | Sample Name: | FB-041113 | | FB-041613 | |
|---|---|---|---|---|---|---|
| | | Location: | FIELD BLANK | | FIELD BLANK | |
| | | Sample Date: | 04/11/2013 | | 04/16/2013 | |
| | | Sample Type: | FB | | FB | |
| | | Lab: | LL | | LL | |
| Analyte | Analytic Method | Units | Concentration | Final Qualifer | Concentration | Final Qualifer |
| Dibromomethane | 8260B | µg/L | 5 | U | 5 | U |
| Dicamba | 8151A | µg/L | 0.29 | U | 0.29 | UJ |
| Dichlorodifluoromethane | 8260B | µg/L | 5 | U | 5 | U |
| Dichlorprop | 8151A | µg/L | 0.49 | U | 0.49 | UJ |
| Dieldrin | 8081B | µg/L | 0.016 | U | 0.017 | U |
| Diethylene Glycol | 8015C | mg/L | 10 | UJ | 10 | U |
| Diethylphthalate | 8270D SIM | µg/L | 0.18 | J | 1 | U |
| Dimethylphthalate | 8270D SIM | µg/L | 1 | U | 1 | U |
| Di-n-butylphthalate | 8270D SIM | µg/L | 0.17 | J | 0.11 | J |
| Dinitrobutyl Phenol | 8151A | µg/L | 0.49 | U | 0.49 | UJ |
| Di-n-octylphthalate | 8270D SIM | µg/L | 1 | UJ | 1 | UJ |
| EFH (C12-C14) | 8015M | mg/L | 0.57 | U | 0.59 | U |
| EFH (C15-C20) | 8015M | mg/L | 0.57 | U | 0.59 | U |
| EFH (C21-C30) | 8015M | mg/L | 0.57 | U | 0.59 | U |
| EFH (C30-C40) | 8015M | mg/L | 0.57 | U | 0.59 | UJ |
| EFH (C8-C11) | 8015M | mg/L | 0.57 | UJ | 0.59 | U |
| Endosulfan I | 8081B | µg/L | 0.0081 | U | 0.0086 | U |
| Endosulfan II | 8081B | µg/L | 0.016 | U | 0.017 | U |
| Endosulfan Sulfate | 8081B | µg/L | 0.016 | U | 0.017 | U |
| Endrin | 8081B | µg/L | 0.016 | U | 0.017 | U |
| Endrin Aldehyde | 8081B | µg/L | 0.081 | U | 0.086 | U |
| Endrin Ketone | 8081B | µg/L | 0.016 | U | 0.017 | U |
| Ethanol | 8015C | µg/L | 1000 | UJ | 1000 | UJ |
| Ethylbenzene | 8260B | µg/L | 5 | U | 5 | U |
| Ethylene Glycol | 8015C | mg/L | 10 | UJ | 10 | U |
| Fluoranthene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Fluorene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Fluoride | 300 | mg/L | 0.1 | U | 0.1 | U |
| Formaldehyde | 8315A | µg/L | 50 | U | 50 | U |
| Gamma-Bhc (Lindane) | 8081B | µg/L | 0.0081 | U | 0.0086 | U |
| Gasoline Range Organics (C5-C12) | 8015M | µg/L | 50 | U | 50 | U |
| Heptachlor | 8081B | µg/L | 0.0081 | U | 0.0086 | U |
| Heptachlor Epoxide | 8081B | µg/L | 0.0081 | U | 0.0086 | U |
| Hexachloro-1,3-butadiene | 8260B | µg/L | 5 | U | 5 | U |
| HMX | 8330A | µg/L | 2 | UJ | 2 | U |
| Indeno(1,2,3-cd)pyrene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Iron | 6010C | mg/L | 0.4 | U | 0.4 | U |
| Isopropylbenzene | 8260B | µg/L | 5 | U | 5 | U |
| Lead | 6010C | mg/L | 0.03 | U | 0.03 | U |
| Lithium | 6010C | mg/L | 0.04 | U | 0.04 | U |
| m,p-Xylene | 8260B | µg/L | 5 | U | 5 | U |
| Magnesium | 6010C | mg/L | 0.2 | U | 0.2 | U |
| Manganese | 6010C | mg/L | 0.01 | U | 0.01 | U |
| MCPA | 8151A | µg/L | 200 | U | 200 | U |
| MCPP | 8151A | µg/L | 200 | U | 200 | UJ |
| M-Dinitrobenzene | 8330A | µg/L | 0.6 | UJ | 0.6 | U |
| Mercury | 7470A | mg/L | 0.0002 | U | 0.0002 | U |
| Methanol | 8015C | µg/L | 1000 | UJ | 1000 | UJ |
| Methoxychlor | 8081B | µg/L | 0.081 | U | 0.086 | U |
| Methyl Iodide | 8260B | µg/L | 5 | U | 5 | U |
| Methyl Tert-Butyl Ether | 8260B | µg/L | 5 | U | 5 | U |
| Methylene Chloride | 8260B | µg/L | 2 | J | 18 | |
| Mirex | 8081B | µg/L | 0.2 | U | 0.22 | U |
| Molybdenum | 6010C | mg/L | 0.02 | U | 0.02 | U |
| m-Terphenyl | 8015B | mg/L | 0.0048 | U | 0.0049 | U |
| Naphthalene | 8270D SIM | µg/L | 0.17 | | 0.052 | U |
| n-Butylbenzene | 8260B | µg/L | 5 | U | 5 | U |
| Nickel | 6010C | mg/L | 0.02 | U | 0.02 | U |
| Nitrate | 300 | mg/L | 0.1 | U | 0.1 | U |
| Nitrite-NO2 | 300 | mg/L | 0.1 | U | 0.1 | U |
| Nitrobenzene | 8330A | µg/L | 0.6 | U | 0.6 | U |
| N-Nitrosodimethylamine | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| n-Propylbenzene | 8260B | µg/L | 5 | U | 5 | U |
| OCDD | 1613B | pg/L | 19.5 | U | 19.4 | U |
| OCDF | 1613B | pg/L | 19.5 | U | 19.4 | U |
| o-Terphenyl | 8015B | mg/L | 0.0048 | U | 0.0049 | U |
| o-Xylene | 8260B | µg/L | 5 | U | 5 | U |
| Perchlorate | 6850 | µg/L | 1 | U | 1 | U |
| pH | 9040C | pH | 7.5 | | 5.7 | |
| Phenanthrene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| Phosphorus | 6010C | mg/L | 0.2 | U | 0.2 | U |
| Potassium | 6010C | mg/L | 1 | U | 1 | U |
| Propylene Glycol | 8015C | mg/L | 10 | UJ | 10 | U |
| p-Terphenyl | 8015B | mg/L | 0.0048 | U | 0.0049 | U |
| Pyrene | 8270D SIM | µg/L | 0.051 | U | 0.052 | U |
| RDX | 8330A | µg/L | 0.6 | UJ | 0.6 | U |
| Selenium | 6020A | mg/L | 0.004 | U | 0.004 | U |
| Silver | 6020A | mg/L | 0.001 | U | 0.001 | U |
| Silvex (2,4,5-TP) | 8151A | µg/L | 0.049 | U | 0.049 | U |
| Sodium | 6010C | mg/L | 2 | U | 2 | U |
| Strontium | 6020A | mg/L | 0.002 | U | 0.002 | U |
| Styrene | 8260B | µg/L | 5 | U | 5 | U |
| TCDD TEQ | 1613B | pg/L | 0.082 | | 0.0354 | |
| Technical Toxaphene | 8081B | µg/L | 2.4 | U | 2.6 | U |
| tert-Butyl ethyl ether | 8260B | µg/L | 5 | U | 5 | U |
| tert-Butylbenzene | 8260B | µg/L | 5 | U | 5 | U |
| Tertiary amyl methyl ether | 8260B | µg/L | 5 | U | 5 | U |
| Tertiary butyl alcohol | 8260B | µg/L | 50 | U | 50 | U |
| Tetrachloroethene | 8260B | µg/L | 5 | U | 5 | U |
| Tetryl | 8330A | µg/L | 0.6 | U | 0.6 | U |
| Thallium | 6020A | mg/L | 0.001 | U | 0.001 | U |
| Tin | 6010C | mg/L | 0.04 | U | 0.0029 | J |
| Titanium | 6010C | mg/L | 0.02 | U | 0.02 | U |
| Toluene | 8260B | µg/L | 5 | U | 5 | U |
| trans-1,2-Dichloroethene | 8260B | µg/L | 5 | U | 5 | U |
| trans-1,3-Dichloropropene | 8260B | µg/L | 5 | U | 5 | U |
| Trichloroethene | 8260B | µg/L | 5 | U | 5 | U |
| Trichlorofluoromethane | 8260B | µg/L | 5 | U | 5 | U |
| Triethylene Glycol | 8015C | mg/L | 10 | UJ | 10 | U |
| Vanadium | 6010C | mg/L | 0.01 | U | 0.01 | U |
| Vinyl Acetate | 8260B | µg/L | 10 | U | 10 | U |
| Vinyl Chloride | 8260B | µg/L | 5 | U | 5 | U |
| Zinc | 6010C | mg/L | 0.04 | U | 0.04 | U |
| Zirconium | 6010C | mg/L | 0.1 | U | 0.1 | U |

Notes:
ug/L - microgram per liter
mg/L - milligram per liter
ng/L - nanogram per liter
pg/L - picogram per liter
U - Compound not detected above the reporting limit

**Table C5 - Northern Buffer Zone - Field Blanks**

| | | | Sample Name: | FB-041613 |
|---|---|---|---|---|
| | | | Location: | FIELD BLANK |
| | | | Sample Date: | 04/16/2013 |
| | | | Sample Type: | FB |
| | | | Lab: | LL |
| Analyte | Analytic Method | Units | Concentration | Final Qualifer |
| 1,1,1,2-Tetrachloroethane | 8260B | µg/L | 5 | U |
| 1,1,1-Trichloroethane | 8260B | µg/L | 5 | U |
| 1,1,2,2-Tetrachloroethane | 8260B | µg/L | 5 | U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 8260B | µg/L | 5 | U |
| 1,1,2-Trichloroethane | 8260B | µg/L | 5 | U |
| 1,1'-Biphenyl | 8270D | µg/L | 1 | U |
| 1,1-Dichloroethane | 8260B | µg/L | 5 | U |
| 1,1-Dichloroethene | 8260B | µg/L | 5 | U |
| 1,1-Dichloropropene | 8260B | µg/L | 5 | U |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.71 | U |
| 1,2,3,4,6,7,8-HPCDF | 1613B | pg/L | 9.71 | U |
| 1,2,3,4,7,8,9-HPCDF | 1613B | pg/L | 9.71 | U |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.71 | U |
| 1,2,3,4,7,8-HXCDF | 1613B | pg/L | 0.257 | J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.71 | U |
| 1,2,3,6,7,8-HXCDF | 1613B | pg/L | 9.71 | U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.71 | U |
| 1,2,3,7,8,9-HXCDF | 1613B | pg/L | 9.71 | U |
| 1,2,3,7,8-Pentachlorodibenzofuran | 1613B | pg/L | 9.71 | U |
| 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 1613B | pg/L | 9.71 | U |
| 1,2,3-Trichlorobenzene | 8260B | µg/L | 5 | U |
| 1,2,3-Trichloropropane | 8260B | µg/L | 5 | U |
| 1,2,4-Trichlorobenzene | 8260B | µg/L | 5 | U |
| 1,2,4-Trichlorobenzene | 8270D | µg/L | 1 | U |
| 1,2,4-Trimethylbenzene | 8260B | µg/L | 5 | U |
| 1,2-Dibromo-3-chloropropane | 8260B | µg/L | 5 | U |
| 1,2-Dibromoethane | 8260B | µg/L | 5 | U |
| 1,2-Dichlorobenzene | 8260B | µg/L | 5 | U |
| 1,2-Dichlorobenzene | 8270D | µg/L | 1 | U |
| 1,2-Dichloroethane | 8260B | µg/L | 5 | U |
| 1,2-Dichloropropane | 8260B | µg/L | 5 | U |
| 1,2-Diphenylhydrazine | 8270D | µg/L | 1 | U |
| 1,3,5-Trimethylbenzene | 8260B | µg/L | 5 | U |
| 1,3,5-Trinitrobenzene | 8330A | µg/L | 0.6 | U |
| 1,3-Dichlorobenzene | 8260B | µg/L | 5 | U |
| 1,3-Dichlorobenzene | 8270D | µg/L | 1 | U |
| 1,3-Dichloropropane | 8260B | µg/L | 5 | U |
| 1,4-Dichlorobenzene | 8260B | µg/L | 5 | U |
| 1,4-Dichlorobenzene | 8270D | µg/L | 1 | U |
| 1,4-Dioxane | 8260B SIM | µg/L | 2 | U |
| 1-Chlorohexane | 8260B | µg/L | 5 | U |
| 1-Methylnaphthalene | 8270D | µg/L | 0.5<br>0.5 | U<br>U |
| 1-Methylnaphthalene | 8270D SIM | µg/L | 0.052 | U |
| 2,2-Dichloropropane | 8260B | µg/L | 5 | U |
| 2,2-Dichlor-Propionic Acid | 8151A | µg/L | 1.2 | UJ |
| 2,3,4,6,7,8-HXCDF | 1613B | pg/L | 9.71 | U |
| 2,3,4,7,8-PECDF | 1613B | pg/L | 9.71 | U |
| 2,3,7,8-TCDD | 1613B | pg/L | 1.94 | U |
| 2,3,7,8-Tetrachlorodibenzofuran | 1613B | pg/L | 1.94 | U |
| 2,4,5-T | 8151A | µg/L | 0.049 | UJ |
| 2,4,5-Trichlorophenol | 8270D | µg/L | 1 | U |
| 2,4,6-Trichlorophenol | 8270D | µg/L | 1 | U |
| 2,4,6-Trinitrotoluene | 8330A | µg/L | 0.6 | U |
| 2,4-D | 8151A | µg/L | 0.49 | U |
| 2,4-DB | 8151A | µg/L | 0.98 | U |
| 2,4-Diamino-6-nitrotoluene | 8330A | µg/L | 0.6 | U |
| 2,4-Dichlorophenol | 8270D | µg/L | 1 | U |
| 2,4-Dimethylphenol | 8270D | µg/L | 1 | U |
| 2,4-Dinitrophenol | 8270D | µg/L | 31 | U |
| 2,4-Dinitrotoluene | 8330A | µg/L | 0.6 | U |
| 2,6-Diamino-4-nitrotoluene | 8330A | µg/L | 0.6 | U |
| 2,6-Dichlorophenol | 8270D | µg/L | 1 | U |
| 2,6-Dinitrotoluene | 8330A | µg/L | 0.6 | U |
| 2-Amino-4,6-Dinitrotoluene | 8330A | µg/L | 0.6 | U |
| 2-Butanone (MEK) | 8260B | µg/L | 10 | U |
| 2-Chloro-1,1,1-trifluoroethane | 8260B | µg/L | 5 | U |
| 2-Chloroethyl Vinyl Ether | 8260B | µg/L | 10 | U |
| 2-Chloronaphthalene | 8270D | µg/L | 1 | U |
| 2-Chlorophenol | 8270D | µg/L | 1 | U |
| 2-Chlorotoluene | 8260B | µg/L | 5 | U |
| 2-Hexanone | 8260B | µg/L | 10 | U |
| 2-Methylnaphthalene | 8270D | µg/L | 0.5<br>0.5 | U<br>U |
| 2-Methylnaphthalene | 8270D SIM | µg/L | 0.012 | J |
| 2-Methylphenol | 8270D | µg/L | 1 | U |
| 2-Nitroaniline | 8270D | µg/L | 1 | U |
| 2-Nitrophenol | 8270D | µg/L | 1 | U |
| 2-Nitrotoluene | 8330A | µg/L | 0.6 | U |
| 2-Phenylbutane | 8260B | µg/L | 5 | U |
| 2-Propanol | 8015C | µg/L | 1000 | UJ |
| 3,3'-Dichlorobenzidine | 8270D | µg/L | 5 | U |
| 3,5-Dimethylphenol | 8270D | µg/L | 10 | U |
| 3-Nitroaniline | 8270D | µg/L | 1 | U |
| 3-Nitrotoluene | 8330A | µg/L | 1.2 | U |
| 4,4'-DDD | 8081B | µg/L | 0.017 | U |
| 4,4'-DDE | 8081B | µg/L | 0.017 | U |
| 4,4'-DDT | 8081B | µg/L | 0.017 | U |
| 4,6-Dinitro-2-methylphenol | 8270D | µg/L | 16 | U |
| 4-Amino-2,6-Dinitrotoluene | 8330A | µg/L | 0.6 | U |
| 4-Bromophenyl-phenylether | 8270D | µg/L | 1 | U |
| 4-Chloro-3-methylphenol | 8270D | µg/L | 1 | U |
| 4-Chloroaniline | 8270D | µg/L | 1 | U |
| 4-Chlorophenyl-phenylether | 8270D | µg/L | 1 | U |
| 4-Chlorotoluene | 8260B | µg/L | 5 | U |
| 4-Methyl-2-pentanone (MIBK) | 8260B | µg/L | 10 | U |
| 4-Methylphenol | 8270D | µg/L | 1 | U |
| 4-Nitroaniline | 8270D | µg/L | 1 | U |
| 4-Nitrophenol | 8270D | µg/L | 31 | U |
| 4-Nitrotoluene | 8330A | µg/L | 1.2 | U |
| Acenaphthene | 8270D | µg/L | 0.5<br>0.5 | U<br>U |
| Acenaphthene | 8270D SIM | µg/L | 0.052 | U |
| Acenaphthylene | 8270D | µg/L | 0.5<br>0.5 | U<br>U |
| Acenaphthylene | 8270D SIM | µg/L | 0.052 | U |
| Acetone | 8260B | µg/L | 20 | U |
| Acrolein | 8260B | µg/L | 100 | U |
| Acrylonitrile | 8260B | µg/L | 20 | U |
| Aldrin | 8081B | µg/L | 0.0086 | U |
| Alpha-Bhc | 8081B | µg/L | 0.0086 | U |
| Aluminum | 6010C | mg/L | 0.4 | U |
| Aniline | 8270D | µg/L | 1 | U |
| Anthracene | 8270D | µg/L | 0.5<br>0.5 | U<br>U |
| Anthracene | 8270D SIM | µg/L | 0.052 | U |
| Antimony | 6010C | mg/L | 0.04 | U |
| Aroclor 1016 | 8082A | µg/L | 0.43 | U |
| Aroclor 1221 | 8082A | µg/L | 0.43 | U |
| Aroclor 1232 | 8082A | µg/L | 0.43 | U |
| Aroclor 1242 | 8082A | µg/L | 0.43 | U |
| Aroclor 1248 | 8082A | µg/L | 0.43 | U |
| Aroclor 1254 | 8082A | µg/L | 0.43 | U |
| Aroclor 1260 | 8082A | µg/L | 0.43 | U |
| Aroclor 1262 | 8082A | µg/L | 0.43 | U |
| Aroclor 1268 | 8082A | µg/L | 0.43 | U |
| Aroclor 5432 | 8082A | µg/L | 0.43 | U |
| Aroclor 5442 | 8082A | µg/L | 0.43 | U |
| Aroclor 5460 | 8082A | µg/L | 0.43 | U |
| Arsenic | 6010C | mg/L | 0.04 | U |
| Barium | 6010C | mg/L | 0.01 | U |

**Table C5 - Northern Buffer Zone - Field Blanks**

| | | | Sample Name: | FB-041613 |
|---|---|---|---|---|
| | | | Location: | FIELD BLANK |
| | | | Sample Date: | 04/16/2013 |
| | | | Sample Type: | FB |
| | | | Lab: | LL |
| Analyte | Analytic Method | Units | Concentration | Final Qualifer |
| Benzene | 8260B | µg/L | 5 | U |
| Benzidine | 8270D | µg/L | 62 | U |
| Benzo(a)anthracene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Benzo(a)anthracene | 8270D SIM | µg/L | 0.052 | U |
| Benzo(a)pyrene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Benzo(a)pyrene | 8270D SIM | µg/L | 0.052 | U |
| Benzo(b)fluoranthene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Benzo(b)fluoranthene | 8270D SIM | µg/L | 0.052 | U |
| Benzo(e)pyrene | 8270D SIM | µg/L | 0.052 | U |
| Benzo(g,h,i)perylene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Benzo(g,h,i)perylene | 8270D SIM | µg/L | 0.052 | U |
| Benzo(k)fluoranthene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Benzo(k)fluoranthene | 8270D SIM | µg/L | 0.052 | U |
| Benzoic Acid | 8270D | µg/L | 16 | UJ |
| Benzyl Alcohol | 8270D | µg/L | 16 | U |
| Beryllium | 6010C | mg/L | 0.01 | U |
| Beta-Bhc | 8081B | µg/L | 0.0086 | U |
| bis(2-chloroethoxy)methane | 8270D | µg/L | 1 | U |
| bis(2-chloroethyl) ether | 8270D | µg/L | 1 | U |
| bis(2-chloroisopropyl) ether | 8270D | µg/L | 1 | U |
| Bis(2-ethylhexyl)phthalate | 8270D | µg/L | 5 | U |
| | | | 5 | U |
| Bis(2-ethylhexyl)phthalate | 8270D SIM | µg/L | 1 | U |
| Boron | 6010C | mg/L | 0.1 | U |
| Bromide | 300.0 | mg/L | 0.5 | U |
| Bromobenzene | 8260B | µg/L | 5 | U |
| Bromochloromethane | 8260B | µg/L | 5 | U |
| Bromodichloromethane | 8260B | µg/L | 5 | U |
| Bromoform | 8260B | µg/L | 5 | U |
| Bromomethane | 8260B | µg/L | 5 | U |
| Butylbenzylphthalate | 8270D | µg/L | 5 | U |
| | | | 5 | U |
| Butylbenzylphthalate | 8270D SIM | µg/L | 1 | U |
| Cadmium | 6010C | mg/L | 0.01 | U |
| Calcium | 6010C | mg/L | 0.4 | U |
| Carbazole | 8270D | µg/L | 1 | U |
| Carbon Disulfide | 8260B | µg/L | 5 | U |
| Carbon Tetrachloride | 8260B | µg/L | 5 | U |
| Chlordane | 8081B | µg/L | 0.43 | U |
| Chloride | 300.0 | mg/L | 0.4 | U |
| Chlorobenzene | 8260B | µg/L | 5 | U |
| Chloroethane | 8260B | µg/L | 5 | U |
| Chloroform | 8260B | µg/L | 3 | J |
| Chloromethane | 8260B | µg/L | 5 | U |
| Chlorotrifluoroethylene | 8260B | µg/L | 5 | U |
| Chromium | 6010C | mg/L | 0.03 | U |
| Chromium (Hexavalent Compounds) | 7199 | µg/L | 10 | U |
| Chrysene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Chrysene | 8270D SIM | µg/L | 0.052 | U |
| cis-1,2-Dichloroethene | 8260B | µg/L | 5 | U |
| cis-1,3-Dichloropropene | 8260B | µg/L | 5 | U |
| Cobalt | 6010C | mg/L | 0.01 | U |
| Copper | 6010C | mg/L | 0.02 | U |
| Cyanide | 9012B | mg/L | 0.01 | U |
| Cymene | 8260B | µg/L | 5 | U |
| Delta-Bhc | 8081B | µg/L | 0.0086 | U |
| Di isopropyl Ether | 8260B | µg/L | 5 | U |
| Dibenzo(a,h)anthracene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Dibenzo(a,h)anthracene | 8270D SIM | µg/L | 0.052 | U |
| Dibenzofuran | 8270D | µg/L | 1 | U |
| Dibromochloromethane | 8260B | µg/L | 5 | U |
| Dibromomethane | 8260B | µg/L | 5 | U |
| Dicamba | 8151A | µg/L | 0.29 | UJ |
| Dichlorodifluoromethane | 8260B | µg/L | 5 | U |
| Dichlorprop | 8151A | µg/L | 0.49 | UJ |
| Dieldrin | 8081B | µg/L | 0.017 | U |
| Diethylene Glycol | 8015C | mg/L | 10 | U |
| Diethylphthalate | 8270D | µg/L | 5 | U |
| | | | 5 | U |
| Diethylphthalate | 8270D SIM | µg/L | 1 | U |
| Dimethylphthalate | 8270D | µg/L | 5 | U |
| | | | 5 | U |
| Dimethylphthalate | 8270D SIM | µg/L | 1 | U |
| Di-n-butylphthalate | 8270D | µg/L | 5 | U |
| | | | 5 | U |
| Di-n-butylphthalate | 8270D SIM | µg/L | 0.11 | J |
| Dinitrobutyl Phenol | 8151A | µg/L | 0.49 | UJ |
| Di-n-octylphthalate | 8270D | µg/L | 5 | U |
| | | | 5 | U |
| Di-n-octylphthalate | 8270D SIM | µg/L | 1 | UJ |
| Diphenylamine | 8270D | µg/L | 5 | U |
| EFH (C12-C14) | 8015M | mg/L | 0.59 | U |
| EFH (C15-C20) | 8015M | mg/L | 0.59 | U |
| EFH (C21-C30) | 8015M | mg/L | 0.59 | U |
| EFH (C30-C40) | 8015M | mg/L | 0.59 | UJ |
| EFH (C8-C11) | 8015M | mg/L | 0.59 | U |
| Endosulfan I | 8081B | µg/L | 0.0086 | U |
| Endosulfan II | 8081B | µg/L | 0.017 | U |
| Endosulfan Sulfate | 8081B | µg/L | 0.017 | U |
| Endrin | 8081B | µg/L | 0.017 | U |
| Endrin Aldehyde | 8081B | µg/L | 0.086 | U |
| Endrin Ketone | 8081B | µg/L | 0.017 | U |
| Ethanol | 8015C | µg/L | 1000 | UJ |
| Ethylbenzene | 8260B | µg/L | 5 | U |
| Ethylene Glycol | 8015C | mg/L | 10 | U |
| Fluoranthene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Fluoranthene | 8270D SIM | µg/L | 0.052 | U |
| Fluorene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Fluorene | 8270D SIM | µg/L | 0.052 | U |
| Fluoride | 300.0 | mg/L | 0.1 | U |
| Formaldehyde | 8315A | µg/L | 50 | U |
| Gamma-Bhc (Lindane) | 8081B | µg/L | 0.0086 | U |
| Gasoline Range Organics (C5-C12) | 8015M | µg/L | 50 | U |
| Heptachlor | 8081B | µg/L | 0.0086 | U |
| Heptachlor Epoxide | 8081B | µg/L | 0.0086 | U |
| Hexachloro-1,3-butadiene | 8260B | µg/L | 5 | U |
| Hexachlorobenzene | 8270D | µg/L | 0.5 | U |
| Hexachlorobutadiene | 8270D | µg/L | 1 | U |
| Hexachlorocyclopentadiene | 8270D | µg/L | 16 | U |
| Hexachloroethane | 8270D | µg/L | 5 | U |
| HMX | 8330A | µg/L | 2 | U |
| Indeno(1,2,3-cd)pyrene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Indeno(1,2,3-cd)pyrene | 8270D SIM | µg/L | 0.052 | U |
| Iron | 6010C | mg/L | 0.4 | U |
| Isophorone | 8270D | µg/L | 1 | U |
| Isopropylbenzene | 8260B | µg/L | 5 | U |
| Lead | 6010C | mg/L | 0.03 | U |
| Lithium | 6010C | mg/L | 0.04 | U |
| m,p-Xylene | 8260B | µg/L | 5 | U |
| Magnesium | 6010C | mg/L | 0.2 | U |
| Manganese | 6010C | mg/L | 0.01 | U |

**Table C5 - Northern Buffer Zone - Field Blanks**

| | | | Sample Name: | FB-041613 |
|---|---|---|---|---|
| | | | Location: | FIELD BLANK |
| | | | Sample Date: | 04/16/2013 |
| | | | Sample Type: | FB |
| | | | Lab: | LL |
| Analyte | Analytic Method | Units | Concentration | Final Qualifer |
| MCPA | 8151A | µg/L | 200 | U |
| MCPP | 8151A | µg/L | 200 | UJ |
| M-Dinitrobenzene | 8330A | µg/L | 0.6 | U |
| Mercury | 7470A | mg/L | 0.0002 | U |
| Methanol | 8015C | µg/L | 1000 | UJ |
| Methoxychlor | 8081B | µg/L | 0.086 | U |
| Methyl Iodide | 8260B | µg/L | 5 | U |
| Methyl Tert-Butyl Ether | 8260B | µg/L | 5 | U |
| Methylene Chloride | 8260B | µg/L | 18 | |
| Mirex | 8081B | µg/L | 0.22 | U |
| Molybdenum | 6010C | mg/L | 0.02 | U |
| m-Terphenyl | 8015B | mg/L | 0.0049 | U |
| Naphthalene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Naphthalene | 8270D SIM | µg/L | 0.052 | U |
| n-Butylbenzene | 8260B | µg/L | 5 | U |
| Nickel | 6010C | mg/L | 0.02 | U |
| Nitrate | 300.0 | mg/L | 0.1 | U |
| Nitrite-NO2 | 300.0 | mg/L | 0.1 | U |
| Nitrobenzene | 8270D | µg/L | 1 | U |
| Nitrobenzene | 8330A | µg/L | 0.6 | U |
| N-Nitrosodimethylamine | 8270D | µg/L | 5 | U |
| | | | 5 | U |
| N-Nitrosodimethylamine | 8270D SIM | µg/L | 0.052 | U |
| N-Nitroso-di-n-propylamine | 8270D | µg/L | 1 | U |
| N-Nitrosodiphenylamine | 8270D | µg/L | 1 | U |
| n-Propylbenzene | 8260B | µg/L | 5 | U |
| OCDD | 1613B | pg/L | 19.4 | U |
| OCDF | 1613B | pg/L | 19.4 | U |
| Orthophosphate | 300.0 | mg/L | 0.5 | U |
| o-Terphenyl | 8015B | mg/L | 0.0049 | U |
| o-Xylene | 8260B | µg/L | 5 | U |
| Pentachlorophenol | 8270D | µg/L | 5 | U |
| Perchlorate | 6850 | µg/L | 1 | U |
| pH | 9040C | pH | 5.7 | |
| Phenanthrene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Phenanthrene | 8270D SIM | µg/L | 0.052 | U |
| Phenol | 8270D | µg/L | 1 | U |
| Phosphorus | 6010C | mg/L | 0.2 | U |
| Potassium | 6010C | mg/L | 1 | U |
| Propylene Glycol | 8015C | mg/L | 10 | U |
| p-Terphenyl | 8015B | mg/L | 0.0049 | U |
| Pyrene | 8270D | µg/L | 0.5 | U |
| | | | 0.5 | U |
| Pyrene | 8270D SIM | µg/L | 0.052 | U |
| Pyridine | 8270D | µg/L | 5 | U |
| RDX | 8330A | µg/L | 0.6 | U |
| Selenium | 6020A | mg/L | 0.004 | U |
| Silver | 6020A | mg/L | 0.001 | U |
| Silvex (2,4,5-TP) | 8151A | µg/L | 0.049 | U |
| Sodium | 6010C | mg/L | 2 | U |
| Strontium | 6020A | mg/L | 0.002 | U |
| Styrene | 8260B | µg/L | 5 | U |
| Sulfate | 300.0 | mg/L | 1 | U |
| TCDD TEQ | 1613B | pg/L | 0.0354 | |
| Technical Toxaphene | 8081B | µg/L | 2.6 | U |
| tert-Butyl ethyl ether | 8260B | µg/L | 5 | U |
| tert-Butylbenzene | 8260B | µg/L | 5 | U |
| Tertiary amyl methyl ether | 8260B | µg/L | 5 | U |
| Tertiary butyl alcohol | 8260B | µg/L | 50 | U |
| Tetrachloroethene | 8260B | µg/L | 5 | U |
| Tetryl | 8330A | µg/L | 0.6 | U |
| Thallium | 6020A | mg/L | 0.001 | U |
| Tin | 6010C | mg/L | 0.0029 | J |
| Titanium | 6010C | mg/L | 0.02 | U |
| Toluene | 8260B | µg/L | 5 | U |
| trans-1,2-Dichloroethene | 8260B | µg/L | 5 | U |
| trans-1,3-Dichloropropene | 8260B | µg/L | 5 | U |
| Trichloroethene | 8260B | µg/L | 5 | U |
| Trichlorofluoromethane | 8260B | µg/L | 5 | U |
| Triethylene Glycol | 8015C | mg/L | 10 | U |
| Vanadium | 6010C | mg/L | 0.01 | U |
| Vinyl Acetate | 8260B | µg/L | 10 | U |
| Vinyl Chloride | 8260B | µg/L | 5 | U |
| Zinc | 6010C | mg/L | 0.04 | U |
| Zirconium | 6010C | mg/L | 0.1 | U |

Notes:
ug/L - microgram per liter
mg/L - milligram per liter
ng/L - nanogram per liter
pg/L - picogram per liter
U - Compound not detected above the reporting limit

**Table C6 - Subarea 7 Trip Blanks**

| | | | Sample Name: | TB-041013 | | TB-041213 | | TB-041513 | | TB-041613 | | TB-041713 | | TB-042213 | | TB-042313 | | TB-042413 | | TB-042613 | | TB-060313 | | TB-060413 | | TB2-100213 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Location: | 7_DG_TB | | 7_DG_TB | | 7_DG_TB | | 7_DG_TB | | 7_DG_TB | | 7_DG_TB | | 7_DG_TB | | 7_DG_TB | | 7_DG_TB | | 7_DG_TB | | 7_DG_TB | | 7_DG_TB | |
| | | | Sample Date: | 04/10/2013 | | 04/12/2013 | | 04/15/2013 | | 04/16/2013 | | 04/17/2013 | | 04/22/2013 | | 04/23/2013 | | 04/24/2013 | | 04/26/2013 | | 06/03/2013 | | 06/04/2013 | | 10/02/2013 | |
| | | | Sample Type: | TB | | TB | | TB | | TB | | TB | | TB | | TB | | TB | | TB | | TB | | TB | | TB | |
| | | | Lab: | LL | | LL | | LL | | LL | | LL | | LL | | LL | | LL | | LL | | LL | | LL | | LL | |
| Analyte | Analytic Method | Units | | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer |
| Gasoline Range Organics (C5-C12) | 8015M | µg/L | | 50 | U | 50 | U | 50 | U | 50 | U | 50 | U | 50 | U | 50 | U | 50 | U | 50 | U | 50 | U | 50 | U | 50 | U |

Notes:
ug/L - microgram per liter
U - Compound not detected above the reporting limit

**Table C7 - Northern Buffer Zone - Trip Blanks**

| | | | Sample Name: | | TB-120313 | | TB-120413 | | TB-120613 | | TB-120913 | | TB2-121613 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Location: | | NBZ_DG_TB | | NBZ_DG_TB | | NBZ_DG_TB | | NBZ_DG_TB | | NBZ_DG_TB | |
| | | | Sample Date: | | 12/03/2013 | | 12/04/2013 | | 12/06/2013 | | 12/09/2013 | | 12/16/2013 | |
| | | | Sample Type: | | TB | | TB | | TB | | TB | | TB | |
| | | | Lab: | | LL | | LL | | LL | | LL | | LL | |
| Analyte | Analytic Method | Units | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer | Concentration | Final Qualifer |
| Gasoline Range Organics (C5-C12) | 8015M | µg/L | 50 | U | 50 | U | 50 | U | 50 | U | 50 | U | 50 | U |

Notes:
ug/L - microgram per liter
U - Compound not detected above the reporting limit

**Table C8 - Subarea 7 - Field Duplicates**

| | | | | Location | 7_DG-510 | | 7_DG-510 | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-810-SA7-SB-0.0-0.5 | | SL-510-SA7-SB-0.0-0.5 | | |
| | | | | Sample Date | 04/22/2013 | | 04/22/2013 | | |
| | | | | Start Depth: | 0 | | 0 | | |
| | | | | End Depth: | 0.5 | | 0.5 | | |
| | | | | Area: | 7_DG | | 7_DG | | |
| | | | | Matrix: | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | |
| MAG: | Chemical Name: | CAS No.: | Lab Method: | Result Unit | | | | | |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 1613B | ng/kg | 22.3 | | 23.2 | | 3.96 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 1613B | ng/kg | 4.4 | J | 4.7 | J | 6.59 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 1613B | ng/kg | 0.396 | J | 0.416 | J | 4.93 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 1613B | ng/kg | 0.357 | J | 0.317 | J | 11.87 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 1613B | ng/kg | 0.435 | J | 1.97 | J | 127.65 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 1613B | ng/kg | 0.79 | J | 0.925 | J | 15.74 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 1613B | ng/kg | 0.267 | J | 0.497 | J | 60.21 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 1613B | ng/kg | 0.622 | J | 0.703 | J | 12.23 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 1613B | ng/kg | 0.111 | J | 0.175 | J | 44.76 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 1613B | ng/kg | 0.591 | J | 0.591 | J | 0.00 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 1613B | ng/kg | 0.135 | J | 0.203 | J | 40.24 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 1613B | ng/kg | 0.315 | J | 0.478 | J | 41.11 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 1613B | ng/kg | 0.375 | J | 0.824 | J | 74.90 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 1613B | ng/kg | 0.994 | U | 0.999 | U | -- |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 1613B | ng/kg | 0.249 | J | 0.258 | J | 3.55 |
| Dioxins | OCDD | 3268-87-9 | 1613B | ng/kg | 171 | | 177 | J | 3.45 |
| Dioxins | OCDF | 39001-02-0 | 1613B | ng/kg | 11.8 | | 10.9 | | 7.93 |
| Dioxins | TCDD TEQ | TCDD TEQ | 1613B | ng/kg | 0.71 | | 1.32 | | 60.10 |
| Formaldehyde | Formaldehyde | 50-00-0 | 8315A | µg/kg | | | | | -- |
| Hexavalent Chormium | Chromium (Hexavalent Compounds) | 18540-29-9 | 7199 | mg/kg | | | | | -- |
| Mercury | Mercury | 7439-97-6 | 7471B | mg/kg | 0.0219 | | 0.0167 | | 26.94 |
| Metals | Aluminum | 7429-90-5 | 6010C | mg/kg | 14600 | | 13600 | | 7.09 |
| Metals | Antimony | 7440-36-0 | 6010C | mg/kg | 0.94 | J | 4.11 | UJ | 200.00 |
| Metals | Arsenic | 7440-38-2 | 6010C | mg/kg | 5.19 | | 5.14 | | 0.97 |
| Metals | Barium | 7440-39-3 | 6010C | mg/kg | 74.3 | | 73.5 | | 1.08 |
| Metals | Beryllium | 7440-41-7 | 6010C | mg/kg | 0.589 | J | 0.542 | J | 8.31 |
| Metals | Boron | 7440-42-8 | 6010C | mg/kg | 10.2 | UJ | 10.3 | UJ | -- |
| Metals | Cadmium | 7440-43-9 | 6010C | mg/kg | 0.0868 | J | 0.12 | J | 32.11 |
| Metals | Calcium | 7440-70-2 | 6010C | mg/kg | 2670 | | 2950 | | 9.96 |
| Metals | Chromium | 7440-47-3 | 6010C | mg/kg | 19.7 | | 20.4 | | 3.49 |
| Metals | Cobalt | 7440-48-4 | 6010C | mg/kg | 5.14 | | 4.8 | | 6.84 |
| Metals | Copper | 7440-50-8 | 6010C | mg/kg | 13.2 | | 12.8 | | 3.08 |
| Metals | Iron | 7439-89-6 | 6010C | mg/kg | 24100 | | 22600 | | 6.42 |
| Metals | Lead | 7439-92-1 | 6010C | mg/kg | 81.7 | J | 29.2 | J | 94.68 |
| Metals | Lithium | 7439-93-2 | 6010C | mg/kg | 26.9 | | 26.6 | | 1.12 |
| Metals | Magnesium | 7439-95-4 | 6010C | mg/kg | 5060 | | 5300 | | 4.63 |
| Metals | Manganese | 7439-96-5 | 6010C | mg/kg | 299 | | 276 | | 8.00 |
| Metals | Molybdenum | 7439-98-7 | 6010C | mg/kg | 2.04 | U | 2.06 | U | -- |
| Metals | Nickel | 7440-02-0 | 6010C | mg/kg | 10.5 | | 10.9 | | 3.74 |
| Metals | Phosphorus | 7723-14-0 | 6010C | mg/kg | 486 | | 436 | | 10.85 |
| Metals | Potassium | 9/7/7440 | 6010C | mg/kg | 4010 | J | 3480 | J | 14.15 |
| Metals | Selenium | 7782-49-2 | 6020A | mg/kg | 0.144 | J | 0.411 | UJ | 200.00 |
| Metals | Silver | 7440-22-4 | 6020A | mg/kg | 0.0404 | J | 0.0279 | J | 36.60 |
| Metals | Sodium | 7440-23-5 | 6010C | mg/kg | 102 | U | 103 | U | -- |
| Metals | Strontium | 7440-24-6 | 6020A | mg/kg | 11.4 | J | 13.2 | J | 14.63 |
| Metals | Thallium | 7440-28-0 | 6020A | mg/kg | 0.211 | | 0.283 | | 29.15 |
| Metals | Tin | 7440-31-5 | 6010C | mg/kg | 10.2 | U | 10.3 | U | -- |
| Metals | Titanium | 7440-32-6 | 6010C | mg/kg | 1190 | | 1170 | | 1.69 |
| Metals | Vanadium | 7440-62-2 | 6010C | mg/kg | 38.6 | | 36.7 | | 5.05 |
| Metals | Zinc | 7440-66-6 | 6010C | mg/kg | 69.1 | | 62.4 | | 10.19 |
| Metals | Zirconium | 7440-67-7 | 6010C | mg/kg | 2.72 | J | 2.52 | J | 7.63 |
| Moisture Content | Moisture | MOIST | 160.3M | % | 3 | | 3.7 | | 20.90 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Acenaphthene | 83-32-9 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Acenaphthylene | 208-96-8 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Anthracene | 120-12-7 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Benzo(a)anthracene | 56-55-3 | 8270D SIM | µg/kg | 0.74 | J | 1.3 | J | 54.90 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 8270D SIM | µg/kg | 1 | J | 1.8 | J | 57.14 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 8270D SIM | µg/kg | 2.4 | J | 5 | J | 70.27 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 8270D SIM | µg/kg | 0.83 | J | 1.4 | J | 51.12 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 8270D SIM | µg/kg | 8.5 | | 9.4 | | 10.06 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 8270D SIM | µg/kg | 76 | J | 7.3 | J | 164.95 |
| PAHs | Butylbenzylphthalate | 85-68-7 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- |
| PAHs | Chrysene | 218-01-9 | 8270D SIM | µg/kg | 1.9 | | 2.9 | | 41.67 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Diethylphthalate | 84-66-2 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- |
| PAHs | Dimethylphthalate | 131-11-3 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- |
| PAHs | Di-n-butylphthalate | 84-74-2 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- |
| PAHs | Di-n-octylphthalate | 117-84-0 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- |
| PAHs | Fluoranthene | 206-44-0 | 8270D SIM | µg/kg | 2.1 | J | 4.1 | J | 64.52 |
| PAHs | Fluorene | 86-73-7 | 8270D SIM | µg/kg | 0.69 | J | 1.7 | UJ | 200.00 |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 8270D SIM | µg/kg | 0.69 | J | 2 | J | 97.40 |
| PAHs | Naphthalene | 91-20-3 | 8270D SIM | µg/kg | 1.2 | J | 0.93 | J | 25.35 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Phenanthrene | 85-01-8 | 8270D SIM | µg/kg | 1.3 | J | 1.9 | | 37.50 |
| PAHs | Pyrene | 129-00-0 | 8270D SIM | µg/kg | 1.8 | J | 3.4 | J | 61.54 |
| PCBPCTs | Aroclor 1016 | 12674-11-2 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1221 | 11104-28-2 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1232 | 11141-16-5 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1242 | 53469-21-9 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1248 | 12672-29-6 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1254 | 11097-69-1 | 8082A | µg/kg | 25 | J | 14 | J | 56.41 |
| PCBPCTs | Aroclor 1260 | 11096-82-5 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1262 | 37324-23-5 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1268 | 11100-14-4 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 5432 | 63496-31-1 | 8082A | µg/kg | 34 | U | 34 | U | -- |
| PCBPCTs | Aroclor 5442 | 12642-23-8 | 8082A | µg/kg | 34 | U | 34 | U | -- |
| PCBPCTs | Aroclor 5460 | 11126-42-4 | 8082A | µg/kg | 32 | J | 17 | J | 61.22 |
| Pesticides | 4,4'-DDD | 72-54-8 | 8081B | µg/kg | 1.8 | U | 1.8 | U | -- |
| Pesticides | 4,4'-DDE | 72-55-9 | 8081B | µg/kg | 1.4 | J | 0.67 | J | 70.53 |
| Pesticides | 4,4'-DDT | 50-29-3 | 8081B | µg/kg | 1.8 | UJ | 0.72 | J | 200.00 |

**Table C8 - Subarea 7 - Field Duplicates**

| | | | | | Location | | 7_DG-510 | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Name: | | SL-810-SA7-SB-0.0-0.5 | SL-510-SA7-SB-0.0-0.5 | |
| | | | | | Sample Date | | 04/22/2013 | 04/22/2013 | |
| | | | | | Start Depth: | | 0 | 0 | |
| | | | | | End Depth: | | 0.5 | 0.5 | |
| | | | | | Area: | | 7_DG | 7_DG | |
| | | | | | Matrix: | | SO | SO | |
| | | | | | Sample Type: | | FD | N | |
| Pesticides | Aldrin | 309-00-2 | 8081B | µg/kg | | 0.86 U | 0.86 U | | -- |
| Pesticides | Alpha-Bhc | 319-84-6 | 8081B | µg/kg | | 0.86 U | 0.86 U | | -- |
| Pesticides | Beta-Bhc | 319-85-7 | 8081B | µg/kg | | 2 U | 2 U | | -- |
| Pesticides | Chlordane | 57-74-9 | 8081B | µg/kg | | 18 U | 18 U | | -- |
| Pesticides | Delta-Bhc | 319-86-8 | 8081B | µg/kg | | 0.86 U | 0.86 U | | -- |
| Pesticides | Dieldrin | 60-57-1 | 8081B | µg/kg | | 1.8 U | 1.8 U | | -- |
| Pesticides | Endosulfan I | 959-98-8 | 8081B | µg/kg | | 0.86 U | 0.86 U | | -- |
| Pesticides | Endosulfan II | 33213-65-9 | 8081B | µg/kg | | 1.8 U | 1.8 U | | -- |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 8081B | µg/kg | | 1.8 U | 1.8 U | | -- |
| Pesticides | Endrin | 72-20-8 | 8081B | µg/kg | | 1.8 U | 1.8 U | | -- |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 8081B | µg/kg | | 1.8 U | 1.8 U | | -- |
| Pesticides | Endrin Ketone | 53494-70-5 | 8081B | µg/kg | | 1.9 U | 1.9 U | | -- |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 8081B | µg/kg | | 0.86 U | 0.86 U | | -- |
| Pesticides | Heptachlor | 76-44-8 | 8081B | µg/kg | | 0.86 U | 0.86 U | | -- |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 8081B | µg/kg | | 0.86 U | 0.86 U | | -- |
| Pesticides | Methoxychlor | 72-43-5 | 8081B | µg/kg | | 6.9 U | 7 U | | -- |
| Pesticides | Mirex | 2385-85-5 | 8081B | µg/kg | | 1.8 U | 1.8 U | | -- |
| Pesticides | Technical Toxaphene | 8001-35-2 | 8081B | µg/kg | | 34 U | 34 U | | -- |
| pH | pH | pH | 9045M | pH | | 6.68 | 6.77 | | 1.34 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 8015M | mg/kg | | 5.2 U | 5.2 U | | -- |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 8015M | mg/kg | | 5.2 U | 5.2 U | | -- |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 8015M | mg/kg | | 5.2 U | 5.2 U | | -- |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 8015M | mg/kg | | 13 J | 6.9 J | | 61.31 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 8015M | mg/kg | | 39 J | 21 J | | 60.00 |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 8015M | mg/kg | | | | | -- |

Notes:
ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported
200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results only were estimated "J"

**Table C8 - Subarea 7 - Field Duplicates**

| | | | | Location | 7_DG-519 | | 7_DG-519 | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-819-SA7-SB-0.0-0.5 | | SL-519-SA7-SB-0.0-0.5 | | |
| | | | | Sample Date | 04/25/2013 | | 04/25/2013 | | |
| | | | | Start Depth: | 0 | | 0 | | |
| | | | | End Depth: | 0.5 | | 0.5 | | |
| | | | | Area: | 7_DG | | 7_DG | | |
| | | | | Matrix: | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | |
| MAG: | Chemical Name: | CAS No.: | Lab Method: | Result Unit | | | | | |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 1613B | ng/kg | 17.1 | | 25.2 | | 38.30 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 1613B | ng/kg | 3.38 | J | 2.91 | J | 14.94 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 1613B | ng/kg | 0.298 | J | 0.344 | J | 14.33 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 1613B | ng/kg | 0.317 | J | 0.276 | J | 13.83 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 1613B | ng/kg | 0.435 | J | 0.486 | J | 11.07 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 1613B | ng/kg | 0.728 | J | 1.02 | J | 33.41 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 1613B | ng/kg | 0.307 | J | 0.299 | J | 2.64 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 1613B | ng/kg | 0.654 | J | 0.691 | J | 5.50 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 1613B | ng/kg | 0.108 | J | 0.114 | J | 5.41 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 1613B | ng/kg | 0.577 | J | 0.711 | J | 20.81 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 1613B | ng/kg | 5.08 | U | 5.1 | U | -- |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 1613B | ng/kg | 0.284 | J | 0.303 | J | 6.47 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 1613B | ng/kg | 0.484 | J | 0.495 | J | 2.25 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 1613B | ng/kg | 0.0291 | J | 0.0651 | J | 76.43 |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 1613B | ng/kg | 0.184 | J | 0.365 | J | 65.94 |
| Dioxins | OCDD | 3268-87-9 | 1613B | ng/kg | 174 | | 270 | J | 43.24 |
| Dioxins | OCDF | 39001-02-0 | 1613B | ng/kg | 13.7 | J | 7.75 | J | 55.48 |
| Dioxins | TCDD TEQ | TCDD TEQ | 1613B | ng/kg | 0.503 | | 0.639 | | 23.82 |
| Formaldehyde | Formaldehyde | 50-00-0 | 8315A | µg/kg | | | | | -- |
| Hexavalent Chormium | Chromium (Hexavalent Compounds) | 18540-29-9 | 7199 | mg/kg | | | | | -- |
| Mercury | Mercury | 7439-97-6 | 7471B | mg/kg | 0.0492 | | 0.0581 | | 16.59 |
| Metals | Aluminum | 7429-90-5 | 6010C | mg/kg | 12000 | | 11700 | | 2.53 |
| Metals | Antimony | 7440-36-0 | 6010C | mg/kg | 0.542 | J | 4.63 | J | 158.08 |
| Metals | Arsenic | 7440-38-2 | 6010C | mg/kg | 4.09 | J | 4.45 | | 8.43 |
| Metals | Barium | 7440-39-3 | 6010C | mg/kg | 107 | | 104 | | 2.84 |
| Metals | Beryllium | 7440-41-7 | 6010C | mg/kg | 0.473 | J | 0.463 | J | 2.14 |
| Metals | Boron | 7440-42-8 | 6010C | mg/kg | 10.3 | U | 10.1 | U | -- |
| Metals | Cadmium | 7440-43-9 | 6010C | mg/kg | 0.38 | J | 1.19 | J | 103.18 |
| Metals | Calcium | 7440-70-2 | 6010C | mg/kg | 6150 | J | 7940 | J | 25.41 |
| Metals | Chromium | 7440-47-3 | 6010C | mg/kg | 17 | | 15.4 | | 9.88 |
| Metals | Cobalt | 7440-48-4 | 6010C | mg/kg | 4.4 | J | 7.61 | J | 53.46 |
| Metals | Copper | 7440-50-8 | 6010C | mg/kg | 12 | | 12.3 | | 2.47 |
| Metals | Iron | 7439-89-6 | 6010C | mg/kg | 18500 | | 17900 | | 3.30 |
| Metals | Lead | 7439-92-1 | 6010C | mg/kg | 15.1 | J | 23.8 | J | 44.73 |
| Metals | Lithium | 7439-93-2 | 6010C | mg/kg | 19.6 | | 20.2 | | 3.02 |
| Metals | Magnesium | 7439-95-4 | 6010C | mg/kg | 4550 | | 4490 | | 1.33 |
| Metals | Manganese | 7439-96-5 | 6010C | mg/kg | 328 | | 355 | | 7.91 |
| Metals | Molybdenum | 7439-98-7 | 6010C | mg/kg | 2.07 | UJ | 2.79 | J | 200.00 |
| Metals | Nickel | 7440-02-0 | 6010C | mg/kg | 10.1 | | 8.9 | J | 12.63 |
| Metals | Phosphorus | 7723-14-0 | 6010C | mg/kg | 515 | J | 679 | J | 27.47 |
| Metals | Potassium | 9/7/7440 | 6010C | mg/kg | 3320 | J | 3090 | J | 7.18 |
| Metals | Selenium | 7782-49-2 | 6020A | mg/kg | 0.139 | J | 0.189 | J | 30.49 |
| Metals | Silver | 7440-22-4 | 6020A | mg/kg | 0.0326 | J | 0.0351 | J | 7.39 |
| Metals | Sodium | 7440-23-5 | 6010C | mg/kg | 103 | U | 101 | U | -- |
| Metals | Strontium | 7440-24-6 | 6020A | mg/kg | 36.6 | | 37.5 | | 2.43 |
| Metals | Thallium | 7440-28-0 | 6020A | mg/kg | 0.259 | | 0.23 | | 11.86 |
| Metals | Tin | 7440-31-5 | 6010C | mg/kg | 10.3 | UJ | 10.9 | J | 200.00 |
| Metals | Titanium | 7440-32-6 | 6010C | mg/kg | 1040 | | 977 | | 6.25 |
| Metals | Vanadium | 7440-62-2 | 6010C | mg/kg | 30.2 | | 29.3 | | 3.03 |
| Metals | Zinc | 7440-66-6 | 6010C | mg/kg | 69.5 | | 71 | | 2.14 |
| Metals | Zirconium | 7440-67-7 | 6010C | mg/kg | 2.54 | J | 2.49 | J | 1.99 |
| Moisture Content | Moisture | MOIST | 160.3M | % | 4.3 | | 2.4 | | 56.72 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 8270D SIM | µg/kg | 1.1 | J | 0.88 | J | 22.22 |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 8270D SIM | µg/kg | 1.8 | | 1.5 | J | 18.18 |
| PAHs | Acenaphthene | 83-32-9 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Acenaphthylene | 208-96-8 | 8270D SIM | µg/kg | 1.7 | UJ | 0.39 | J | 200.00 |
| PAHs | Anthracene | 120-12-7 | 8270D SIM | µg/kg | 0.59 | J | 0.52 | J | 12.61 |
| PAHs | Benzo(a)anthracene | 56-55-3 | 8270D SIM | µg/kg | 2.8 | | 4.5 | J | 46.58 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 8270D SIM | µg/kg | 2.7 | J | 5 | J | 59.74 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 8270D SIM | µg/kg | 5.9 | J | 13 | J | 75.13 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 8270D SIM | µg/kg | 18 | UJ | 5.5 | J | 200.00 |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 8270D SIM | µg/kg | 1.4 | J | 2.8 | J | 66.67 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 8270D SIM | µg/kg | 2.4 | J | 9.1 | J | 116.52 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 8270D SIM | µg/kg | 14 | J | 21 | | 40.00 |
| PAHs | Butylbenzylphthalate | 85-68-7 | 8270D SIM | µg/kg | 19 | U | 18 | U | -- |
| PAHs | Chrysene | 218-01-9 | 8270D SIM | µg/kg | 5 | J | 9 | J | 57.14 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 8270D SIM | µg/kg | 1.7 | UJ | 1 | J | 200.00 |
| PAHs | Diethylphthalate | 84-66-2 | 8270D SIM | µg/kg | 19 | U | 18 | U | -- |
| PAHs | Dimethylphthalate | 131-11-3 | 8270D SIM | µg/kg | 19 | U | 18 | U | -- |
| PAHs | Di-n-butylphthalate | 84-74-2 | 8270D SIM | µg/kg | 19 | U | 18 | U | -- |
| PAHs | Di-n-octylphthalate | 117-84-0 | 8270D SIM | µg/kg | 19 | U | 18 | U | -- |
| PAHs | Fluoranthene | 206-44-0 | 8270D SIM | µg/kg | 5.8 | | 9.1 | J | 44.30 |
| PAHs | Fluorene | 86-73-7 | 8270D SIM | µg/kg | 3.5 | | 3.9 | | 10.81 |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 8270D SIM | µg/kg | 1.4 | J | 2.5 | J | 56.41 |
| PAHs | Naphthalene | 91-20-3 | 8270D SIM | µg/kg | 2.1 | | 1.5 | J | 33.33 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Phenanthrene | 85-01-8 | 8270D SIM | µg/kg | 3.3 | | 3.1 | | 6.25 |
| PAHs | Pyrene | 129-00-0 | 8270D SIM | µg/kg | 5 | | 7.9 | J | 44.96 |
| PCBPCTs | Aroclor 1016 | 12674-11-2 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1221 | 11104-28-2 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1232 | 11141-16-5 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1242 | 53469-21-9 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1248 | 12672-29-6 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1254 | 11097-69-1 | 8082A | µg/kg | 6.1 | J | 7 | J | 13.74 |
| PCBPCTs | Aroclor 1260 | 11096-82-5 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1262 | 37324-23-5 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1268 | 11100-14-4 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 5432 | 63496-31-1 | 8082A | µg/kg | 34 | UJ | 33 | UJ | -- |
| PCBPCTs | Aroclor 5442 | 12642-23-8 | 8082A | µg/kg | 34 | UJ | 33 | UJ | -- |
| PCBPCTs | Aroclor 5460 | 11126-42-4 | 8082A | µg/kg | 34 | UJ | 33 | UJ | -- |
| Pesticides | 4,4'-DDD | 72-54-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | 4,4'-DDE | 72-55-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | 4,4'-DDT | 50-29-3 | 8081B | µg/kg | | | | | -- |

**Table C8 - Subarea 7 - Field Duplicates**

| | | | | | | | | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Location | 7_DG-519 | | 7_DG-519 | | |
| | | | | Sample Name: | SL-819-SA7-SB-0.0-0.5 | | SL-519-SA7-SB-0.0-0.5 | | |
| | | | | Sample Date | 04/25/2013 | | 04/25/2013 | | |
| | | | | Start Depth: | 0 | | 0 | | |
| | | | | End Depth: | 0.5 | | 0.5 | | |
| | | | | Area: | 7_DG | | 7_DG | | |
| | | | | Matrix: | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | |
| Pesticides | Aldrin | 309-00-2 | 8081B | µg/kg | | | | | -- |
| Pesticides | Alpha-Bhc | 319-84-6 | 8081B | µg/kg | | | | | -- |
| Pesticides | Beta-Bhc | 319-85-7 | 8081B | µg/kg | | | | | -- |
| Pesticides | Chlordane | 57-74-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | Delta-Bhc | 319-86-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Dieldrin | 60-57-1 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endosulfan I | 959-98-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endosulfan II | 33213-65-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endrin | 72-20-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endrin Ketone | 53494-70-5 | 8081B | µg/kg | | | | | -- |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | Heptachlor | 76-44-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 8081B | µg/kg | | | | | -- |
| Pesticides | Methoxychlor | 72-43-5 | 8081B | µg/kg | | | | | -- |
| Pesticides | Mirex | 2385-85-5 | 8081B | µg/kg | | | | | -- |
| Pesticides | Technical Toxaphene | 8001-35-2 | 8081B | µg/kg | | | | | -- |
| pH | pH | pH | 9045M | pH | 7.59 | | 7.32 | | 3.62 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 8015M | mg/kg | 5.2 | UJ | 3 | J | 200.00 |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 8015M | mg/kg | 5.2 | UJ | 2.5 | J | 200.00 |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 8015M | mg/kg | 14 | | 14 | | 0.00 |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 8015M | mg/kg | 56 | | 41 | | 30.93 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 8015M | mg/kg | 79 | J | 95 | J | 18.39 |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 8015M | mg/kg | | | | | -- |

Notes:
ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported
200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results only were estimated "J"

**Table C8 - Subarea 7 - Field Duplicates**

| | | | | Location | 7_DG-536 | | 7_DG-536 | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-836-SA7-SB-3.0-4.0 | | SL-536-SA7-SB-3.0-4.0 | | |
| | | | | Sample Date | 04/12/2013 | | 04/12/2013 | | |
| | | | | Start Depth: | 3 | | 3 | | |
| | | | | End Depth: | 4 | | 4 | | |
| | | | | Area: | 7_DG | | 7_DG | | |
| | | | | Matrix: | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | |
| MAG: | Chemical Name: | CAS No.: | Lab Method: | Result Unit | | | | | |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 1613B | ng/kg | 38.9 | J | 18.2 | J | 72.50 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 1613B | ng/kg | 5.29 | J | 2.14 | J | 84.79 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 1613B | ng/kg | 0.529 | J | 5.02 | UJ | 200.00 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 1613B | ng/kg | 0.724 | J | 0.287 | J | 86.45 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 1613B | ng/kg | 0.302 | J | 5.02 | UJ | 200.00 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 1613B | ng/kg | 1.87 | J | 0.778 | J | 82.48 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 1613B | ng/kg | 0.396 | J | 5.02 | UJ | 200.00 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 1613B | ng/kg | 1.41 | J | 0.575 | J | 84.13 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 1613B | ng/kg | 5.13 | UJ | 5.02 | UJ | -- |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 1613B | ng/kg | 5.13 | UJ | 5.02 | UJ | -- |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 1613B | ng/kg | 0.38 | J | 0.238 | J | 45.95 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 1613B | ng/kg | 0.439 | J | 0.189 | J | 79.62 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 1613B | ng/kg | 0.231 | J | 5.02 | UJ | 200.00 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 1613B | ng/kg | 1.03 | UJ | 1 | UJ | -- |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 1613B | ng/kg | 0.0308 | J | 1 | UJ | 200.00 |
| Dioxins | OCDD | 3268-87-9 | 1613B | ng/kg | 358 | J | 150 | J | 81.89 |
| Dioxins | OCDF | 39001-02-0 | 1613B | ng/kg | 9.39 | J | 3.87 | J | 83.26 |
| Dioxins | TCDD TEQ | TCDD TEQ | 1613B | ng/kg | 1.54 | | 0.441 | | 110.95 |
| Formaldehyde | Formaldehyde | 50-00-0 | 8315A | µg/kg | | | | | -- |
| Hexavalent Chormium | Chromium (Hexavalent Compounds) | 18540-29-9 | 7199 | mg/kg | | | | | -- |
| Mercury | Mercury | 7439-97-6 | 7471B | mg/kg | 0.02 | U | 0.0202 | U | -- |
| Metals | Aluminum | 7429-90-5 | 6010C | mg/kg | 10800 | | 10800 | | 0.00 |
| Metals | Antimony | 7440-36-0 | 6010C | mg/kg | 1.47 | J | 1.58 | J | 7.21 |
| Metals | Arsenic | 7440-38-2 | 6010C | mg/kg | 2.38 | J | 2.06 | J | 14.41 |
| Metals | Barium | 7440-39-3 | 6010C | mg/kg | 66.7 | | 72.1 | | 7.78 |
| Metals | Beryllium | 7440-41-7 | 6010C | mg/kg | 0.501 | J | 0.482 | J | 3.87 |
| Metals | Boron | 7440-42-8 | 6010C | mg/kg | 2.9 | J | 3.2 | J | 9.84 |
| Metals | Cadmium | 7440-43-9 | 6010C | mg/kg | 0.453 | J | 0.42 | J | 7.56 |
| Metals | Calcium | 7440-70-2 | 6010C | mg/kg | 2540 | | 3140 | | 21.13 |
| Metals | Chromium | 7440-47-3 | 6010C | mg/kg | 14 | | 18.5 | | 27.69 |
| Metals | Cobalt | 7440-48-4 | 6010C | mg/kg | 4.93 | | 5.11 | | 3.59 |
| Metals | Copper | 7440-50-8 | 6010C | mg/kg | 4.57 | | 5.13 | | 11.55 |
| Metals | Iron | 7439-89-6 | 6010C | mg/kg | 19600 | | 19000 | | 3.11 |
| Metals | Lead | 7439-92-1 | 6010C | mg/kg | 5.13 | | 5.13 | | 0.00 |
| Metals | Lithium | 7439-93-2 | 6010C | mg/kg | 23.8 | | 23.5 | | 1.27 |
| Metals | Magnesium | 7439-95-4 | 6010C | mg/kg | 3870 | | 4080 | | 5.28 |
| Metals | Manganese | 7439-96-5 | 6010C | mg/kg | 276 | | 283 | | 2.50 |
| Metals | Molybdenum | 7439-98-7 | 6010C | mg/kg | 1.98 | UJ | 1.97 | UJ | -- |
| Metals | Nickel | 7440-02-0 | 6010C | mg/kg | 7.16 | | 8.67 | | 19.08 |
| Metals | Phosphorus | 7723-14-0 | 6010C | mg/kg | 344 | J | 367 | J | 6.47 |
| Metals | Potassium | 9/7/7440 | 6010C | mg/kg | 2710 | J | 2760 | J | 1.83 |
| Metals | Selenium | 7782-49-2 | 6020A | mg/kg | 0.396 | U | 0.395 | U | -- |
| Metals | Silver | 7440-22-4 | 6020A | mg/kg | 0.198 | UJ | 0.0307 | J | 200.00 |
| Metals | Sodium | 7440-23-5 | 6010C | mg/kg | 59.4 | J | 61.3 | J | 3.15 |
| Metals | Strontium | 7440-24-6 | 6020A | mg/kg | 10.9 | | 12 | | 9.61 |
| Metals | Thallium | 7440-28-0 | 6020A | mg/kg | 0.248 | | 0.232 | | 6.67 |
| Metals | Tin | 7440-31-5 | 6010C | mg/kg | 9.89 | U | 9.87 | U | -- |
| Metals | Titanium | 7440-32-6 | 6010C | mg/kg | 979 | | 1060 | | 7.95 |
| Metals | Vanadium | 7440-62-2 | 6010C | mg/kg | 26.8 | | 28.8 | | 7.19 |
| Metals | Zinc | 7440-66-6 | 6010C | mg/kg | 54.9 | | 55.1 | | 0.36 |
| Metals | Zirconium | 7440-67-7 | 6010C | mg/kg | 4.95 | UJ | 1.11 | J | 200.00 |
| Moisture Content | Moisture | MOIST | 160.3M | % | 2.8 | | 2.6 | | 7.41 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Acenaphthene | 83-32-9 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Acenaphthylene | 208-96-8 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Anthracene | 120-12-7 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Benzo(a)anthracene | 56-55-3 | 8270D SIM | µg/kg | 0.91 | J | 0.98 | J | 7.41 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 8270D SIM | µg/kg | 1.5 | J | 1.2 | J | 22.22 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 8270D SIM | µg/kg | 3.5 | | 2.1 | | 50.00 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 8270D SIM | µg/kg | 1.7 | | 1.1 | J | 42.86 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 8270D SIM | µg/kg | 1 | J | 0.89 | J | 11.64 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Butylbenzylphthalate | 85-68-7 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Chrysene | 218-01-9 | 8270D SIM | µg/kg | 2.6 | | 1.8 | | 36.36 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Diethylphthalate | 84-66-2 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Dimethylphthalate | 131-11-3 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Di-n-butylphthalate | 84-74-2 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Di-n-octylphthalate | 117-84-0 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Fluoranthene | 206-44-0 | 8270D SIM | µg/kg | 3.5 | | 2.4 | | 37.29 |
| PAHs | Fluorene | 86-73-7 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 8270D SIM | µg/kg | 1.3 | J | 0.91 | J | 35.29 |
| PAHs | Naphthalene | 91-20-3 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Phenanthrene | 85-01-8 | 8270D SIM | µg/kg | 2 | | 1.2 | J | 50.00 |
| PAHs | Pyrene | 129-00-0 | 8270D SIM | µg/kg | 3.8 | | 2.6 | J | 37.50 |
| PCBPCTs | Aroclor 1016 | 12674-11-2 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1221 | 11104-28-2 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1232 | 11141-16-5 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1242 | 53469-21-9 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1248 | 12672-29-6 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1254 | 11097-69-1 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1260 | 11096-82-5 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1262 | 37324-23-5 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1268 | 11100-14-4 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 5432 | 63496-31-1 | 8082A | µg/kg | 33 | U | 33 | U | -- |
| PCBPCTs | Aroclor 5442 | 12642-23-8 | 8082A | µg/kg | 33 | U | 33 | U | -- |
| PCBPCTs | Aroclor 5460 | 11126-42-4 | 8082A | µg/kg | 33 | U | 33 | U | -- |
| Pesticides | 4,4'-DDD | 72-54-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | 4,4'-DDE | 72-55-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | 4,4'-DDT | 50-29-3 | 8081B | µg/kg | | | | | -- |

**Table C8 - Subarea 7 - Field Duplicates**

| | | | | | Location | | 7_DG-536 | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Name: | | SL-836-SA7-SB-3.0-4.0 | | |
| | | | | | Sample Date | | 04/12/2013 | | |
| | | | | | Start Depth: | | 3 | | |
| | | | | | End Depth: | | 4 | | |
| | | | | | Area: | | 7_DG | | |
| | | | | | Matrix: | | SO | | |
| | | | | | Sample Type: | | FD | | |
| Pesticides | Aldrin | 309-00-2 | 8081B | µg/kg | | | | | -- |
| Pesticides | Alpha-Bhc | 319-84-6 | 8081B | µg/kg | | | | | -- |
| Pesticides | Beta-Bhc | 319-85-7 | 8081B | µg/kg | | | | | -- |
| Pesticides | Chlordane | 57-74-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | Delta-Bhc | 319-86-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Dieldrin | 60-57-1 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endosulfan I | 959-98-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endosulfan II | 33213-65-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endrin | 72-20-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endrin Ketone | 53494-70-5 | 8081B | µg/kg | | | | | -- |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | Heptachlor | 76-44-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 8081B | µg/kg | | | | | -- |
| Pesticides | Methoxychlor | 72-43-5 | 8081B | µg/kg | | | | | -- |
| Pesticides | Mirex | 2385-85-5 | 8081B | µg/kg | | | | | -- |
| Pesticides | Technical Toxaphene | 8001-35-2 | 8081B | µg/kg | | | | | -- |
| pH | pH | pH | 9045M | pH | 7.92 | | 7.71 | | 2.69 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 8015M | mg/kg | 5.1 | U | 5.1 | U | -- |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 8015M | mg/kg | 5.1 | U | 5.1 | U | -- |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 8015M | mg/kg | 5.1 | U | 5.1 | U | -- |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 8015M | mg/kg | 5.1 | UJ | 6.7 | J | 200.00 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 8015M | mg/kg | 10 | UJ | 14 | J | 200.00 |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 8015M | mg/kg | 1 | U | 1 | U | -- |

Notes:
ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported
200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results only were estimated "J"

**Table C8 - Subarea 7 - Field Duplicates**

| | | | | Location | 7_DG-540 | | 7_DG-540 | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-840-SA7-SB-0.0-0.5 | | SL-540-SA7-SB-0.0-0.5 | | |
| | | | | Sample Date | 04/09/2013 | | 04/09/2013 | | |
| | | | | Start Depth: | 0 | | 0 | | |
| | | | | End Depth: | 0.5 | | 0.5 | | |
| | | | | Area: | 7_DG | | 7_DG | | |
| | | | | Matrix: | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | |
| MAG: | Chemical Name: | CAS No.: | Lab Method: | Result Unit | | | | | |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 1613B | ng/kg | 12.7 | | 8.49 | | 39.74 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 1613B | ng/kg | 2.35 | J | 1.52 | J | 42.89 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 1613B | ng/kg | 0.239 | J | 5.12 | U | 200.00 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 1613B | ng/kg | 0.197 | J | 0.15 | J | 27.09 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 1613B | ng/kg | 0.196 | J | 0.15 | J | 26.59 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 1613B | ng/kg | 0.661 | J | 0.361 | J | 58.71 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 1613B | ng/kg | 4.9 | U | 5.12 | U | -- |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 1613B | ng/kg | 0.443 | J | 0.339 | J | 26.60 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 1613B | ng/kg | 0.204 | J | 0.0774 | J | 89.98 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 1613B | ng/kg | 4.9 | U | 5.12 | U | -- |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 1613B | ng/kg | 4.9 | U | 5.12 | U | -- |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 1613B | ng/kg | 0.187 | J | 5.12 | U | 200.00 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 1613B | ng/kg | 4.9 | U | 5.12 | U | -- |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 1613B | ng/kg | 0.98 | U | 1.02 | U | -- |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 1613B | ng/kg | 0.98 | U | 1.02 | U | -- |
| Dioxins | OCDD | 3268-87-9 | 1613B | ng/kg | 161 | J | 86.5 | J | 60.20 |
| Dioxins | OCDF | 39001-02-0 | 1613B | ng/kg | 4.4 | J | 3.16 | J | 32.80 |
| Dioxins | TCDD TEQ | TCDD TEQ | 1613B | ng/kg | 0.602 | J | 0.193 | J | 102.89 |
| Formaldehyde | Formaldehyde | 50-00-0 | 8315A | µg/kg | 2100 | U | 2100 | U | -- |
| Hexavalent Chormium | Chromium (Hexavalent Compounds) | 18540-29-9 | 7199 | mg/kg | 0.26 | J | 0.37 | J | 34.92 |
| Mercury | Mercury | 7439-97-6 | 7471B | mg/kg | 0.02 | U | 0.0201 | U | -- |
| Metals | Aluminum | 7429-90-5 | 6010C | mg/kg | 14800 | | 13300 | | 10.68 |
| Metals | Antimony | 7440-36-0 | 6010C | mg/kg | 3.99 | UJ | 4.1 | UJ | -- |
| Metals | Arsenic | 7440-38-2 | 6010C | mg/kg | 4.74 | | 4.19 | | 12.32 |
| Metals | Barium | 7440-39-3 | 6010C | mg/kg | 73.5 | | 72.7 | | 1.09 |
| Metals | Beryllium | 7440-41-7 | 6010C | mg/kg | 0.998 | U | 0.556 | J | 200.00 |
| Metals | Boron | 7440-42-8 | 6010C | mg/kg | 9.98 | U | 10.2 | U | -- |
| Metals | Cadmium | 7440-43-9 | 6010C | mg/kg | 0.998 | U | 0.0727 | J | 200.00 |
| Metals | Calcium | 7440-70-2 | 6010C | mg/kg | 2670 | J | 3100 | J | 14.90 |
| Metals | Chromium | 7440-47-3 | 6010C | mg/kg | 15.4 | | 15.2 | | 1.31 |
| Metals | Cobalt | 7440-48-4 | 6010C | mg/kg | 4 | | 4.28 | | 6.76 |
| Metals | Copper | 7440-50-8 | 6010C | mg/kg | 6.02 | | 6.71 | | 10.84 |
| Metals | Iron | 7439-89-6 | 6010C | mg/kg | 19100 | | 19000 | | 0.52 |
| Metals | Lead | 7439-92-1 | 6010C | mg/kg | 4.92 | | 5.22 | | 5.92 |
| Metals | Lithium | 7439-93-2 | 6010C | mg/kg | 23.6 | | 22.4 | | 5.22 |
| Metals | Magnesium | 7439-95-4 | 6010C | mg/kg | 4100 | | 4080 | | 0.49 |
| Metals | Manganese | 7439-96-5 | 6010C | mg/kg | 245 | | 244 | | 0.41 |
| Metals | Molybdenum | 7439-98-7 | 6010C | mg/kg | 2 | UJ | 2.05 | UJ | -- |
| Metals | Nickel | 7440-02-0 | 6010C | mg/kg | 8.86 | | 8.81 | | 0.57 |
| Metals | Phosphorus | 7723-14-0 | 6010C | mg/kg | 426 | J | 399 | J | 6.55 |
| Metals | Potassium | 9/7/7440 | 6010C | mg/kg | 3400 | J | 3560 | J | 4.60 |
| Metals | Selenium | 7782-49-2 | 6020A | mg/kg | 0.399 | UJ | 0.102 | J | 200.00 |
| Metals | Silver | 7440-22-4 | 6020A | mg/kg | 0.2 | UJ | 0.024 | J | 200.00 |
| Metals | Sodium | 7440-23-5 | 6010C | mg/kg | 69.5 | J | 69.3 | J | 0.29 |
| Metals | Strontium | 7440-24-6 | 6020A | mg/kg | 14.9 | J | 19.4 | J | 26.24 |
| Metals | Thallium | 7440-28-0 | 6020A | mg/kg | 0.244 | | 0.223 | | 8.99 |
| Metals | Tin | 7440-31-5 | 6010C | mg/kg | 9.98 | U | 10.2 | U | -- |
| Metals | Titanium | 7440-32-6 | 6010C | mg/kg | 983 | | 888 | | 10.15 |
| Metals | Vanadium | 7440-62-2 | 6010C | mg/kg | 32 | | 29.8 | | 7.12 |
| Metals | Zinc | 7440-66-6 | 6010C | mg/kg | 52.3 | | 55.8 | | 6.48 |
| Metals | Zirconium | 7440-67-7 | 6010C | mg/kg | 4.99 | UJ | 0.921 | J | 200.00 |
| Moisture Content | Moisture | MOIST | 160.3M | % | 2.7 | | 3.3 | | 20.00 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Acenaphthene | 83-32-9 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Acenaphthylene | 208-96-8 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Anthracene | 120-12-7 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Benzo(a)anthracene | 56-55-3 | 8270D SIM | µg/kg | 0.8 | J | 1.7 | UJ | 200.00 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 8270D SIM | µg/kg | 0.89 | J | 0.74 | J | 18.40 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 8270D SIM | µg/kg | 1.6 | J | 1.4 | J | 13.33 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 8270D SIM | µg/kg | 17 | U | 18 | UJ | -- |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 8270D SIM | µg/kg | 0.77 | J | 0.98 | J | 24.00 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 8270D SIM | µg/kg | 13 | J | 15 | J | 14.29 |
| PAHs | Butylbenzylphthalate | 85-68-7 | 8270D SIM | µg/kg | 8.7 | J | 6.7 | J | 25.97 |
| PAHs | Chrysene | 218-01-9 | 8270D SIM | µg/kg | 1.5 | J | 1.6 | J | 6.45 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Diethylphthalate | 84-66-2 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- |
| PAHs | Dimethylphthalate | 131-11-3 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- |
| PAHs | Di-n-butylphthalate | 84-74-2 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- |
| PAHs | Di-n-octylphthalate | 117-84-0 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- |
| PAHs | Fluoranthene | 206-44-0 | 8270D SIM | µg/kg | 1.7 | | 1.4 | J | 19.35 |
| PAHs | Fluorene | 86-73-7 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Naphthalene | 91-20-3 | 8270D SIM | µg/kg | 1.7 | UJ | 1.7 | UJ | -- |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 8270D SIM | µg/kg | 1.7 | U | 1.7 | U | -- |
| PAHs | Phenanthrene | 85-01-8 | 8270D SIM | µg/kg | 1.1 | J | 0.77 | J | 35.29 |
| PAHs | Pyrene | 129-00-0 | 8270D SIM | µg/kg | 2.1 | | 1.5 | J | 33.33 |
| PCBPCTs | Aroclor 1016 | 12674-11-2 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1221 | 11104-28-2 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1232 | 11141-16-5 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1242 | 53469-21-9 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1248 | 12672-29-6 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1254 | 11097-69-1 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1260 | 11096-82-5 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1262 | 37324-23-5 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1268 | 11100-14-4 | 8082A | µg/kg | 17 | U | 18 | U | -- |
| PCBPCTs | Aroclor 5432 | 63496-31-1 | 8082A | µg/kg | 34 | U | 34 | U | -- |
| PCBPCTs | Aroclor 5442 | 12642-23-8 | 8082A | µg/kg | 34 | U | 34 | U | -- |
| PCBPCTs | Aroclor 5460 | 11126-42-4 | 8082A | µg/kg | 34 | U | 34 | U | -- |
| Pesticides | 4,4'-DDD | 72-54-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | 4,4'-DDE | 72-55-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | 4,4'-DDT | 50-29-3 | 8081B | µg/kg | | | | | -- |

**Table C8 - Subarea 7 - Field Duplicates**

| | | | | | Location | | 7_DG-540 | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Name: | | SL-840-SA7-SB-0.0-0.5 | | SL-540-SA7-SB-0.0-0.5 | | |
| | | | | | Sample Date | | 04/09/2013 | | 04/09/2013 | | |
| | | | | | Start Depth: | | 0 | | 0 | | |
| | | | | | End Depth: | | 0.5 | | 0.5 | | |
| | | | | | Area: | | 7_DG | | 7_DG | | |
| | | | | | Matrix: | | SO | | SO | | |
| | | | | | Sample Type: | | FD | | N | | |
| Pesticides | Aldrin | 309-00-2 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Alpha-Bhc | 319-84-6 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Beta-Bhc | 319-85-7 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Chlordane | 57-74-9 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Delta-Bhc | 319-86-8 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Dieldrin | 60-57-1 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Endosulfan I | 959-98-8 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Endosulfan II | 33213-65-9 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Endrin | 72-20-8 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Endrin Ketone | 53494-70-5 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Heptachlor | 76-44-8 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Methoxychlor | 72-43-5 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Mirex | 2385-85-5 | 8081B | µg/kg | | | | | | -- |
| Pesticides | Technical Toxaphene | 8001-35-2 | 8081B | µg/kg | | | | | | -- |
| pH | pH | pH | 9045M | pH | | | | | | -- |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 8015M | mg/kg | 5.1 | U | 5.1 | U | | -- |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 8015M | mg/kg | 5.1 | U | 5.1 | U | | -- |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 8015M | mg/kg | 4.3 | J | 3 | J | | 35.62 |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 8015M | mg/kg | 7 | | 4.9 | J | | 35.29 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 8015M | mg/kg | 46 | J | 17 | J | | 92.06 |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 8015M | mg/kg | | | | | | -- |

Notes:
ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported
200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results only were estimated "J"

**Table C8 - Subarea 7 - Field Duplicates**

| | | | | Location | 7_DG-513 | | 7_DG-513 | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-913-SA7-SB-0.0-0.5 | | SL-513-SA7-SB-0.0-0.5 | | |
| | | | | Sample Date | 06/04/2013 | | 06/04/2013 | | |
| | | | | Start Depth: | 0 | | 0 | | |
| | | | | End Depth: | 0.5 | | 0.5 | | |
| | | | | Area: | 7_DG | | 7_DG | | |
| | | | | Matrix: | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | |
| MAG: | Chemical Name: | CAS No.: | Lab Method: | Result Unit | | | | | |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 1613B | ng/kg | 40.7 | J | 95.8 | J | 80.73 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 1613B | ng/kg | 8.72 | J | 19.2 | J | 75.07 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 1613B | ng/kg | 0.775 | J | 1.28 | J | 49.15 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 1613B | ng/kg | 0.527 | J | 1.06 | J | 67.17 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 1613B | ng/kg | 0.864 | J | 0.876 | J | 1.38 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 1613B | ng/kg | 1.49 | J | 3.18 | J | 72.38 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 1613B | ng/kg | 0.706 | J | 0.913 | J | 25.57 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 1613B | ng/kg | 0.998 | J | 1.87 | J | 60.81 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 1613B | ng/kg | 4.96 | U | 5.09 | U | -- |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 1613B | ng/kg | 0.646 | J | 0.702 | J | 8.31 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 1613B | ng/kg | 4.96 | U | 0.451 | J | 200.00 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 1613B | ng/kg | 0.624 | J | 0.894 | J | 35.57 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 1613B | ng/kg | 0.691 | J | 0.839 | J | 19.35 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 1613B | ng/kg | 0.0389 | J | 0.11 | J | 95.50 |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 1613B | ng/kg | 0.457 | J | 0.763 | J | 50.16 |
| Dioxins | OCDD | 3268-87-9 | 1613B | ng/kg | 396 | J | 906 | J | 78.34 |
| Dioxins | OCDF | 39001-02-0 | 1613B | ng/kg | 28.3 | J | 82.8 | J | 98.11 |
| Dioxins | TCDD TEQ | TCDD TEQ | 1613B | ng/kg | 1.49 | | 3.17 | | 72.10 |
| Formaldehyde | Formaldehyde | 50-00-0 | 8315A | µg/kg | | | | | -- |
| Hexavalent Chormium | Chromium (Hexavalent Compounds) | 18540-29-9 | 7199 | mg/kg | | | | | -- |
| Mercury | Mercury | 7439-97-6 | 7471B | mg/kg | 0.0267 | J | 0.0151 | J | 55.50 |
| Metals | Aluminum | 7429-90-5 | 6010C | mg/kg | 9640 | | 9050 | | 6.31 |
| Metals | Antimony | 7440-36-0 | 6010C | mg/kg | 0.637 | J | 0.573 | J | 10.58 |
| Metals | Arsenic | 7440-38-2 | 6010C | mg/kg | 4.31 | | 4.18 | | 3.06 |
| Metals | Barium | 7440-39-3 | 6010C | mg/kg | 65.4 | | 61.3 | | 6.47 |
| Metals | Beryllium | 7440-41-7 | 6010C | mg/kg | 0.453 | J | 0.404 | J | 11.44 |
| Metals | Boron | 7440-42-8 | 6010C | mg/kg | 6.3 | J | 6.16 | J | 2.25 |
| Metals | Cadmium | 7440-43-9 | 6010C | mg/kg | 0.511 | J | 0.513 | J | 0.39 |
| Metals | Calcium | 7440-70-2 | 6010C | mg/kg | 2620 | | 2450 | | 6.71 |
| Metals | Chromium | 7440-47-3 | 6010C | mg/kg | 12.4 | | 11.6 | | 6.67 |
| Metals | Cobalt | 7440-48-4 | 6010C | mg/kg | 4.18 | | 3.77 | | 10.31 |
| Metals | Copper | 7440-50-8 | 6010C | mg/kg | 5.92 | | 5.37 | | 9.74 |
| Metals | Iron | 7439-89-6 | 6010C | mg/kg | 16700 | | 16400 | | 1.81 |
| Metals | Lead | 7439-92-1 | 6010C | mg/kg | 9.75 | | 7.81 | | 22.10 |
| Metals | Lithium | 7439-93-2 | 6010C | mg/kg | 22.4 | | 22.2 | | 0.90 |
| Metals | Magnesium | 7439-95-4 | 6010C | mg/kg | 3720 | | 3550 | | 4.68 |
| Metals | Manganese | 7439-96-5 | 6010C | mg/kg | 255 | | 243 | | 4.82 |
| Metals | Molybdenum | 7439-98-7 | 6010C | mg/kg | 2.01 | UJ | 2.04 | UJ | -- |
| Metals | Nickel | 7440-02-0 | 6010C | mg/kg | 7.63 | | 6.82 | | 11.21 |
| Metals | Phosphorus | 7723-14-0 | 6010C | mg/kg | 389 | | 385 | | 1.03 |
| Metals | Potassium | 9/7/7440 | 6010C | mg/kg | 3160 | J | 2980 | J | 5.86 |
| Metals | Selenium | 7782-49-2 | 6020A | mg/kg | 0.402 | U | 0.407 | U | -- |
| Metals | Silver | 7440-22-4 | 6020A | mg/kg | 0.201 | UJ | 0.0323 | J | 200.00 |
| Metals | Sodium | 7440-23-5 | 6010C | mg/kg | 63.2 | J | 63.8 | J | 0.94 |
| Metals | Strontium | 7440-24-6 | 6020A | mg/kg | 9.91 | | 8.69 | | 13.12 |
| Metals | Thallium | 7440-28-0 | 6020A | mg/kg | 0.209 | | 0.202 | J | 3.41 |
| Metals | Tin | 7440-31-5 | 6010C | mg/kg | 10.1 | U | 10.2 | U | -- |
| Metals | Titanium | 7440-32-6 | 6010C | mg/kg | 1030 | | 945 | | 8.61 |
| Metals | Vanadium | 7440-62-2 | 6010C | mg/kg | 26.7 | | 25 | | 6.58 |
| Metals | Zinc | 7440-66-6 | 6010C | mg/kg | 76.4 | | 67.4 | | 12.52 |
| Metals | Zirconium | 7440-67-7 | 6010C | mg/kg | 2.48 | J | 2.22 | J | 11.06 |
| Moisture Content | Moisture | MOIST | 160.3M | % | 1.5 | | 1.8 | | 18.18 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Acenaphthene | 83-32-9 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Acenaphthylene | 208-96-8 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Anthracene | 120-12-7 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Benzo(a)anthracene | 56-55-3 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Benzo(a)pyrene | 50-32-8 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 8270D SIM | µg/kg | 13 | J | 18 | | 32.26 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 8270D SIM | µg/kg | 170 | U | 170 | U | -- |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 8270D SIM | µg/kg | 180 | U | 180 | U | -- |
| PAHs | Butylbenzylphthalate | 85-68-7 | 8270D SIM | µg/kg | 180 | U | 180 | U | -- |
| PAHs | Chrysene | 218-01-9 | 8270D SIM | µg/kg | 20 | | 23 | | 13.95 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Diethylphthalate | 84-66-2 | 8270D SIM | µg/kg | 180 | U | 180 | U | -- |
| PAHs | Dimethylphthalate | 131-11-3 | 8270D SIM | µg/kg | 180 | U | 180 | U | -- |
| PAHs | Di-n-butylphthalate | 84-74-2 | 8270D SIM | µg/kg | 180 | U | 180 | U | -- |
| PAHs | Di-n-octylphthalate | 117-84-0 | 8270D SIM | µg/kg | 180 | U | 180 | U | -- |
| PAHs | Fluoranthene | 206-44-0 | 8270D SIM | µg/kg | 8.3 | J | 7 | J | 16.99 |
| PAHs | Fluorene | 86-73-7 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Naphthalene | 91-20-3 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Phenanthrene | 85-01-8 | 8270D SIM | µg/kg | 17 | U | 17 | U | -- |
| PAHs | Pyrene | 129-00-0 | 8270D SIM | µg/kg | 8.4 | J | 7.5 | J | 11.32 |
| PCBPCTs | Aroclor 1016 | 12674-11-2 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1221 | 11104-28-2 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1232 | 11141-16-5 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1242 | 53469-21-9 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1248 | 12672-29-6 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1254 | 11097-69-1 | 8082A | µg/kg | 13 | J | 13 | J | 0.00 |
| PCBPCTs | Aroclor 1260 | 11096-82-5 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1262 | 37324-23-5 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 1268 | 11100-14-4 | 8082A | µg/kg | 17 | U | 17 | U | -- |
| PCBPCTs | Aroclor 5432 | 63496-31-1 | 8082A | µg/kg | 34 | U | 33 | U | -- |
| PCBPCTs | Aroclor 5442 | 12642-23-8 | 8082A | µg/kg | 34 | U | 33 | U | -- |
| PCBPCTs | Aroclor 5460 | 11126-42-4 | 8082A | µg/kg | 17 | J | 33 | UJ | 200.00 |
| Pesticides | 4,4'-DDD | 72-54-8 | 8081B | µg/kg | 1.7 | U | 1.7 | U | -- |
| Pesticides | 4,4'-DDE | 72-55-9 | 8081B | µg/kg | 1.8 | UJ | 0.53 | J | 200.00 |
| Pesticides | 4,4'-DDT | 50-29-3 | 8081B | µg/kg | 6.3 | | 7 | J | 10.53 |

**Table C8 - Subarea 7 - Field Duplicates**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Location | 7_DG-513 | | 7_DG-513 | | RPD |
| | | | | | Sample Name: | SL-913-SA7-SB-0.0-0.5 | | SL-513-SA7-SB-0.0-0.5 | | |
| | | | | | Sample Date | 06/04/2013 | | 06/04/2013 | | |
| | | | | | Start Depth: | 0 | | 0 | | |
| | | | | | End Depth: | 0.5 | | 0.5 | | |
| | | | | | Area: | 7_DG | | 7_DG | | |
| | | | | | Matrix: | SO | | SO | | |
| | | | | | Sample Type: | FD | | N | | |
| Pesticides | Aldrin | 309-00-2 | 8081B | µg/kg | | 0.84 | U | 0.85 | U | -- |
| Pesticides | Alpha-Bhc | 319-84-6 | 8081B | µg/kg | | 0.84 | U | 0.85 | U | -- |
| Pesticides | Beta-Bhc | 319-85-7 | 8081B | µg/kg | | 1.9 | U | 1.9 | U | -- |
| Pesticides | Chlordane | 57-74-9 | 8081B | µg/kg | | 17 | U | 17 | U | -- |
| Pesticides | Delta-Bhc | 319-86-8 | 8081B | µg/kg | | 0.84 | U | 0.85 | U | -- |
| Pesticides | Dieldrin | 60-57-1 | 8081B | µg/kg | | 1.7 | U | 1.7 | U | -- |
| Pesticides | Endosulfan I | 959-98-8 | 8081B | µg/kg | | 0.84 | U | 0.85 | U | -- |
| Pesticides | Endosulfan II | 33213-65-9 | 8081B | µg/kg | | 1.7 | U | 1.7 | U | -- |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 8081B | µg/kg | | 1.7 | U | 1.7 | U | -- |
| Pesticides | Endrin | 72-20-8 | 8081B | µg/kg | | 1.7 | U | 1.7 | U | -- |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 8081B | µg/kg | | 1.7 | U | 1.7 | U | -- |
| Pesticides | Endrin Ketone | 53494-70-5 | 8081B | µg/kg | | 1.8 | U | 1.8 | U | -- |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 8081B | µg/kg | | 0.84 | U | 0.85 | U | -- |
| Pesticides | Heptachlor | 76-44-8 | 8081B | µg/kg | | 0.84 | U | 0.85 | U | -- |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 8081B | µg/kg | | 0.84 | U | 0.85 | U | -- |
| Pesticides | Methoxychlor | 72-43-5 | 8081B | µg/kg | | 6.8 | U | 6.8 | U | -- |
| Pesticides | Mirex | 2385-85-5 | 8081B | µg/kg | | 0.89 | J | 0.63 | J | 34.21 |
| Pesticides | Technical Toxaphene | 8001-35-2 | 8081B | µg/kg | | 34 | U | 34 | U | -- |
| pH | pH | pH | 9045M | pH | | 6.72 | | 6.68 | | 0.60 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 8015M | mg/kg | | 50 | U | 25 | U | -- |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 8015M | mg/kg | | 50 | U | 25 | U | -- |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 8015M | mg/kg | | 50 | U | 25 | U | -- |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 8015M | mg/kg | | 160 | | 100 | | 46.15 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 8015M | mg/kg | | 350 | J | 160 | J | 74.51 |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 8015M | mg/kg | | | | | | -- |

Notes:
ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported
200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results only were estimated "J"

**Table C8 - Subarea 7 - Field Duplicates**

| | | | | Location | 7_DG-524 | | 7_DG-524 | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-924-SA7-SB-1.0-2.0 | | SL-524-SA7-SB-1.0-2.0 | | |
| | | | | Sample Date | 06/04/2013 | | 06/04/2013 | | |
| | | | | Start Depth: | 1 | | 1 | | |
| | | | | End Depth: | 2 | | 2 | | |
| | | | | Area: | 7_DG | | 7_DG | | |
| | | | | Matrix: | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | |
| MAG: | Chemical Name: | CAS No.: | Lab Method: | Result Unit | | | | | |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 1613B | ng/kg | 5.37 | UJ | 0.859 | J | 200.00 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 1613B | ng/kg | 5.37 | UJ | 5.34 | UJ | -- |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 1613B | ng/kg | 5.37 | UJ | 5.34 | UJ | -- |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 1613B | ng/kg | 5.37 | UJ | 5.34 | UJ | -- |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 1613B | ng/kg | 5.37 | U | 5.34 | U | -- |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 1613B | ng/kg | 5.37 | UJ | 0.0966 | J | 200.00 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 1613B | ng/kg | 5.37 | UJ | 5.34 | UJ | -- |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 1613B | ng/kg | 5.37 | U | 5.34 | U | -- |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 1613B | ng/kg | 5.37 | U | 5.34 | U | -- |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 1613B | ng/kg | 5.37 | UJ | 5.34 | UJ | -- |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 1613B | ng/kg | 5.37 | U | 5.34 | U | -- |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 1613B | ng/kg | 5.37 | U | 5.34 | U | -- |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 1613B | ng/kg | 5.37 | U | 5.34 | U | -- |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 1613B | ng/kg | 1.07 | UJ | 1.07 | UJ | -- |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 1613B | ng/kg | 0.0139 | J | 0.0189 | J | 30.49 |
| Dioxins | OCDD | 3268-87-9 | 1613B | ng/kg | 2.71 | J | 10.5 | J | 117.94 |
| Dioxins | OCDF | 39001-02-0 | 1613B | ng/kg | 10.7 | UJ | 10.7 | UJ | -- |
| Dioxins | TCDD TEQ | TCDD TEQ | 1613B | ng/kg | 0.0816 | | 0.0324 | | 86.32 |
| Formaldehyde | Formaldehyde | 50-00-0 | 8315A | µg/kg | | | | | -- |
| Hexavalent Chormium | Chromium (Hexavalent Compounds) | 18540-29-9 | 7199 | mg/kg | | | | | -- |
| Mercury | Mercury | 7439-97-6 | 7471B | mg/kg | 0.0178 | U | 0.0178 | U | -- |
| Metals | Aluminum | 7429-90-5 | 6010C | mg/kg | 13300 | | 12300 | | 7.81 |
| Metals | Antimony | 7440-36-0 | 6010C | mg/kg | 4.25 | U | 4.16 | U | -- |
| Metals | Arsenic | 7440-38-2 | 6010C | mg/kg | 4.15 | J | 3.93 | J | 5.45 |
| Metals | Barium | 7440-39-3 | 6010C | mg/kg | 78.6 | | 88.1 | | 11.40 |
| Metals | Beryllium | 7440-41-7 | 6010C | mg/kg | 0.518 | J | 0.48 | J | 7.62 |
| Metals | Boron | 7440-42-8 | 6010C | mg/kg | 2.31 | J | 1.87 | J | 21.05 |
| Metals | Cadmium | 7440-43-9 | 6010C | mg/kg | 0.363 | J | 0.37 | J | 1.91 |
| Metals | Calcium | 7440-70-2 | 6010C | mg/kg | 3310 | J | 5580 | J | 51.07 |
| Metals | Chromium | 7440-47-3 | 6010C | mg/kg | 17.8 | | 18.5 | | 3.86 |
| Metals | Cobalt | 7440-48-4 | 6010C | mg/kg | 4.93 | | 4.59 | | 7.14 |
| Metals | Copper | 7440-50-8 | 6010C | mg/kg | 10.1 | J | 10.3 | J | 1.96 |
| Metals | Iron | 7439-89-6 | 6010C | mg/kg | 21500 | J | 22000 | J | 2.30 |
| Metals | Lead | 7439-92-1 | 6010C | mg/kg | 5.95 | | 5.69 | | 4.47 |
| Metals | Lithium | 7439-93-2 | 6010C | mg/kg | 27 | | 27.4 | | 1.47 |
| Metals | Magnesium | 7439-95-4 | 6010C | mg/kg | 4600 | | 4840 | | 5.08 |
| Metals | Manganese | 7439-96-5 | 6010C | mg/kg | 269 | | 280 | | 4.01 |
| Metals | Molybdenum | 7439-98-7 | 6010C | mg/kg | 2.12 | UJ | 2.08 | UJ | -- |
| Metals | Nickel | 7440-02-0 | 6010C | mg/kg | 8.12 | J | 7.9 | J | 2.75 |
| Metals | Phosphorus | 7723-14-0 | 6010C | mg/kg | 410 | J | 401 | J | 2.22 |
| Metals | Potassium | 9/7/7440 | 6010C | mg/kg | 2870 | J | 3230 | J | 11.80 |
| Metals | Selenium | 7782-49-2 | 6020A | mg/kg | 0.425 | U | 0.416 | U | -- |
| Metals | Silver | 7440-22-4 | 6020A | mg/kg | 0.023 | J | 0.208 | UJ | 200.00 |
| Metals | Sodium | 7440-23-5 | 6010C | mg/kg | 132 | | 123 | | 7.06 |
| Metals | Strontium | 7440-24-6 | 6020A | mg/kg | 15.4 | J | 17.9 | J | 15.02 |
| Metals | Thallium | 7440-28-0 | 6020A | mg/kg | 0.228 | | 0.285 | | 22.22 |
| Metals | Tin | 7440-31-5 | 6010C | mg/kg | 10.6 | U | 10.4 | U | -- |
| Metals | Titanium | 7440-32-6 | 6010C | mg/kg | 1250 | | 1280 | | 2.37 |
| Metals | Vanadium | 7440-62-2 | 6010C | mg/kg | 34.2 | | 32.9 | | 3.87 |
| Metals | Zinc | 7440-66-6 | 6010C | mg/kg | 54.3 | | 59.2 | | 8.63 |
| Metals | Zirconium | 7440-67-7 | 6010C | mg/kg | 1.01 | J | 5.2 | UJ | 200.00 |
| Moisture Content | Moisture | MOIST | 160.3M | % | 7.7 | | 7.5 | | 2.63 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 8270D SIM | µg/kg | 1.8 | U | 1.8 | U | -- |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 8270D SIM | µg/kg | 1.8 | U | 1.8 | U | -- |
| PAHs | Acenaphthene | 83-32-9 | 8270D SIM | µg/kg | 1.8 | U | 1.8 | U | -- |
| PAHs | Acenaphthylene | 208-96-8 | 8270D SIM | µg/kg | 1.8 | U | 1.8 | U | -- |
| PAHs | Anthracene | 120-12-7 | 8270D SIM | µg/kg | 1.8 | U | 1.8 | U | -- |
| PAHs | Benzo(a)anthracene | 56-55-3 | 8270D SIM | µg/kg | 1.3 | J | 1.5 | J | 14.29 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 8270D SIM | µg/kg | 1.7 | J | 1.5 | J | 12.50 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 8270D SIM | µg/kg | 3.7 | | 2.5 | | 38.71 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 8270D SIM | µg/kg | 8 | J | 6.5 | J | 20.69 |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 8270D SIM | µg/kg | 1 | J | 1.3 | J | 26.09 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 8270D SIM | µg/kg | 1.8 | J | 1.8 | UJ | 200.00 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 8270D SIM | µg/kg | 20 | U | 19 | U | -- |
| PAHs | Butylbenzylphthalate | 85-68-7 | 8270D SIM | µg/kg | 20 | U | 19 | U | -- |
| PAHs | Chrysene | 218-01-9 | 8270D SIM | µg/kg | 8.6 | | 7.2 | J | 17.72 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 8270D SIM | µg/kg | 1.8 | UJ | 0.75 | J | 200.00 |
| PAHs | Diethylphthalate | 84-66-2 | 8270D SIM | µg/kg | 20 | U | 19 | U | -- |
| PAHs | Dimethylphthalate | 131-11-3 | 8270D SIM | µg/kg | 20 | U | 19 | U | -- |
| PAHs | Di-n-butylphthalate | 84-74-2 | 8270D SIM | µg/kg | 20 | U | 19 | U | -- |
| PAHs | Di-n-octylphthalate | 117-84-0 | 8270D SIM | µg/kg | 20 | U | 19 | U | -- |
| PAHs | Fluoranthene | 206-44-0 | 8270D SIM | µg/kg | 1.1 | J | 0.96 | J | 13.59 |
| PAHs | Fluorene | 86-73-7 | 8270D SIM | µg/kg | 1.8 | U | 1.8 | U | -- |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 8270D SIM | µg/kg | 1.8 | U | 1.8 | U | -- |
| PAHs | Naphthalene | 91-20-3 | 8270D SIM | µg/kg | 1.8 | U | 1.8 | U | -- |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 8270D SIM | µg/kg | 1.8 | U | 1.8 | U | -- |
| PAHs | Phenanthrene | 85-01-8 | 8270D SIM | µg/kg | 3.7 | | 4.1 | J | 10.26 |
| PAHs | Pyrene | 129-00-0 | 8270D SIM | µg/kg | 4.6 | J | 2.5 | J | 59.15 |
| PCBPCTs | Aroclor 1016 | 12674-11-2 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1221 | 11104-28-2 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1232 | 11141-16-5 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1242 | 53469-21-9 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1248 | 12672-29-6 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1254 | 11097-69-1 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1260 | 11096-82-5 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1262 | 37324-23-5 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1268 | 11100-14-4 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 5432 | 63496-31-1 | 8082A | µg/kg | 36 | U | 36 | U | -- |
| PCBPCTs | Aroclor 5442 | 12642-23-8 | 8082A | µg/kg | 36 | U | 36 | U | -- |
| PCBPCTs | Aroclor 5460 | 11126-42-4 | 8082A | µg/kg | 36 | U | 36 | U | -- |
| Pesticides | 4,4'-DDD | 72-54-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | 4,4'-DDE | 72-55-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | 4,4'-DDT | 50-29-3 | 8081B | µg/kg | | | | | -- |

**Table C8 - Subarea 7 - Field Duplicates**

| | | | | Location | 7_DG-524 | | 7_DG-524 | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-924-SA7-SB-1.0-2.0 | | SL-524-SA7-SB-1.0-2.0 | | |
| | | | | Sample Date | 06/04/2013 | | 06/04/2013 | | |
| | | | | Start Depth: | 1 | | 1 | | |
| | | | | End Depth: | 2 | | 2 | | |
| | | | | Area: | 7_DG | | 7_DG | | |
| | | | | Matrix: | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | |
| Pesticides | Aldrin | 309-00-2 | 8081B | µg/kg | | | | | -- |
| Pesticides | Alpha-Bhc | 319-84-6 | 8081B | µg/kg | | | | | -- |
| Pesticides | Beta-Bhc | 319-85-7 | 8081B | µg/kg | | | | | -- |
| Pesticides | Chlordane | 57-74-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | Delta-Bhc | 319-86-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Dieldrin | 60-57-1 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endosulfan I | 959-98-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endosulfan II | 33213-65-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endrin | 72-20-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endrin Ketone | 53494-70-5 | 8081B | µg/kg | | | | | -- |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | Heptachlor | 76-44-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 8081B | µg/kg | | | | | -- |
| Pesticides | Methoxychlor | 72-43-5 | 8081B | µg/kg | | | | | -- |
| Pesticides | Mirex | 2385-85-5 | 8081B | µg/kg | | | | | -- |
| Pesticides | Technical Toxaphene | 8001-35-2 | 8081B | µg/kg | | | | | -- |
| pH | pH | pH | 9045M | pH | 8.3 | | 8.18 | | 1.46 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 8015M | mg/kg | 5.4 | U | 5.4 | U | -- |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 8015M | mg/kg | 5.4 | U | 5.4 | U | -- |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 8015M | mg/kg | 5.4 | U | 5.4 | U | -- |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 8015M | mg/kg | 14 | | 12 | J | 15.38 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 8015M | mg/kg | 36 | | 23 | | 44.07 |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 8015M | mg/kg | 1 | U | 1 | U | -- |

Notes:
ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported
200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results only were estimated "J"

**Table C9 - Northern Buffer Zone - Field Duplicates**

| | | | | Location | NBZ_DG-504 | | NBZ_DG-504 | | RPD | NBZ_DG-509 | | NBZ_DG-509 | | RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-804-NBZ-SB-0.0-0.5 | | SL-504-NBZ-SB-0.0-0.5 | | | SL-809-NBZ-SB-2.5-3.5 | | SL-509-NBZ-SB-2.5-3.5 | | |
| | | | | Sample Date | 12/03/2013 | | 12/03/2013 | | | 12/03/2013 | | 12/03/2013 | | |
| | | | | Start Depth: | 0 | | 0 | | | 2.5 | | 2.5 | | |
| | | | | End Depth: | 0.5 | | 0.5 | | | 3.5 | | 3.5 | | |
| | | | | Area: | NBZ_DG | | NBZ_DG | | | NBZ_DG | | NBZ_DG | | |
| | | | | Matrix: | SO | | SO | | | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | | FD | | N | | |
| MAG: | Chemical Name: | CAS No.: | Lab Method: | Result Unit | | | | | | | | | | |
| Cyanide | Cyanide | 57-12-5 | 9012B | mg/kg | | | | | -- | | | | | -- |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 1613B | ng/kg | | | | | -- | 5.17 | UJ | 5.18 | UJ | -- |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 1613B | ng/kg | | | | | -- | 5.17 | UJ | 5.18 | UJ | -- |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 1613B | ng/kg | | | | | -- | 5.17 | UJ | 5.18 | UJ | -- |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 1613B | ng/kg | | | | | -- | 5.17 | UJ | 5.18 | UJ | -- |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 1613B | ng/kg | | | | | -- | 5.17 | U | 5.18 | U | -- |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 1613B | ng/kg | | | | | -- | 5.17 | UJ | 5.18 | UJ | -- |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 1613B | ng/kg | | | | | -- | 5.17 | UJ | 5.18 | UJ | -- |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 1613B | ng/kg | | | | | -- | 5.17 | U | 5.18 | U | -- |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 1613B | ng/kg | | | | | -- | 5.17 | UJ | 5.18 | UJ | -- |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 1613B | ng/kg | | | | | -- | 5.17 | U | 5.18 | U | -- |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 1613B | ng/kg | | | | | -- | 0.107 | J | 5.18 | UJ | 200.00 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 1613B | ng/kg | | | | | -- | 5.17 | UJ | 5.18 | UJ | -- |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 1613B | ng/kg | | | | | -- | 5.17 | U | 5.18 | U | -- |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 1613B | ng/kg | | | | | -- | 1.03 | U | 1.04 | U | -- |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 1613B | ng/kg | | | | | -- | 1.03 | U | 1.04 | U | -- |
| Dioxins | OCDD | 3268-87-9 | 1613B | ng/kg | | | | | -- | 10.3 | UJ | 10.4 | UJ | -- |
| Dioxins | OCDF | 39001-02-0 | 1613B | ng/kg | | | | | -- | 10.3 | U | 10.4 | U | -- |
| Dioxins | TCDD TEQ | TCDD TEQ | 1613B | ng/kg | | | | | -- | 0.0147 | | 0.00775 | | 61.92 |
| Herbicides | 2,2-Dichlor-Propionic Acid | 75-99-0 | 8151A | µg/kg | | | | | -- | | | | | -- |
| Herbicides | 2,4,5-T | 93-76-5 | 8151A | µg/kg | | | | | -- | | | | | -- |
| Herbicides | 2,4-D | 94-75-7 | 8151A | µg/kg | | | | | -- | | | | | -- |
| Herbicides | 2,4-DB | 94-82-6 | 8151A | µg/kg | | | | | -- | | | | | -- |
| Herbicides | Dicamba | 1918-00-9 | 8151A | µg/kg | | | | | -- | | | | | -- |
| Herbicides | Dichlorprop | 120-36-5 | 8151A | µg/kg | | | | | -- | | | | | -- |
| Herbicides | Dinitrobutyl Phenol | 88-85-7 | 8151A | µg/kg | | | | | -- | | | | | -- |
| Herbicides | MCPA | 94-74-6 | 8151A | µg/kg | | | | | -- | | | | | -- |
| Herbicides | MCPP | 93-65-2 | 8151A | µg/kg | | | | | -- | | | | | -- |
| Herbicides | Silvex (2,4,5-TP) | 93-72-1 | 8151A | µg/kg | | | | | -- | | | | | -- |
| Mercury | Mercury | 7439-97-6 | 7471B | mg/kg | | | | | -- | | | | | -- |
| Metals | Aluminum | 7429-90-5 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Antimony | 7440-36-0 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Arsenic | 7440-38-2 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Barium | 7440-39-3 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Beryllium | 7440-41-7 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Boron | 7440-42-8 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Cadmium | 7440-43-9 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Calcium | 7440-70-2 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Chromium | 7440-47-3 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Cobalt | 7440-48-4 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Copper | 7440-50-8 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Iron | 7439-89-6 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Lead | 7439-92-1 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Lithium | 7439-93-2 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Magnesium | 7439-95-4 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Manganese | 7439-96-5 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Molybdenum | 7439-98-7 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Nickel | 7440-02-0 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Phosphorus | 7723-14-0 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Potassium | 7440-09-7 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Selenium | 7782-49-2 | 6020A | mg/kg | | | | | -- | | | | | -- |
| Metals | Silver | 7440-22-4 | 6020A | mg/kg | | | | | -- | | | | | -- |
| Metals | Sodium | 7440-23-5 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Strontium | 7440-24-6 | 6020A | mg/kg | | | | | -- | | | | | -- |
| Metals | Thallium | 7440-28-0 | 6020A | mg/kg | | | | | -- | | | | | -- |
| Metals | Tin | 7440-31-5 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Titanium | 7440-32-6 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Vanadium | 7440-62-2 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Zinc | 7440-66-6 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Zirconium | 7440-67-7 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Moisture Content | Moisture | MOIST | 160.3M | % | 1.9 | | 2.2 | | 14.63 | 5.4 | | 4.5 | | 18.18 |
| Nitrates | Nitrate | 14797-55-8 | 300.0 | mg/kg | | | | | -- | | | | | -- |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Acenaphthene | 83-32-9 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Acenaphthylene | 208-96-8 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Anthracene | 120-12-7 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Benzo(a)anthracene | 56-55-3 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Benzo(a)pyrene | 50-32-8 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Benzo(e)pyrene | 192-97-2 | 8270D SIM | µg/kg | | | | | -- | 18 | U | 18 | U | -- |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 8270D SIM | µg/kg | | | | | -- | 19 | U | 19 | U | -- |
| PAHs | Butylbenzylphthalate | 85-68-7 | 8270D SIM | µg/kg | | | | | -- | 19 | U | 19 | U | -- |
| PAHs | Chrysene | 218-01-9 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Diethylphthalate | 84-66-2 | 8270D SIM | µg/kg | | | | | -- | 19 | U | 19 | U | -- |
| PAHs | Dimethylphthalate | 131-11-3 | 8270D SIM | µg/kg | | | | | -- | 19 | U | 19 | U | -- |
| PAHs | Di-n-butylphthalate | 84-74-2 | 8270D SIM | µg/kg | | | | | -- | 19 | U | 19 | U | -- |
| PAHs | Di-n-octylphthalate | 117-84-0 | 8270D SIM | µg/kg | | | | | -- | 19 | U | 19 | U | -- |
| PAHs | Fluoranthene | 206-44-0 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Fluorene | 86-73-7 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Naphthalene | 91-20-3 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Phenanthrene | 85-01-8 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PAHs | Pyrene | 129-00-0 | 8270D SIM | µg/kg | | | | | -- | 1.8 | U | 1.7 | U | -- |
| PCBPCTs | Aroclor 1016 | 12674-11-2 | 8082A | µg/kg | | | | | -- | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1221 | 11104-28-2 | 8082A | µg/kg | | | | | -- | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1232 | 11141-16-5 | 8082A | µg/kg | | | | | -- | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1242 | 53469-21-9 | 8082A | µg/kg | | | | | -- | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1248 | 12672-29-6 | 8082A | µg/kg | | | | | -- | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1254 | 11097-69-1 | 8082A | µg/kg | | | | | -- | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1260 | 11096-82-5 | 8082A | µg/kg | | | | | -- | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1262 | 37324-23-5 | 8082A | µg/kg | | | | | -- | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1268 | 11100-14-4 | 8082A | µg/kg | | | | | -- | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 5432 | 63496-31-1 | 8082A | µg/kg | | | | | -- | 35 | U | 35 | U | -- |
| PCBPCTs | Aroclor 5442 | 12642-23-8 | 8082A | µg/kg | | | | | -- | 35 | U | 35 | U | -- |
| PCBPCTs | Aroclor 5460 | 11126-42-4 | 8082A | µg/kg | | | | | -- | 35 | U | 35 | U | -- |
| Pesticides | 4,4'-DDD | 72-54-8 | 8081B | µg/kg | 1.7 | U | 1.7 | U | -- | 1.8 | U | 1.8 | U | -- |
| Pesticides | 4,4'-DDE | 72-55-9 | 8081B | µg/kg | 1.7 | U | 1.7 | U | -- | 1.8 | U | 1.8 | U | -- |
| Pesticides | 4,4'-DDT | 50-29-3 | 8081B | µg/kg | 1.7 | U | 1.7 | U | -- | 1.8 | U | 1.8 | U | -- |
| Pesticides | Aldrin | 309-00-2 | 8081B | µg/kg | 0.83 | U | 0.84 | U | -- | 0.88 | U | 0.87 | U | -- |
| Pesticides | Alpha-Bhc | 319-84-6 | 8081B | µg/kg | 0.83 | U | 0.84 | U | -- | 0.88 | U | 0.87 | U | -- |
| Pesticides | Beta-Bhc | 319-85-7 | 8081B | µg/kg | 1.9 | U | 1.9 | U | -- | 2.0 | U | 2.0 | U | -- |
| Pesticides | Chlordane | 57-74-9 | 8081B | µg/kg | 17 | U | 17 | U | -- | 18 | U | 18 | U | -- |
| Pesticides | Delta-Bhc | 319-86-8 | 8081B | µg/kg | 0.83 | U | 0.84 | U | -- | 0.88 | U | 0.87 | U | -- |
| Pesticides | Dieldrin | 60-57-1 | 8081B | µg/kg | 1.7 | U | 1.7 | U | -- | 1.8 | U | 1.8 | U | -- |
| Pesticides | Endosulfan I | 959-98-8 | 8081B | µg/kg | 0.83 | U | 0.84 | U | -- | 0.88 | U | 0.87 | U | -- |
| Pesticides | Endosulfan II | 33213-65-9 | 8081B | µg/kg | 1.7 | U | 1.7 | U | -- | 1.8 | U | 1.8 | U | -- |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 8081B | µg/kg | 1.7 | U | 1.7 | U | -- | 1.8 | U | 1.8 | U | -- |
| Pesticides | Endrin | 72-20-8 | 8081B | µg/kg | 1.7 | U | 1.7 | U | -- | 1.8 | U | 1.8 | U | -- |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 8081B | µg/kg | 1.7 | U | 1.7 | U | -- | 1.8 | U | 1.8 | U | -- |
| Pesticides | Endrin Ketone | 53494-70-5 | 8081B | µg/kg | 1.8 | U | 1.8 | U | -- | 1.9 | U | 1.9 | U | -- |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 8081B | µg/kg | 0.83 | U | 0.84 | U | -- | 0.88 | U | 0.87 | U | -- |
| Pesticides | Heptachlor | 76-44-8 | 8081B | µg/kg | 0.83 | U | 0.84 | U | -- | 0.88 | U | 0.87 | U | -- |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 8081B | µg/kg | 0.83 | U | 0.84 | U | -- | 0.88 | U | 0.87 | U | -- |
| Pesticides | Methoxychlor | 72-43-5 | 8081B | µg/kg | 6.7 | U | 6.8 | U | -- | 7.1 | U | 7.0 | U | -- |
| Pesticides | Mirex | 2385-85-5 | 8081B | µg/kg | 1.7 | U | 1.7 | U | -- | 1.8 | U | 1.8 | U | -- |

**Table C9 - Northern Buffer Zone - Field Duplicates**

| | | | | Location | NBZ_DG-504 | | NBZ_DG-504 | | RPD | NBZ_DG-509 | | NBZ_DG-509 | | RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-804-NBZ-SB-0.0-0.5 | | SL-504-NBZ-SB-0.0-0.5 | | | SL-809-NBZ-SB-2.5-3.5 | | SL-509-NBZ-SB-2.5-3.5 | | |
| | | | | Sample Date | 12/03/2013 | | 12/03/2013 | | | 12/03/2013 | | 12/03/2013 | | |
| | | | | Start Depth: | 0 | | 0 | | | 2.5 | | 2.5 | | |
| | | | | End Depth: | 0.5 | | 0.5 | | | 3.5 | | 3.5 | | |
| | | | | Area: | NBZ_DG | | NBZ_DG | | | NBZ_DG | | NBZ_DG | | |
| | | | | Matrix: | SO | | SO | | | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | | FD | | N | | |
| Pesticides | Technical Toxaphene | 8001-35-2 | 8081B | µg/kg | 33 | U | 33 | U | -- | 35 | U | 35 | U | -- |
| pH | pH | pH | 9045M | pH | | | | | -- | 7.65 | | 7.60 | | 0.66 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 8015M | mg/kg | 5.1 | U | 5.1 | U | -- | 5.3 | U | 5.2 | U | -- |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 8015M | mg/kg | 5.1 | U | 5.1 | U | -- | 5.3 | U | 5.2 | U | -- |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 8015M | mg/kg | 5.1 | U | 5.1 | U | -- | 5.3 | U | 5.2 | U | -- |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 8015M | mg/kg | 5.1 | U | 5.1 | U | -- | 5.3 | U | 5.2 | U | -- |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 8015M | mg/kg | 10 | U | 10 | U | -- | 11 | U | 10 | U | -- |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 8015M | mg/kg | | | | | -- | 1.1 | U | 1.1 | U | -- |

Notes:
ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported
200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only
Limit - 50% - If RPD is above 50% detected field duplicate results only were estimated "J"

**Table C9 - Northern Buffer Zone - Field Duplicates**

| | | | | Location | NBZ_DG-524 | | NBZ_DG-524 | | RPD | NBZ_DG-525 | | NBZ_DG-525 | | RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-824-NBZ-SB-0.0-0.5 | | SL-524-NBZ-SB-0.0-0.5 | | | SL-825-NBZ-SB-4.0-5.0 | | SL-525-NBZ-SB-4.0-5.0 | | |
| | | | | Sample Date | 12/09/2013 | | 12/09/2013 | | | 12/05/2013 | | 12/05/2013 | | |
| | | | | Start Depth: | 0 | | 0 | | | 4 | | 4 | | |
| | | | | End Depth: | 0.5 | | 0.5 | | | 5 | | 5 | | |
| | | | | Area: | NBZ_DG | | NBZ_DG | | | NBZ_DG | | NBZ_DG | | |
| | | | | Matrix: | SO | | SO | | | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | | FD | | N | | |
| MAG: | Chemical Name: | CAS No.: | Lab Method: | Result Unit | | | | | | | | | | |
| Cyanide | Cyanide | 57-12-5 | 9012B | mg/kg | | | | | -- | | | | | -- |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | OCDD | 3268-87-9 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | OCDF | 39001-02-0 | 1613B | ng/kg | | | | | -- | | | | | -- |
| Dioxins | TCDD TEQ | TCDD TEQ | 1613B | ng/kg | | | | | -- | | | | | -- |
| Herbicides | 2,2-Dichlor-Propionic Acid | 75-99-0 | 8151A | µg/kg | | | | | -- | 92 | U | 200 | U | -- |
| Herbicides | 2,4,5-T | 93-76-5 | 8151A | µg/kg | | | | | -- | 1.7 | U | 1.7 | U | -- |
| Herbicides | 2,4-D | 94-75-7 | 8151A | µg/kg | | | | | -- | 37 | U | 37 | U | -- |
| Herbicides | 2,4-DB | 94-82-6 | 8151A | µg/kg | | | | | -- | 17 | U | 17 | U | -- |
| Herbicides | Dicamba | 1918-00-9 | 8151A | µg/kg | | | | | -- | 12 | U | 12 | U | -- |
| Herbicides | Dichlorprop | 120-36-5 | 8151A | µg/kg | | | | | -- | 17 | U | 17 | U | -- |
| Herbicides | Dinitrobutyl Phenol | 88-85-7 | 8151A | µg/kg | | | | | -- | 25 | U | 24 | U | -- |
| Herbicides | MCPA | 94-74-6 | 8151A | µg/kg | | | | | -- | 2600 | U | 2500 | U | -- |
| Herbicides | MCPP | 93-65-2 | 8151A | µg/kg | | | | | -- | 2600 | U | 2500 | U | -- |
| Herbicides | Silvex (2,4,5-TP) | 93-72-1 | 8151A | µg/kg | | | | | -- | 1.7 | U | 1.7 | U | -- |
| Mercury | Mercury | 7439-97-6 | 7471B | mg/kg | | | | | -- | | | | | -- |
| Metals | Aluminum | 7429-90-5 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Antimony | 7440-36-0 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Arsenic | 7440-38-2 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Barium | 7440-39-3 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Beryllium | 7440-41-7 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Boron | 7440-42-8 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Cadmium | 7440-43-9 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Calcium | 7440-70-2 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Chromium | 7440-47-3 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Cobalt | 7440-48-4 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Copper | 7440-50-8 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Iron | 7439-89-6 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Lead | 7439-92-1 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Lithium | 7439-93-2 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Magnesium | 7439-95-4 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Manganese | 7439-96-5 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Molybdenum | 7439-98-7 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Nickel | 7440-02-0 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Phosphorus | 7723-14-0 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Potassium | 7440-09-7 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Selenium | 7782-49-2 | 6020A | mg/kg | | | | | -- | | | | | -- |
| Metals | Silver | 7440-22-4 | 6020A | mg/kg | | | | | -- | | | | | -- |
| Metals | Sodium | 7440-23-5 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Strontium | 7440-24-6 | 6020A | mg/kg | | | | | -- | | | | | -- |
| Metals | Thallium | 7440-28-0 | 6020A | mg/kg | | | | | -- | | | | | -- |
| Metals | Tin | 7440-31-5 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Titanium | 7440-32-6 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Vanadium | 7440-62-2 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Zinc | 7440-66-6 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Metals | Zirconium | 7440-67-7 | 6010C | mg/kg | | | | | -- | | | | | -- |
| Moisture Content | Moisture | MOIST | 160.3M | % | 5.4 | | 4.6 | | 16.00 | 2.6 | | 2.6 | | 0.00 |
| Nitrates | Nitrate | 14797-55-8 | 300.0 | mg/kg | 5.8 | J | 0.70 | J | 156.92 | | | | | -- |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 8270D SIM | µg/kg | 1.2 | J | 1.7 | UJ | 200.00 | | | | | -- |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 8270D SIM | µg/kg | 1.4 | J | 0.87 | J | 46.70 | | | | | -- |
| PAHs | Acenaphthene | 83-32-9 | 8270D SIM | µg/kg | 1.8 | U | 1.7 | U | -- | | | | | -- |
| PAHs | Acenaphthylene | 208-96-8 | 8270D SIM | µg/kg | 1.8 | U | 1.7 | U | -- | | | | | -- |
| PAHs | Anthracene | 120-12-7 | 8270D SIM | µg/kg | 0.37 | J | 1.7 | UJ | 200.00 | | | | | -- |
| PAHs | Benzo(a)anthracene | 56-55-3 | 8270D SIM | µg/kg | 1.7 | J | 1.7 | UJ | 200.00 | | | | | -- |
| PAHs | Benzo(a)pyrene | 50-32-8 | 8270D SIM | µg/kg | 2.2 | J | 1.7 | UJ | 200.00 | | | | | -- |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 8270D SIM | µg/kg | 5.7 | J | 2.0 | J | 96.10 | | | | | -- |
| PAHs | Benzo(e)pyrene | 192-97-2 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- | | | | | -- |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 8270D SIM | µg/kg | 1.6 | J | 1.7 | UJ | 200.00 | | | | | -- |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 8270D SIM | µg/kg | 1.7 | J | 1.7 | UJ | 200.00 | | | | | -- |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 8270D SIM | µg/kg | 31 | J | 19 | UJ | 200.00 | | | | | -- |
| PAHs | Butylbenzylphthalate | 85-68-7 | 8270D SIM | µg/kg | 12 | J | 19 | UJ | 200.00 | | | | | -- |
| PAHs | Chrysene | 218-01-9 | 8270D SIM | µg/kg | 5.4 | J | 2.4 | J | 76.92 | | | | | -- |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 8270D SIM | µg/kg | 1.8 | U | 1.7 | U | -- | | | | | -- |
| PAHs | Diethylphthalate | 84-66-2 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- | | | | | -- |
| PAHs | Dimethylphthalate | 131-11-3 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- | | | | | -- |
| PAHs | Di-n-butylphthalate | 84-74-2 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- | | | | | -- |
| PAHs | Di-n-octylphthalate | 117-84-0 | 8270D SIM | µg/kg | 19 | U | 19 | U | -- | | | | | -- |
| PAHs | Fluoranthene | 206-44-0 | 8270D SIM | µg/kg | 4.1 | J | 1.3 | J | 103.70 | | | | | -- |
| PAHs | Fluorene | 86-73-7 | 8270D SIM | µg/kg | 0.97 | J | 1.7 | UJ | 200.00 | | | | | -- |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 8270D SIM | µg/kg | 1.1 | J | 1.7 | UJ | 200.00 | | | | | -- |
| PAHs | Naphthalene | 91-20-3 | 8270D SIM | µg/kg | 2.3 | | 1.7 | | 30.00 | | | | | -- |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 8270D SIM | µg/kg | 1.8 | U | 1.7 | U | -- | | | | | -- |
| PAHs | Phenanthrene | 85-01-8 | 8270D SIM | µg/kg | 3.3 | | 2.1 | | 44.44 | | | | | -- |
| PAHs | Pyrene | 129-00-0 | 8270D SIM | µg/kg | 4.7 | J | 1.4 | J | 108.20 | | | | | -- |
| PCBPCTs | Aroclor 1016 | 12674-11-2 | 8082A | µg/kg | | | | | -- | | | | | -- |
| PCBPCTs | Aroclor 1221 | 11104-28-2 | 8082A | µg/kg | | | | | -- | | | | | -- |
| PCBPCTs | Aroclor 1232 | 11141-16-5 | 8082A | µg/kg | | | | | -- | | | | | -- |
| PCBPCTs | Aroclor 1242 | 53469-21-9 | 8082A | µg/kg | | | | | -- | | | | | -- |
| PCBPCTs | Aroclor 1248 | 12672-29-6 | 8082A | µg/kg | | | | | -- | | | | | -- |
| PCBPCTs | Aroclor 1254 | 11097-69-1 | 8082A | µg/kg | | | | | -- | | | | | -- |
| PCBPCTs | Aroclor 1260 | 11096-82-5 | 8082A | µg/kg | | | | | -- | | | | | -- |
| PCBPCTs | Aroclor 1262 | 37324-23-5 | 8082A | µg/kg | | | | | -- | | | | | -- |
| PCBPCTs | Aroclor 1268 | 11100-14-4 | 8082A | µg/kg | | | | | -- | | | | | -- |
| PCBPCTs | Aroclor 5432 | 63496-31-1 | 8082A | µg/kg | | | | | -- | | | | | -- |
| PCBPCTs | Aroclor 5442 | 12642-23-8 | 8082A | µg/kg | | | | | -- | | | | | -- |
| PCBPCTs | Aroclor 5460 | 11126-42-4 | 8082A | µg/kg | | | | | -- | | | | | -- |
| Pesticides | 4,4'-DDD | 72-54-8 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | 4,4'-DDE | 72-55-9 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | 4,4'-DDT | 50-29-3 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Aldrin | 309-00-2 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Alpha-Bhc | 319-84-6 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Beta-Bhc | 319-85-7 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Chlordane | 57-74-9 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Delta-Bhc | 319-86-8 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Dieldrin | 60-57-1 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Endosulfan I | 959-98-8 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Endosulfan II | 33213-65-9 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Endrin | 72-20-8 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Endrin Ketone | 53494-70-5 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Heptachlor | 76-44-8 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Methoxychlor | 72-43-5 | 8081B | µg/kg | | | | | -- | | | | | -- |
| Pesticides | Mirex | 2385-85-5 | 8081B | µg/kg | | | | | -- | | | | | -- |

**Table C9 - Northern Buffer Zone - Field Duplicates**

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Location | NBZ_DG-524 | | NBZ_DG-524 | | RPD | NBZ_DG-525 | | NBZ_DG-525 | | RPD |
| | | | | | Sample Name: | SL-824-NBZ-SB-0.0-0.5 | | SL-524-NBZ-SB-0.0-0.5 | | | SL-825-NBZ-SB-4.0-5.0 | | SL-525-NBZ-SB-4.0-5.0 | | |
| | | | | | Sample Date | 12/09/2013 | | 12/09/2013 | | | 12/05/2013 | | 12/05/2013 | | |
| | | | | | Start Depth: | 0 | | 0 | | | 4 | | 4 | | |
| | | | | | End Depth: | 0.5 | | 0.5 | | | 5 | | 5 | | |
| | | | | | Area: | NBZ_DG | | NBZ_DG | | | NBZ_DG | | NBZ_DG | | |
| | | | | | Matrix: | SO | | SO | | | SO | | SO | | |
| | | | | | Sample Type: | FD | | N | | | FD | | N | | |
| Pesticides | Technical Toxaphene | 8001-35-2 | 8081B | µg/kg | | | | | | -- | | | | | -- |
| pH | pH | pH | 9045M | pH | | | | | | -- | | | | | -- |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 8015M | mg/kg | 5.2 | U | 10 | U | | -- | 5.1 | U | 5.1 | U | -- |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 8015M | mg/kg | 5.2 | U | 10 | U | | -- | 5.1 | U | 5.1 | U | -- |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 8015M | mg/kg | 2.2 | J | 8.4 | J | | 116.98 | 5.1 | U | 5.1 | U | -- |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 8015M | mg/kg | 28 | J | 58 | J | | 69.77 | 5.1 | U | 5.1 | U | -- |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 8015M | mg/kg | 50 | J | 120 | J | | 82.35 | 10 | U | 10 | U | -- |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 8015M | mg/kg | | | | | | -- | | | | | -- |

Notes:
ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported
200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only
Limit - 50% - If RPD is above 50% detected field duplicate results only were estimated "J"

**Table C9 - Northern Buffer Zone - Field Duplicates**

| | | | | | Location | | | NBZ_DG-540 | | | RPD | NBZ_DG-544 | | | NBZ_DG-544 | | | RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Name: | | | SL-840-NBZ-SB-0.0-0.5 | | | | SL-844-NBZ-SB-0.0-0.5 | | | SL-544-NBZ-SB-0.0-0.5 | | | |
| | | | | | Sample Date | | | 12/11/2013 | | | | 12/12/2013 | | | 12/12/2013 | | | |
| | | | | | Start Depth: | | | 0 | | | | 0 | | | 0 | | | |
| | | | | | End Depth: | | | 0.5 | | | | 0.5 | | | 0.5 | | | |
| | | | | | Area: | | | NBZ_DG | | | | NBZ_DG | | | NBZ_DG | | | |
| | | | | | Matrix: | | | SO | | | | SO | | | SO | | | |
| | | | | | Sample Type: | | | FD | | | | FD | | | N | | | |
| MAG: | Chemical Name: | CAS No.: | Lab Method: | Result Unit | | | | | | | | | | | | | | |
| Cyanide | Cyanide | 57-12-5 | 9012B | mg/kg | | | | | | | -- | | | | | | | -- |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 1613B | ng/kg | 90.2 | J | | 36.2 | J | | 85.44 | 3.20 | J | | 4.41 | J | | 31.80 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 1613B | ng/kg | 14.5 | J | | 8.53 | J | | 51.85 | 0.851 | J | | 1.99 | J | | 80.18 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 1613B | ng/kg | 1.18 | J | | 0.654 | J | | 57.36 | 4.96 | UJ | | 4.96 | UJ | | -- |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 1613B | ng/kg | 0.665 | J | | 0.350 | J | | 62.07 | 0.157 | J | | 0.133 | J | | 16.55 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 1613B | ng/kg | 0.501 | J | | 0.337 | J | | 39.14 | 4.96 | U | | 4.96 | U | | -- |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 1613B | ng/kg | 3.07 | J | | 1.75 | J | | 54.77 | 0.391 | J | | 0.474 | J | | 19.19 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 1613B | ng/kg | 0.563 | J | | 0.490 | J | | 13.87 | 0.220 | J | | 0.214 | J | | 2.76 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 1613B | ng/kg | 1.18 | J | | 0.583 | J | | 67.73 | 0.472 | J | | 0.429 | J | | 9.54 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 1613B | ng/kg | 5.80 | U | | 5.90 | U | | -- | 0.258 | J | | 4.96 | UJ | | 200.00 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 1613B | ng/kg | 1.21 | J | | 0.785 | J | | 42.61 | 0.288 | J | | 4.96 | U | | 200.00 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 1613B | ng/kg | 0.215 | J | | 5.90 | U | | 200.00 | 0.328 | J | | 0.126 | J | | 88.99 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 1613B | ng/kg | 0.787 | J | | 0.575 | J | | 31.13 | 0.301 | J | | 4.96 | U | | 200.00 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 1613B | ng/kg | 0.590 | J | | 0.580 | J | | 1.71 | 0.395 | J | | 4.96 | U | | 200.00 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 1613B | ng/kg | 1.16 | UJ | | 1.18 | UJ | | -- | 0.110 | J | | 0.993 | UJ | | 200.00 |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 1613B | ng/kg | 0.466 | J | | 1.18 | U | | 200.00 | 0.202 | J | | 0.126 | J | | 46.34 |
| Dioxins | OCDD | 3268-87-9 | 1613B | ng/kg | 856 | J | | 288 | J | | 99.30 | 26.9 | | | 43.6 | | | 47.38 |
| Dioxins | OCDF | 39001-02-0 | 1613B | ng/kg | 35.2 | | | 21.2 | | | 49.65 | 2.03 | J | | 2.24 | J | | 9.84 |
| Dioxins | TCDD TEQ | TCDD TEQ | 1613B | ng/kg | 2.18 | | | 1.15 | | | 61.86 | 0.160 | | | 0.304 | | | 62.07 |
| Herbicides | 2,2-Dichlor-Propionic Acid | 75-99-0 | 8151A | µg/kg | 110 | U | | 110 | U | | -- | | | | | | | -- |
| Herbicides | 2,4,5-T | 93-76-5 | 8151A | µg/kg | 2.2 | J | | 2.0 | UJ | | 200.00 | | | | | | | -- |
| Herbicides | 2,4-D | 94-75-7 | 8151A | µg/kg | 43 | U | | 42 | U | | -- | | | | | | | -- |
| Herbicides | 2,4-DB | 94-82-6 | 8151A | µg/kg | 20 | U | | 20 | U | | -- | | | | | | | -- |
| Herbicides | Dicamba | 1918-00-9 | 8151A | µg/kg | 14 | U | | 14 | U | | -- | | | | | | | -- |
| Herbicides | Dichlorprop | 120-36-5 | 8151A | µg/kg | 20 | U | | 20 | U | | -- | | | | | | | -- |
| Herbicides | Dinitrobutyl Phenol | 88-85-7 | 8151A | µg/kg | 28 | U | | 28 | U | | -- | | | | | | | -- |
| Herbicides | MCPA | 94-74-6 | 8151A | µg/kg | 3000 | U | | 2900 | U | | -- | | | | | | | -- |
| Herbicides | MCPP | 93-65-2 | 8151A | µg/kg | 3000 | U | | 2900 | U | | -- | | | | | | | -- |
| Herbicides | Silvex (2,4,5-TP) | 93-72-1 | 8151A | µg/kg | 2.0 | UJ | | 0.98 | J | | 200.00 | | | | | | | -- |
| Mercury | Mercury | 7439-97-6 | 7471B | mg/kg | | | | | | | -- | 0.0096 | J | | 0.0109 | J | | 12.68 |
| Metals | Aluminum | 7429-90-5 | 6010C | mg/kg | | | | | | | -- | 9880 | | | 9680 | | | 2.04 |
| Metals | Antimony | 7440-36-0 | 6010C | mg/kg | | | | | | | -- | 1.22 | J | | 3.99 | UJ | | 200.00 |
| Metals | Arsenic | 7440-38-2 | 6010C | mg/kg | | | | | | | -- | 3.75 | J | | 2.84 | J | | 27.62 |
| Metals | Barium | 7440-39-3 | 6010C | mg/kg | | | | | | | -- | 63.9 | | | 65.1 | | | 1.86 |
| Metals | Beryllium | 7440-41-7 | 6010C | mg/kg | | | | | | | -- | 0.382 | J | | 0.359 | J | | 6.21 |
| Metals | Boron | 7440-42-8 | 6010C | mg/kg | | | | | | | -- | 4.20 | J | | 8.30 | J | | 65.60 |
| Metals | Cadmium | 7440-43-9 | 6010C | mg/kg | | | | | | | -- | 0.993 | UJ | | 0.464 | J | | 200.00 |
| Metals | Calcium | 7440-70-2 | 6010C | mg/kg | | | | | | | -- | 2070 | | | 2090 | | | 0.96 |
| Metals | Chromium | 7440-47-3 | 6010C | mg/kg | | | | | | | -- | 13.5 | | | 13.8 | | | 2.20 |
| Metals | Cobalt | 7440-48-4 | 6010C | mg/kg | | | | | | | -- | 4.20 | | | 4.46 | | | 6.00 |
| Metals | Copper | 7440-50-8 | 6010C | mg/kg | | | | | | | -- | 6.43 | J | | 3.80 | J | | 51.42 |
| Metals | Iron | 7439-89-6 | 6010C | mg/kg | | | | | | | -- | 17800 | | | 17600 | | | 1.13 |
| Metals | Lead | 7439-92-1 | 6010C | mg/kg | | | | | | | -- | 8.44 | | | 6.86 | | | 20.65 |
| Metals | Lithium | 7439-93-2 | 6010C | mg/kg | | | | | | | -- | 26.1 | | | 25.5 | | | 2.33 |
| Metals | Magnesium | 7439-95-4 | 6010C | mg/kg | | | | | | | -- | 3960 | | | 3920 | | | 1.02 |
| Metals | Manganese | 7439-96-5 | 6010C | mg/kg | | | | | | | -- | 273 | | | 276 | | | 1.09 |
| Metals | Molybdenum | 7439-98-7 | 6010C | mg/kg | | | | | | | -- | 1.99 | U | | 2.00 | U | | -- |
| Metals | Nickel | 7440-02-0 | 6010C | mg/kg | | | | | | | -- | 7.68 | | | 8.13 | | | 5.69 |
| Metals | Phosphorus | 7723-14-0 | 6010C | mg/kg | | | | | | | -- | 321 | J | | 385 | J | | 18.13 |
| Metals | Potassium | 7440-09-7 | 6010C | mg/kg | | | | | | | -- | 2820 | | | 2770 | | | 1.79 |
| Metals | Selenium | 7782-49-2 | 6020A | mg/kg | | | | | | | -- | 0.459 | | | 0.284 | J | | 47.11 |
| Metals | Silver | 7440-22-4 | 6020A | mg/kg | | | | | | | -- | 0.0450 | J | | 0.0426 | J | | 5.48 |
| Metals | Sodium | 7440-23-5 | 6010C | mg/kg | | | | | | | -- | 57.6 | J | | 53.9 | J | | 6.64 |
| Metals | Strontium | 7440-24-6 | 6020A | mg/kg | | | | | | | -- | 10.2 | | | 9.84 | | | 3.59 |
| Metals | Thallium | 7440-28-0 | 6020A | mg/kg | | | | | | | -- | 0.233 | | | 0.218 | | | 6.65 |
| Metals | Tin | 7440-31-5 | 6010C | mg/kg | | | | | | | -- | 9.93 | U | | 9.98 | U | | -- |
| Metals | Titanium | 7440-32-6 | 6010C | mg/kg | | | | | | | -- | 959 | | | 871 | | | 9.62 |
| Metals | Vanadium | 7440-62-2 | 6010C | mg/kg | | | | | | | -- | 28.4 | | | 27.3 | | | 3.95 |
| Metals | Zinc | 7440-66-6 | 6010C | mg/kg | | | | | | | -- | 53.6 | | | 51.6 | | | 3.80 |
| Metals | Zirconium | 7440-67-7 | 6010C | mg/kg | | | | | | | -- | 4.96 | UJ | | 0.877 | J | | 200.00 |
| Moisture Content | Moisture | MOIST | 160.3M | % | 15.3 | | | 15.2 | | | 0.66 | 2.2 | | | 3.7 | | | 50.85 |
| Nitrates | Nitrate | 14797-55-8 | 300.0 | mg/kg | | | | | | | -- | | | | | | | -- |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 8270D SIM | µg/kg | 1.9 | UJ | | 2.4 | J | | 200.00 | 1.7 | UJ | | 0.72 | J | | 200.00 |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 8270D SIM | µg/kg | 1.5 | J | | 2.9 | J | | 63.64 | 1.7 | UJ | | 0.85 | J | | 200.00 |
| PAHs | Acenaphthene | 83-32-9 | 8270D SIM | µg/kg | 1.9 | U | | 2.0 | U | | -- | 1.7 | U | | 1.7 | U | | -- |
| PAHs | Acenaphthylene | 208-96-8 | 8270D SIM | µg/kg | 1.9 | U | | 2.0 | U | | -- | 1.7 | U | | 1.7 | U | | -- |
| PAHs | Anthracene | 120-12-7 | 8270D SIM | µg/kg | 0.46 | J | | 0.53 | J | | 14.14 | 1.7 | U | | 1.7 | U | | -- |
| PAHs | Benzo(a)anthracene | 56-55-3 | 8270D SIM | µg/kg | 1.2 | J | | 1.2 | J | | 0.00 | 1.7 | UJ | | 1.2 | J | | 200.00 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 8270D SIM | µg/kg | 1.4 | J | | 1.5 | J | | 6.90 | 1.7 | UJ | | 1.2 | J | | 200.00 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 8270D SIM | µg/kg | 3.3 | | | 3.7 | | | 11.43 | 0.73 | J | | 2.5 | J | | 109.60 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 8270D SIM | µg/kg | 20 | U | | 20 | U | | -- | 17 | U | | 17 | U | | -- |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 8270D SIM | µg/kg | 1.3 | J | | 1.1 | J | | 16.67 | 1.7 | U | | 1.7 | U | | -- |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 8270D SIM | µg/kg | 1.2 | J | | 1.2 | J | | 0.00 | 1.7 | UJ | | 1.0 | J | | 200.00 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 8270D SIM | µg/kg | 13 | J | | 15 | J | | 14.29 | 18 | U | | 18 | U | | -- |
| PAHs | Butylbenzylphthalate | 85-68-7 | 8270D SIM | µg/kg | 21 | U | | 21 | U | | -- | 18 | U | | 18 | U | | -- |
| PAHs | Chrysene | 218-01-9 | 8270D SIM | µg/kg | 3.3 | | | 3.5 | | | 5.88 | 0.81 | J | | 2.1 | J | | 88.66 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 8270D SIM | µg/kg | 1.9 | U | | 2.0 | U | | -- | 1.7 | U | | 1.7 | U | | -- |
| PAHs | Diethylphthalate | 84-66-2 | 8270D SIM | µg/kg | 21 | U | | 21 | U | | -- | 18 | U | | 18 | U | | -- |
| PAHs | Dimethylphthalate | 131-11-3 | 8270D SIM | µg/kg | 21 | U | | 21 | U | | -- | 18 | U | | 18 | U | | -- |
| PAHs | Di-n-butylphthalate | 84-74-2 | 8270D SIM | µg/kg | 21 | U | | 21 | U | | -- | 18 | U | | 18 | U | | -- |
| PAHs | Di-n-octylphthalate | 117-84-0 | 8270D SIM | µg/kg | 21 | U | | 21 | U | | -- | 18 | U | | 18 | U | | -- |
| PAHs | Fluoranthene | 206-44-0 | 8270D SIM | µg/kg | 3.1 | | | 2.9 | | | 6.67 | 1.7 | UJ | | 2.1 | J | | 200.00 |
| PAHs | Fluorene | 86-73-7 | 8270D SIM | µg/kg | 5.5 | J | | 2.0 | UJ | | 200.00 | 1.7 | U | | 1.7 | U | | -- |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 8270D SIM | µg/kg | 0.85 | J | | 2.0 | UJ | | 200.00 | 1.7 | U | | 1.7 | U | | -- |
| PAHs | Naphthalene | 91-20-3 | 8270D SIM | µg/kg | 3.8 | | | 5.3 | | | 32.97 | 1.1 | J | | 1.7 | | | 42.86 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 8270D SIM | µg/kg | 1.9 | U | | 2.0 | U | | -- | 1.7 | U | | 1.7 | U | | -- |
| PAHs | Phenanthrene | 85-01-8 | 8270D SIM | µg/kg | 2.9 | | | 2.9 | | | 0.00 | 0.80 | J | | 1.5 | J | | 60.87 |
| PAHs | Pyrene | 129-00-0 | 8270D SIM | µg/kg | 2.8 | | | 3.2 | | | 13.33 | 0.67 | J | | 2.0 | J | | 99.63 |
| PCBPCTs | Aroclor 1016 | 12674-11-2 | 8082A | µg/kg | | | | | | | -- | | | | | | | -- |
| PCBPCTs | Aroclor 1221 | 11104-28-2 | 8082A | µg/kg | | | | | | | -- | | | | | | | -- |
| PCBPCTs | Aroclor 1232 | 11141-16-5 | 8082A | µg/kg | | | | | | | -- | | | | | | | -- |
| PCBPCTs | Aroclor 1242 | 53469-21-9 | 8082A | µg/kg | | | | | | | -- | | | | | | | -- |
| PCBPCTs | Aroclor 1248 | 12672-29-6 | 8082A | µg/kg | | | | | | | -- | | | | | | | -- |
| PCBPCTs | Aroclor 1254 | 11097-69-1 | 8082A | µg/kg | | | | | | | -- | | | | | | | -- |
| PCBPCTs | Aroclor 1260 | 11096-82-5 | 8082A | µg/kg | | | | | | | -- | | | | | | | -- |
| PCBPCTs | Aroclor 1262 | 37324-23-5 | 8082A | µg/kg | | | | | | | -- | | | | | | | -- |
| PCBPCTs | Aroclor 1268 | 11100-14-4 | 8082A | µg/kg | | | | | | | -- | | | | | | | -- |
| PCBPCTs | Aroclor 5432 | 63496-31-1 | 8082A | µg/kg | | | | | | | -- | | | | | | | -- |
| PCBPCTs | Aroclor 5442 | 12642-23-8 | 8082A | µg/kg | | | | | | | -- | | | | | | | -- |
| PCBPCTs | Aroclor 5460 | 11126-42-4 | 8082A | µg/kg | | | | | | | -- | | | | | | | -- |
| Pesticides | 4,4'-DDD | 72-54-8 | 8081B | µg/kg | 2.0 | U | | 2.0 | U | | -- | 1.7 | U | | 1.8 | U | | -- |
| Pesticides | 4,4'-DDE | 72-55-9 | 8081B | µg/kg | 2.0 | U | | 2.0 | U | | -- | 0.40 | J | | 0.64 | J | | 46.15 |
| Pesticides | 4,4'-DDT | 50-29-3 | 8081B | µg/kg | 1.3 | J | | 2.0 | | | 42.42 | 0.49 | J | | 0.90 | J | | 58.99 |
| Pesticides | Aldrin | 309-00-2 | 8081B | µg/kg | 0.97 | U | | 0.97 | U | | -- | 0.85 | U | | 0.86 | U | | -- |
| Pesticides | Alpha-Bhc | 319-84-6 | 8081B | µg/kg | 0.97 | U | | 0.97 | U | | -- | 0.85 | U | | 0.86 | U | | -- |
| Pesticides | Beta-Bhc | 319-85-7 | 8081B | µg/kg | 2.2 | U | | 2.2 | U | | -- | 1.9 | U | | 2.0 | U | | -- |
| Pesticides | Chlordane | 57-74-9 | 8081B | µg/kg | 20 | U | | 20 | U | | -- | 17 | U | | 18 | U | | -- |
| Pesticides | Delta-Bhc | 319-86-8 | 8081B | µg/kg | 0.97 | U | | 0.97 | U | | -- | 0.85 | U | | 0.86 | U | | -- |
| Pesticides | Dieldrin | 60-57-1 | 8081B | µg/kg | 2.0 | UJ | | 0.56 | J | | 200.00 | 1.7 | U | | 1.8 | U | | -- |
| Pesticides | Endosulfan I | 959-98-8 | 8081B | µg/kg | 0.97 | U | | 0.97 | U | | -- | 0.85 | U | | 0.86 | U | | -- |
| Pesticides | Endosulfan II | 33213-65-9 | 8081B | µg/kg | 2.0 | U | | 2.0 | U | | -- | 1.7 | U | | 1.8 | U | | -- |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 8081B | µg/kg | 2.0 | U | | 2.0 | U | | -- | 1.7 | U | | 1.8 | U | | -- |
| Pesticides | Endrin | 72-20-8 | 8081B | µg/kg | 2.0 | UJ | | 0.46 | J | | 200.00 | 1.7 | U | | 1.8 | U | | -- |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 8081B | µg/kg | 2.0 | U | | 2.0 | U | | -- | 1.7 | U | | 1.8 | U | | -- |
| Pesticides | Endrin Ketone | 53494-70-5 | 8081B | µg/kg | 2.1 | U | | 2.1 | U | | -- | 1.8 | U | | 1.9 | U | | -- |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 8081B | µg/kg | 0.97 | U | | 0.97 | U | | -- | 0.85 | U | | 0.86 | U | | -- |
| Pesticides | Heptachlor | 76-44-8 | 8081B | µg/kg | 0.29 | J | | 0.54 | J | | 60.24 | 0.85 | U | | 0.86 | U | | -- |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 8081B | µg/kg | 0.97 | U | | 0.97 | U | | -- | 0.85 | U | | 0.86 | U | | -- |
| Pesticides | Methoxychlor | 72-43-5 | 8081B | µg/kg | 7.9 | U | | 7.8 | U | | -- | 6.9 | U | | 7.0 | U | | -- |
| Pesticides | Mirex | 2385-85-5 | 8081B | µg/kg | 2.0 | U | | 2.0 | U | | -- | 1.7 | U | | 1.8 | U | | -- |

**Table C9 - Northern Buffer Zone - Field Duplicates**

| | | | | Location | NBZ_DG-540 | | NBZ_DG-540 | | RPD | NBZ_DG-544 | | NBZ_DG-544 | | RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-840-NBZ-SB-0.0-0.5 | | SL-540-NBZ-SB-0.0-0.5 | | | SL-844-NBZ-SB-0.0-0.5 | | SL-544-NBZ-SB-0.0-0.5 | | |
| | | | | Sample Date | 12/11/2013 | | 12/11/2013 | | | 12/12/2013 | | 12/12/2013 | | |
| | | | | Start Depth: | 0 | | 0 | | | 0 | | 0 | | |
| | | | | End Depth: | 0.5 | | 0.5 | | | 0.5 | | 0.5 | | |
| | | | | Area: | NBZ_DG | | NBZ_DG | | | NBZ_DG | | NBZ_DG | | |
| | | | | Matrix: | SO | | SO | | | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | | FD | | N | | |
| Pesticides | Technical Toxaphene | 8001-35-2 | 8081B | µg/kg | 39 | U | 39 | U | -- | 34 | U | 34 | U | -- |
| pH | pH | pH | 9045M | pH | | | | | -- | 6.41 | | 6.47 | | 0.93 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 8015M | mg/kg | | | | | -- | 5.1 | U | 5.1 | U | -- |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 8015M | mg/kg | | | | | -- | 5.1 | U | 5.1 | U | -- |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 8015M | mg/kg | | | | | -- | 5.1 | U | 5.1 | U | -- |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 8015M | mg/kg | | | | | -- | 6.8 | J | 15 | J | 75.23 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 8015M | mg/kg | | | | | -- | 20 | | 30 | J | 40.00 |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 8015M | mg/kg | | | | | -- | | | | | -- |

Notes:
ug/kg - microgram per kilogram
mg/kg - milligram per kilogram
ng/g - nanogram per kilogram
FD - field duplicate sample
N - normal sample
RPD - relative percent difference
SO - soil
-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported
200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only
Limit - 50% - If RPD is above 50% detected field duplicate results only were estimated "J"

**Table C9 - Northern Buffer Zone - Field Duplicates**

| | | | | Location | NBZ_DG-545 | | NBZ_DG-545 | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-845-NBZ-SB-0.0-0.5 | | SL-545-NBZ-SB-0.0-0.5 | | |
| | | | | Sample Date | 12/04/2013 | | 12/04/2013 | | |
| | | | | Start Depth: | 0 | | 0 | | |
| | | | | End Depth: | 0.5 | | 0.5 | | |
| | | | | Area: | NBZ_DG | | NBZ_DG | | |
| | | | | Matrix: | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | |
| MAG: | Chemical Name: | CAS No.: | Lab Method: | Result Unit | | | | | |
| Cyanide | Cyanide | 57-12-5 | 9012B | mg/kg | 0.53 | U | 0.52 | U | -- |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 1613B | ng/kg | 13.2 | | 17.3 | | 26.89 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 1613B | ng/kg | 4.26 | J | 3.75 | J | 12.73 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 1613B | ng/kg | 5.27 | U | 5.17 | U | -- |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 1613B | ng/kg | 5.27 | U | 5.17 | U | -- |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 1613B | ng/kg | 5.27 | U | 5.17 | U | -- |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 1613B | ng/kg | 1.10 | J | 1.04 | J | 5.61 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 1613B | ng/kg | 5.27 | U | 5.17 | U | -- |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 1613B | ng/kg | 5.27 | U | 5.17 | U | -- |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 1613B | ng/kg | 5.27 | UJ | 5.17 | UJ | -- |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 1613B | ng/kg | 1.13 | J | 5.17 | U | 200.00 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 1613B | ng/kg | 5.27 | UJ | 5.17 | UJ | -- |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 1613B | ng/kg | 5.27 | U | 5.17 | U | -- |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 1613B | ng/kg | 5.27 | U | 5.17 | U | -- |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 1613B | ng/kg | 1.05 | U | 1.03 | U | -- |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 1613B | ng/kg | 0.487 | J | 0.622 | J | 24.35 |
| Dioxins | OCDD | 3268-87-9 | 1613B | ng/kg | 106 | | 142 | | 29.03 |
| Dioxins | OCDF | 39001-02-0 | 1613B | ng/kg | 8.17 | J | 8.97 | J | 9.33 |
| Dioxins | TCDD TEQ | TCDD TEQ | 1613B | ng/kg | 0.997 | | 1.01 | | 1.30 |
| Herbicides | 2,2-Dichlor-Propionic Acid | 75-99-0 | 8151A | µg/kg | | | | | -- |
| Herbicides | 2,4,5-T | 93-76-5 | 8151A | µg/kg | | | | | -- |
| Herbicides | 2,4-D | 94-75-7 | 8151A | µg/kg | | | | | -- |
| Herbicides | 2,4-DB | 94-82-6 | 8151A | µg/kg | | | | | -- |
| Herbicides | Dicamba | 1918-00-9 | 8151A | µg/kg | | | | | -- |
| Herbicides | Dichlorprop | 120-36-5 | 8151A | µg/kg | | | | | -- |
| Herbicides | Dinitrobutyl Phenol | 88-85-7 | 8151A | µg/kg | | | | | -- |
| Herbicides | MCPA | 94-74-6 | 8151A | µg/kg | | | | | -- |
| Herbicides | MCPP | 93-65-2 | 8151A | µg/kg | | | | | -- |
| Herbicides | Silvex (2,4,5-TP) | 93-72-1 | 8151A | µg/kg | | | | | -- |
| Mercury | Mercury | 7439-97-6 | 7471B | mg/kg | 0.284 | | 0.182 | | 43.78 |
| Metals | Aluminum | 7429-90-5 | 6010C | mg/kg | 11800 | | 12100 | | 2.51 |
| Metals | Antimony | 7440-36-0 | 6010C | mg/kg | 4.15 | UJ | 4.24 | UJ | -- |
| Metals | Arsenic | 7440-38-2 | 6010C | mg/kg | 2.90 | J | 3.24 | J | 11.07 |
| Metals | Barium | 7440-39-3 | 6010C | mg/kg | 77.1 | | 71.5 | | 7.54 |
| Metals | Beryllium | 7440-41-7 | 6010C | mg/kg | 0.466 | J | 0.477 | J | 2.33 |
| Metals | Boron | 7440-42-8 | 6010C | mg/kg | 5.57 | J | 4.79 | J | 15.06 |
| Metals | Cadmium | 7440-43-9 | 6010C | mg/kg | 0.466 | J | 0.447 | J | 4.16 |
| Metals | Calcium | 7440-70-2 | 6010C | mg/kg | 5200 | | 5070 | | 2.53 |
| Metals | Chromium | 7440-47-3 | 6010C | mg/kg | 17.7 | | 16.7 | | 5.81 |
| Metals | Cobalt | 7440-48-4 | 6010C | mg/kg | 4.62 | | 4.80 | | 3.82 |
| Metals | Copper | 7440-50-8 | 6010C | mg/kg | 4.80 | | 4.81 | | 0.21 |
| Metals | Iron | 7439-89-6 | 6010C | mg/kg | 18000 | | 18500 | | 2.74 |
| Metals | Lead | 7439-92-1 | 6010C | mg/kg | 15.1 | | 14.8 | | 2.01 |
| Metals | Lithium | 7439-93-2 | 6010C | mg/kg | 22.0 | | 22.7 | | 3.13 |
| Metals | Magnesium | 7439-95-4 | 6010C | mg/kg | 4070 | | 4240 | | 4.09 |
| Metals | Manganese | 7439-96-5 | 6010C | mg/kg | 273 | | 283 | | 3.60 |
| Metals | Molybdenum | 7439-98-7 | 6010C | mg/kg | 2.08 | UJ | 2.12 | UJ | -- |
| Metals | Nickel | 7440-02-0 | 6010C | mg/kg | 10.3 | | 10.7 | | 3.81 |
| Metals | Phosphorus | 7723-14-0 | 6010C | mg/kg | 372 | | 431 | | 14.69 |
| Metals | Potassium | 7440-09-7 | 6010C | mg/kg | 3070 | | 3490 | | 12.80 |
| Metals | Selenium | 7782-49-2 | 6020A | mg/kg | 0.189 | J | 0.203 | J | 7.14 |
| Metals | Silver | 7440-22-4 | 6020A | mg/kg | 0.233 | | 0.201 | J | 14.75 |
| Metals | Sodium | 7440-23-5 | 6010C | mg/kg | 92.1 | J | 78.3 | J | 16.20 |
| Metals | Strontium | 7440-24-6 | 6020A | mg/kg | 29.2 | J | 25.3 | J | 14.31 |
| Metals | Thallium | 7440-28-0 | 6020A | mg/kg | 0.208 | U | 0.213 | | 200.00 |
| Metals | Tin | 7440-31-5 | 6010C | mg/kg | 10.4 | U | 10.6 | U | -- |
| Metals | Titanium | 7440-32-6 | 6010C | mg/kg | 1010 | | 1010 | | 0.00 |
| Metals | Vanadium | 7440-62-2 | 6010C | mg/kg | 29.6 | | 31.2 | | 5.26 |
| Metals | Zinc | 7440-66-6 | 6010C | mg/kg | 63.6 | | 57.2 | | 10.60 |
| Metals | Zirconium | 7440-67-7 | 6010C | mg/kg | 2.00 | J | 1.66 | J | 18.58 |
| Moisture Content | Moisture | MOIST | 160.3M | % | 5.6 | | 7.5 | | 29.01 |
| Nitrates | Nitrate | 14797-55-8 | 300.0 | mg/kg | | | | | -- |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Acenaphthene | 83-32-9 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Acenaphthylene | 208-96-8 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Anthracene | 120-12-7 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Benzo(a)anthracene | 56-55-3 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Benzo(a)pyrene | 50-32-8 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 8270D SIM | µg/kg | 18 | UJ | 15 | J | 200.00 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 8270D SIM | µg/kg | 180 | U | 180 | U | -- |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 8270D SIM | µg/kg | 190 | U | 190 | U | -- |
| PAHs | Butylbenzylphthalate | 85-68-7 | 8270D SIM | µg/kg | 190 | U | 190 | U | -- |
| PAHs | Chrysene | 218-01-9 | 8270D SIM | µg/kg | 6.9 | J | 20 | J | 97.40 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Diethylphthalate | 84-66-2 | 8270D SIM | µg/kg | 190 | U | 190 | U | -- |
| PAHs | Dimethylphthalate | 131-11-3 | 8270D SIM | µg/kg | 190 | U | 190 | U | -- |
| PAHs | Di-n-butylphthalate | 84-74-2 | 8270D SIM | µg/kg | 190 | U | 190 | U | -- |
| PAHs | Di-n-octylphthalate | 117-84-0 | 8270D SIM | µg/kg | 190 | U | 190 | U | -- |
| PAHs | Fluoranthene | 206-44-0 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Fluorene | 86-73-7 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Naphthalene | 91-20-3 | 8270D SIM | µg/kg | 18 | UJ | 12 | J | 200.00 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Phenanthrene | 85-01-8 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PAHs | Pyrene | 129-00-0 | 8270D SIM | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1016 | 12674-11-2 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1221 | 11104-28-2 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1232 | 11141-16-5 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1242 | 53469-21-9 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1248 | 12672-29-6 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1254 | 11097-69-1 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1260 | 11096-82-5 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1262 | 37324-23-5 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 1268 | 11100-14-4 | 8082A | µg/kg | 18 | U | 18 | U | -- |
| PCBPCTs | Aroclor 5432 | 63496-31-1 | 8082A | µg/kg | 35 | U | 36 | U | -- |
| PCBPCTs | Aroclor 5442 | 12642-23-8 | 8082A | µg/kg | 35 | U | 36 | U | -- |
| PCBPCTs | Aroclor 5460 | 11126-42-4 | 8082A | µg/kg | 35 | U | 36 | U | -- |
| Pesticides | 4,4'-DDD | 72-54-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | 4,4'-DDE | 72-55-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | 4,4'-DDT | 50-29-3 | 8081B | µg/kg | | | | | -- |
| Pesticides | Aldrin | 309-00-2 | 8081B | µg/kg | | | | | -- |
| Pesticides | Alpha-Bhc | 319-84-6 | 8081B | µg/kg | | | | | -- |
| Pesticides | Beta-Bhc | 319-85-7 | 8081B | µg/kg | | | | | -- |
| Pesticides | Chlordane | 57-74-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | Delta-Bhc | 319-86-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Dieldrin | 60-57-1 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endosulfan I | 959-98-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endosulfan II | 33213-65-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endrin | 72-20-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 8081B | µg/kg | | | | | -- |
| Pesticides | Endrin Ketone | 53494-70-5 | 8081B | µg/kg | | | | | -- |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 8081B | µg/kg | | | | | -- |
| Pesticides | Heptachlor | 76-44-8 | 8081B | µg/kg | | | | | -- |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 8081B | µg/kg | | | | | -- |
| Pesticides | Methoxychlor | 72-43-5 | 8081B | µg/kg | | | | | -- |
| Pesticides | Mirex | 2385-85-5 | 8081B | µg/kg | | | | | -- |

**Table C9 - Northern Buffer Zone - Field Duplicates**

| | | | | Location | NBZ_DG-545 | | NBZ_DG-545 | | RPD |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | SL-845-NBZ-SB-0.0-0.5 | | SL-545-NBZ-SB-0.0-0.5 | | |
| | | | | Sample Date | 12/04/2013 | | 12/04/2013 | | |
| | | | | Start Depth: | 0 | | 0 | | |
| | | | | End Depth: | 0.5 | | 0.5 | | |
| | | | | Area: | NBZ_DG | | NBZ_DG | | |
| | | | | Matrix: | SO | | SO | | |
| | | | | Sample Type: | FD | | N | | |
| Pesticides | Technical Toxaphene | 8001-35-2 | 8081B | µg/kg | | | | | -- |
| pH | pH | pH | 9045M | pH | 7.06 | | 6.97 | | 1.28 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 8015M | mg/kg | 26 | U | 27 | U | -- |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 8015M | mg/kg | 26 | U | 27 | U | -- |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 8015M | mg/kg | 33 | | 35 | | 5.88 |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 8015M | mg/kg | 200 | | 150 | | 28.57 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 8015M | mg/kg | 460 | | 370 | | 21.69 |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 8015M | mg/kg | | | | | -- |

Notes:

ug/kg - microgram per kilogram

mg/kg - milligram per kilogram

ng/g - nanogram per kilogram

FD - field duplicate sample

N - normal sample

RPD - relative percent difference

SO - soil

-- - RPD not calculated when both field duplicate and normal samples were nondetect or only one sample result is reported

200* - When one result is nondetect a 200% RPD is given and sample results are qualified as estimated "J" or "UJ" in the field duplicate samples only

Limit - 50% - If RPD is above 50% detected field duplicate results only were estimated "J"

**Table C10 – Subarea 7 – Summary of Data Completeness Following Data Validation**

| | Number of Analyte Detections Without Qualifiers | Number of Estimated Results | Number of Rejected Results | Number of Nondetect Results | Number of Estimated Nondetect Results | Total Analytes Detect and Nondetect | Percent of Analyte Results Judged Valid Versus Total Analyte Results Collected |
|---|---|---|---|---|---|---|---|
| Dioxins – 1613B | 273 | 782 | -- | 370 | 15 | 1,440 | 100 |
| Metals - 6010C | 1,165 | 593 | -- | 260 | 36 | 2,054 | 100 |
| Metals – 6020A | 118 | 148 | -- | 48 | 2 | 316 | 100 |
| Hexavalent Chromium – 7199 | -- | 1 | -- | -- | -- | 1 | 100 |
| Mercury – 7471B | 28 | 32 | -- | 19 | 1 | 79 | 100 |
| TPH-EFH/GRO – 8015M | 98 | 77 | -- | 239 | 2 | 416 | 100 |
| Pesticides – 8081B | 3 | 11 | 1 | 173 | 1 | 189 | 99.47 |
| PCB/PCTs – 8082A | 11 | 30 | -- | 953 | 38 | 1,032 | 100 |
| SVOC SIM – 8270D SIM | 326 | 403 | -- | 1,317 | 8 | 2,054 | 100 |
| **Completeness Total for Phase 3 Subarea 3 Samples Collected and Judged Valid** | | | | | | | **99.47** |

**Table C11 – Northern Buffer Zone – Summary of Data Completeness Following Data Validation**

| | Number of Analyte Detections Without Qualifiers | Number of Estimated Results | Number of Rejected Results | Number of Nondetect Results | Number of Estimated Nondetect Results | Total Analytes Detect and Nondetect | Percent of Analyte Results Judged Valid Versus Total Analyte Results Collected |
|---|---|---|---|---|---|---|---|
| Dioxins – 1613B | 54 | 119 | -- | 351 | 16 | 540 | 100 |
| Nitrate - 300 | -- | 4 | -- | -- | -- | 4 | 100 |
| Metals – 6010C | 260 | 81 | -- | 42 | 7 | 390 | 100 |
| Metals – 6020A | 26 | 29 | -- | 5 | -- | 60 | 100 |
| Mercury – 7471B | 4 | 7 | -- | 4 | -- | 15 | 100 |
| Cyanide – 9012B | -- | -- | -- | -- | -- | 20 | 100 |
| TPH-EFH/GRO – 8015M | 65 | 39 | -- | 172 | -- | 276 | 100 |
| Pesticides – 8081B | 5 | 40 | -- | 647 | 1 | 693 | 100 |
| PCB/PCTs – 8082A | -- | -- | -- | 180 | -- | 180 | 100 |
| Herbicides – 8151A | 3 | 7 | -- | 89 | 1 | 100 | 100 |
| SVOC SIM – 8270D SIM | 73 | 156 | -- | 695 | 12 | 936 | 100 |
| **Completeness Total for Phase 3 Subarea 6 Samples Collected and Judged Valid** | | | | | | | **100** |

**Appendix C. Samples by SDG EQuIS for Phase 3 Subarea 7**

| Task Code | System Sample Code | Lab SDG | Matrix Code | Sample Date | Sample Source |
|---|---|---|---|---|---|
| 7_DG | SL-539-SA7-SB-0.0-0.5 | PH027 | SO | 4/8/2013 | FIELD |
| 7_DG | SL-540-SA7-SB-0.0-0.5 | PH027 | SO | 4/9/2013 | FIELD |
| 7_DG | SL-542-SA7-SB-0.0-0.5 | PH027 | SO | 4/9/2013 | FIELD |
| 7_DG | SL-544-SA7-SB-0.0-0.5 | PH027 | SO | 4/9/2013 | FIELD |
| 7_DG | SL-546-SA7-SB-0.0-0.5 | PH027 | SO | 4/9/2013 | FIELD |
| 7_DG | SL-840-SA7-SB-0.0-0.5 | PH027 | SO | 4/9/2013 | FIELD |
| 7_DG | SL-547-SA7-SB-0.0-0.5 | PH028 | SO | 4/9/2013 | FIELD |
| 7_DG | SL-548-SA7-SB-0.0-0.5 | PH028 | SO | 4/10/2013 | FIELD |
| 7_DG | SL-549-SA7-SB-0.0-0.5 | PH028 | SO | 4/10/2013 | FIELD |
| 7_DG | SL-551-SA7-SB-0.0-0.5 | PH028 | SO | 4/10/2013 | FIELD |
| 7_DG | SL-551-SA7-SB-2.0-3.0 | PH028 | SO | 4/10/2013 | FIELD |
| 7_DG | SL-552-SA7-SB-0.0-0.5 | PH028 | SO | 4/10/2013 | FIELD |
| | TB-041013 | PH028 | WQ | 4/10/2013 | FIELD |
| | EB-041113 | PH029 | WQ | 4/11/2013 | FIELD |
| | FB-041113 | PH029 | WQ | 4/11/2013 | FIELD |
| 7_DG | SL-536-SA7-SB-0.0-0.5 | PH029 | SO | 4/11/2013 | FIELD |
| 7_DG | SL-553-SA7-SB-0.0-0.5 | PH029 | SO | 4/11/2013 | FIELD |
| 7_DG | SL-554-SA7-SB-0.0-0.5 | PH029 | SO | 4/11/2013 | FIELD |
| 7_DG | SL-555-SA7-SB-0.0-0.5 | PH029 | SO | 4/11/2013 | FIELD |
| | EB-041213 | PH030 | WQ | 4/12/2013 | FIELD |
| 7_DG | SL-534-SA7-SB-0.0-0.5 | PH030 | SO | 4/12/2013 | FIELD |
| 7_DG | SL-535-SA7-SB-0.0-0.5 | PH030 | SO | 4/12/2013 | FIELD |
| 7_DG | SL-535-SA7-SB-4.0-5.0 | PH030 | SO | 4/12/2013 | FIELD |
| 7_DG | SL-535-SA7-SB-9.0-10.0 | PH030 | SO | 4/12/2013 | FIELD |
| 7_DG | SL-536-SA7-SB-3.0-4.0 | PH030 | SO | 4/12/2013 | FIELD |
| 7_DG | SL-836-SA7-SB-3.0-4.0 | PH030 | SO | 4/12/2013 | FIELD |
| | TB-041213 | PH030 | WQ | 4/12/2013 | FIELD |
| 7_DG | SL-521-SA7-SB-0.0-0.5 | PH031 | SO | 4/15/2013 | FIELD |
| 7_DG | SL-522-SA7-SB-0.0-0.5 | PH031 | SO | 4/15/2013 | FIELD |
| 7_DG | SL-534-SA7-SB-5.5-6.5 | PH031 | SO | 4/15/2013 | FIELD |
| 7_DG | SL-537-SA7-SB-0.0-0.5 | PH031 | SO | 4/15/2013 | FIELD |
| 7_DG | SL-538-SA7-SB-0.0-0.5 | PH031 | SO | 4/15/2013 | FIELD |
| | TB-041513 | PH031 | WQ | 4/15/2013 | FIELD |
| | FB-041613 | PH032 | WQ | 4/16/2013 | FIELD |
| 7_DG | SL-558-SA7-SB-0.0-0.5 | PH032 | SO | 4/16/2013 | FIELD |
| 7_DG | SL-559-SA7-SB-0.0-0.5 | PH032 | SO | 4/16/2013 | FIELD |
| 7_DG | SL-559-SA7-SB-2.0-3.0 | PH032 | SO | 4/16/2013 | FIELD |
| 7_DG | SL-560-SA7-SB-0.0-0.5 | PH032 | SO | 4/16/2013 | FIELD |
| 7_DG | SL-560-SA7-SB-3.0-4.0 | PH032 | SO | 4/16/2013 | FIELD |
| 7_DG | SL-561-SA7-SB-0.0-0.5 | PH032 | SO | 4/16/2013 | FIELD |
| | TB-041613 | PH032 | WQ | 4/16/2013 | FIELD |
| 7_DG | SL-500-SA7-SB-0.0-0.5 | PH033 | SO | 4/17/2013 | FIELD |
| 7_DG | SL-501-SA7-SB-0.0-0.5 | PH033 | SO | 4/17/2013 | FIELD |
| 7_DG | SL-502-SA7-SB-0.0-0.5 | PH033 | SO | 4/17/2013 | FIELD |
| 7_DG | SL-505-SA7-SB-0.0-0.5 | PH033 | SO | 4/17/2013 | FIELD |
| 7_DG | SL-557-SA7-SB-0.0-0.5 | PH033 | SO | 4/17/2013 | FIELD |
| 7_DG | SL-558-SA7-SB-3.0-4.0 | PH033 | SO | 4/17/2013 | FIELD |
| | TB-041713 | PH033 | WQ | 4/17/2013 | FIELD |
| | EB-041813 | PH034 | WQ | 4/18/2013 | FIELD |
| 7_DG | SL-530-SA7-SB-0.0-0.5 | PH034 | SO | 4/18/2013 | FIELD |
| 7_DG | SL-531-SA7-SB-0.0-0.5 | PH034 | SO | 4/18/2013 | FIELD |
| 7_DG | SL-532-SA7-SB-0.0-0.5 | PH034 | SO | 4/18/2013 | FIELD |
| 7_DG | SL-533-SA7-SB-0.0-0.5 | PH034 | SO | 4/18/2013 | FIELD |
| | EB-041913 | PH035 | WQ | 4/19/2013 | FIELD |
| 7_DG | SL-511-SA7-SB-0.0-0.5 | PH035 | SO | 4/19/2013 | FIELD |
| 7_DG | SL-518-SA7-SB-0.0-0.5 | PH035 | SO | 4/19/2013 | FIELD |
| 7_DG | SL-520-SA7-SB-0.0-0.5 | PH035 | SO | 4/19/2013 | FIELD |
| 7_DG | SL-503-SA7-SB-0.0-0.5 | PH036 | SO | 4/22/2013 | FIELD |
| 7_DG | SL-504-SA7-SB-0.0-0.5 | PH036 | SO | 4/22/2013 | FIELD |
| 7_DG | SL-504-SA7-SB-4.0-5.0 | PH036 | SO | 4/22/2013 | FIELD |
| 7_DG | SL-510-SA7-SB-0.0-0.5 | PH036 | SO | 4/22/2013 | FIELD |
| 7_DG | SL-517-SA7-SB-0.0-0.5 | PH036 | SO | 4/22/2013 | FIELD |
| 7_DG | SL-810-SA7-SB-0.0-0.5 | PH036 | SO | 4/22/2013 | FIELD |
| | TB-042213 | PH036 | WQ | 4/22/2013 | FIELD |
| 7_DG | SL-512-SA7-SB-0.0-0.5 | PH037 | SO | 4/23/2013 | FIELD |
| 7_DG | SL-525-SA7-SB-0.0-0.5 | PH037 | SO | 4/23/2013 | FIELD |
| 7_DG | SL-526-SA7-SB-0.0-0.5 | PH037 | SO | 4/23/2013 | FIELD |
| 7_DG | SL-526-SA7-SB-3.5-4.5 | PH037 | SO | 4/23/2013 | FIELD |
| | TB-042313 | PH037 | WQ | 4/23/2013 | FIELD |
| | EB-042413 | PH038 | WQ | 4/24/2013 | FIELD |
| 7_DG | SL-525-SA7-SB-6.5-7.5 | PH038 | SO | 4/24/2013 | FIELD |
| 7_DG | SL-527-SA7-SB-0.0-0.5 | PH038 | SO | 4/24/2013 | FIELD |
| 7_DG | SL-527-SA7-SB-2.5-3.5 | PH038 | SO | 4/24/2013 | FIELD |
| 7_DG | SL-528-SA7-SB-0.0-0.5 | PH038 | SO | 4/24/2013 | FIELD |
| 7_DG | SL-529-SA7-SB-0.0-0.5 | PH038 | SO | 4/24/2013 | FIELD |
| | TB-042413 | PH038 | WQ | 4/24/2013 | FIELD |
| 7_DG | SL-506-SA7-SB-0.0-0.5 | PH039 | SO | 4/25/2013 | FIELD |
| 7_DG | SL-507-SA7-SB-0.0-0.5 | PH039 | SO | 4/24/2013 | FIELD |
| 7_DG | SL-508-SA7-SB-0.0-0.5 | PH039 | SO | 4/25/2013 | FIELD |
| 7_DG | SL-509-SA7-SB-0.0-0.5 | PH039 | SO | 4/25/2013 | FIELD |
| 7_DG | SL-519-SA7-SB-0.0-0.5 | PH039 | SO | 4/25/2013 | FIELD |
| 7_DG | SL-519-SA7-SB-2.0-3.0 | PH039 | SO | 4/25/2013 | FIELD |
| 7_DG | SL-819-SA7-SB-0.0-0.5 | PH039 | SO | 4/25/2013 | FIELD |
| 7_DG | SL-543A-SA7-SB-0.0-0.5 | PH040 | SO | 4/25/2013 | FIELD |
| 7_DG | SL-543B-SA7-SB-0.0-0.5 | PH040 | SO | 4/25/2013 | FIELD |
| 7_DG | SL-543C-SA7-SB-0.0-0.5 | PH040 | SO | 4/25/2013 | FIELD |
| 7_DG | SL-543D-SA7-SB-0.0-0.5 | PH040 | SO | 4/25/2013 | FIELD |
| 7_DG | SL-562-SA7-SB-0.0-0.5 | PH040 | SO | 4/26/2013 | FIELD |
| 7_DG | SL-562-SA7-SB-2.0-3.0 | PH040 | SO | 4/26/2013 | FIELD |
| | TB-042613 | PH040 | WQ | 4/26/2013 | FIELD |
| | EB1-060313 | PH045 | WQ | 6/3/2013 | FIELD |
| | EB2-060313 | PH045 | WQ | 6/3/2013 | FIELD |
| 7_DG | SL-525-SA7-SB-4.0-5.0 | PH045 | SO | 6/3/2013 | FIELD |
| 7_DG | SL-525-SA7-SB-9.5-10.5 | PH045 | SO | 6/3/2013 | FIELD |
| 7_DG | SL-526-SA7-SB-9.0-10.0 | PH045 | SO | 6/3/2013 | FIELD |
| 7_DG | SL-532-SA7-SB-3.0-4.0 | PH045 | SO | 6/3/2013 | FIELD |
| 7_DG | SL-533-SA7-SB-2.5-3.5 | PH045 | SO | 6/3/2013 | FIELD |
| | TB-060313 | PH045 | WQ | 6/3/2013 | FIELD |
| 7_DG | SL-513-SA7-SB-0.0-0.5 | PH046 | SO | 6/4/2013 | FIELD |
| 7_DG | SL-516-SA7-SB-0.0-0.5 | PH046 | SO | 6/4/2013 | FIELD |
| 7_DG | SL-524-SA7-SB-0.0-0.5 | PH046 | SO | 6/4/2013 | FIELD |
| 7_DG | SL-524-SA7-SB-1.0-2.0 | PH046 | SO | 6/4/2013 | FIELD |
| 7_DG | SL-545A-SA7-SB-0.0-0.5 | PH046 | SO | 6/3/2013 | FIELD |
| 7_DG | SL-545B-SA7-SB-0.0-0.5 | PH046 | SO | 6/3/2013 | FIELD |
| 7_DG | SL-545C-SA7-SB-0.0-0.5 | PH046 | SO | 6/3/2013 | FIELD |
| 7_DG | SL-913-SA7-SB-0.0-0.5 | PH046 | SO | 6/4/2013 | FIELD |
| 7_DG | SL-924-SA7-SB-1.0-2.0 | PH046 | SO | 6/4/2013 | FIELD |
| | TB-060413 | PH046 | WQ | 6/4/2013 | FIELD |
| 7_DG | SL-514-SA7-SB-0.0-0.5 | PH049 | SO | 6/6/2013 | FIELD |
| 7_DG | SL-515-SA7-SB-0.0-0.5 | PH049 | SO | 6/6/2013 | FIELD |
| | EB2-100213 | PH121 | WQ | 10/2/2013 | FIELD |
| 7_DG | SL-541-SA7-SB-0.0-0.5 | PH121 | SO | 10/2/2013 | FIELD |
| 7_DG | SL-541-SA7-SB-2.0-3.0 | PH121 | SO | 10/2/2013 | FIELD |
| | TB2-100213 | PH121 | WQ | 10/2/2013 | FIELD |

**Appendix C. Samples by SDG for Phase 3 Northern Buffer Zone**

| Task Code | System Sample Code | Lab SDG | Matrix Code | Sample Date | Sample Source |
|---|---|---|---|---|---|
| | FB-041613 | PH032 | WQ | 4/16/2013 | FIELD |
| NBZ_DG | SL-502-NBZ-SB-0.0-0.5 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-502-NBZ-SB-4.0-5.0 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-503-NBZ-SB-0.0-0.5 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-503-NBZ-SB-2.0-3.0 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-504-NBZ-SB-0.0-0.5 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-509-NBZ-SB-0.0-0.5 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-509-NBZ-SB-2.5-3.5 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-510-NBZ-SB-0.0-0.5 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-510-NBZ-SB-4.0-5.0 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-530-NBZ-SB-0.0-0.5 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-531-NBZ-SB-0.0-0.5 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-532-NBZ-SB-0.0-0.5 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-533-NBZ-SB-0.0-0.5 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-804-NBZ-SB-0.0-0.5 | PH138 | SO | 12/3/2013 | FIELD |
| NBZ_DG | SL-809-NBZ-SB-2.5-3.5 | PH138 | SO | 12/3/2013 | FIELD |
| | TB-120313 | PH138 | WQ | 12/3/2013 | FIELD |
| NBZ_DG | SL-506-NBZ-SB-0.0-0.5 | PH139 | SO | 12/4/2013 | FIELD |
| NBZ_DG | SL-507-NBZ-SB-0.0-0.5 | PH139 | SO | 12/4/2013 | FIELD |
| NBZ_DG | SL-507-NBZ-SB-3.5-4.5 | PH139 | SO | 12/4/2013 | FIELD |
| NBZ_DG | SL-508-NBZ-SB-0.0-0.5 | PH139 | SO | 12/4/2013 | FIELD |
| NBZ_DG | SL-508-NBZ-SB-4.0-5.0 | PH139 | SO | 12/4/2013 | FIELD |
| NBZ_DG | SL-511-NBZ-SB-0.0-0.5 | PH139 | SO | 12/4/2013 | FIELD |
| NBZ_DG | SL-511-NBZ-SB-2.5-3.5 | PH139 | SO | 12/4/2013 | FIELD |
| NBZ_DG | SL-545-NBZ-SB-0.0-0.5 | PH139 | SO | 12/4/2013 | FIELD |
| NBZ_DG | SL-546-NBZ-SB-0.0-0.5 | PH139 | SO | 12/4/2013 | FIELD |
| NBZ_DG | SL-547-NBZ-SB-0.0-0.5 | PH139 | SO | 12/4/2013 | FIELD |
| NBZ_DG | SL-548-NBZ-SB-0.0-0.5 | PH139 | SO | 12/4/2013 | FIELD |
| NBZ_DG | SL-549-NBZ-SB-0.0-0.5 | PH139 | SO | 12/4/2013 | FIELD |
| NBZ_DG | SL-845-NBZ-SB-0.0-0.5 | PH139 | SO | 12/4/2013 | FIELD |
| | TB-120413 | PH139 | WQ | 12/4/2013 | FIELD |
| | EB1-120513 | PH140 | WQ | 12/5/2013 | FIELD |
| | EB2-120513 | PH140 | WQ | 12/5/2013 | FIELD |
| | EB3-120513 | PH140 | WQ | 12/5/2013 | FIELD |
| NBZ_DG | SL-525-NBZ-SB-0.0-0.5 | PH140 | SO | 12/5/2013 | FIELD |
| NBZ_DG | SL-525-NBZ-SB-4.0-5.0 | PH140 | SO | 12/5/2013 | FIELD |
| NBZ_DG | SL-526-NBZ-SB-0.0-0.5 | PH140 | SO | 12/5/2013 | FIELD |
| NBZ_DG | SL-526-NBZ-SB-2.5-3.5 | PH140 | SO | 12/5/2013 | FIELD |
| NBZ_DG | SL-527-NBZ-SB-0.0-0.5 | PH140 | SO | 12/5/2013 | FIELD |
| NBZ_DG | SL-528-NBZ-SB-0.0-0.5 | PH140 | SO | 12/5/2013 | FIELD |
| NBZ_DG | SL-529-NBZ-SB-0.0-0.5 | PH140 | SO | 12/5/2013 | FIELD |
| NBZ_DG | SL-825-NBZ-SB-4.0-5.0 | PH140 | SO | 12/5/2013 | FIELD |
| NBZ_DG | SL-501-NBZ-SB-0.0-0.5 | PH141 | SO | 12/6/2013 | FIELD |
| NBZ_DG | SL-512-NBZ-SB-0.0-0.5 | PH141 | SO | 12/6/2013 | FIELD |
| NBZ_DG | SL-534-NBZ-SB-0.0-0.5 | PH141 | SO | 12/6/2013 | FIELD |
| NBZ_DG | SL-535-NBZ-SB-0.0-0.5 | PH141 | SO | 12/6/2013 | FIELD |
| NBZ_DG | SL-537-NBZ-SB-0.0-0.5 | PH141 | SO | 12/6/2013 | FIELD |
| NBZ_DG | SL-538-NBZ-SB-0.0-0.5 | PH141 | SO | 12/6/2013 | FIELD |
| NBZ_DG | SL-556-NBZ-SB-0.0-0.5 | PH141 | SO | 12/6/2013 | FIELD |
| NBZ_DG | SL-556-NBZ-SB-4.0-5.0 | PH141 | SO | 12/6/2013 | FIELD |
| | TB-120613 | PH141 | WQ | 12/6/2013 | FIELD |
| NBZ_DG | SL-513-NBZ-SB-0.0-0.5 | PH142 | SO | 12/9/2013 | FIELD |
| NBZ_DG | SL-514-NBZ-SB-0.0-0.5 | PH142 | SO | 12/9/2013 | FIELD |
| NBZ_DG | SL-515-NBZ-SB-0.0-0.5 | PH142 | SO | 12/9/2013 | FIELD |
| NBZ_DG | SL-516-NBZ-SB-0.0-0.5 | PH142 | SO | 12/9/2013 | FIELD |
| NBZ_DG | SL-516-NBZ-SB-4.0-5.0 | PH142 | SO | 12/9/2013 | FIELD |
| NBZ_DG | SL-522-NBZ-SB-0.0-0.5 | PH142 | SO | 12/9/2013 | FIELD |
| NBZ_DG | SL-522-NBZ-SB-2.5-3.5 | PH142 | SO | 12/9/2013 | FIELD |
| NBZ_DG | SL-523-NBZ-SB-0.0-0.5 | PH142 | SO | 12/9/2013 | FIELD |
| NBZ_DG | SL-524-NBZ-SB-0.0-0.5 | PH142 | SO | 12/9/2013 | FIELD |
| NBZ_DG | SL-824-NBZ-SB-0.0-0.5 | PH142 | SO | 12/9/2013 | FIELD |
| | TB-120913 | PH142 | WQ | 12/9/2013 | FIELD |
| NBZ_DG | SL-553-NBZ-SB-0.0-0.5 | PH143 | SO | 12/10/2013 | FIELD |
| NBZ_DG | SL-554-NBZ-SB-0.0-0.5 | PH143 | SO | 12/10/2013 | FIELD |
| NBZ_DG | SL-555-NBZ-SB-0.0-0.5 | PH143 | SO | 12/10/2013 | FIELD |
| | EB1-121113 | PH146 | WQ | 12/11/2013 | FIELD |
| | EB2-121113 | PH146 | WQ | 12/11/2013 | FIELD |
| NBZ_DG | SL-552-NBZ-SB-0.0-0.5 | PH146 | SO | 12/10/2013 | FIELD |
| NBZ_DG | SL-552-NBZ-SB-2.0-3.0 | PH146 | SO | 12/10/2013 | FIELD |
| NBZ_DG | SL-539-NBZ-SB-0.0-0.5 | PH148 | SO | 12/12/2013 | FIELD |
| NBZ_DG | SL-540-NBZ-SB-0.0-0.5 | PH148 | SO | 12/11/2013 | FIELD |
| NBZ_DG | SL-541-NBZ-SB-0.0-0.5 | PH148 | SO | 12/11/2013 | FIELD |
| NBZ_DG | SL-542-NBZ-SB-0.0-0.5 | PH148 | SO | 12/11/2013 | FIELD |
| NBZ_DG | SL-543-NBZ-SB-0.0-0.5 | PH148 | SO | 12/12/2013 | FIELD |
| NBZ_DG | SL-544-NBZ-SB-0.0-0.5 | PH148 | SO | 12/12/2013 | FIELD |
| NBZ_DG | SL-840-NBZ-SB-0.0-0.5 | PH148 | SO | 12/11/2013 | FIELD |
| NBZ_DG | SL-844-NBZ-SB-0.0-0.5 | PH148 | SO | 12/12/2013 | FIELD |
| NBZ_DG | SL-505-NBZ-SB-0.0-0.5 | PH151 | SO | 12/13/2013 | FIELD |
| NBZ_DG | SL-521-NBZ-SB-0.0-0.5 | PH151 | SO | 12/13/2013 | FIELD |
| NBZ_DG | SL-557-NBZ-SB-0.0-0.5 | PH151 | SO | 12/13/2013 | FIELD |
| | EB2-121613 | PH155 | WQ | 12/16/2013 | FIELD |
| NBZ_DG | SL-517-NBZ-SB-0.0-0.5 | PH155 | SO | 12/16/2013 | FIELD |
| NBZ_DG | SL-517-NBZ-SB-2.0-3.0 | PH155 | SO | 12/16/2013 | FIELD |
| NBZ_DG | SL-518-NBZ-SB-0.0-0.5 | PH155 | SO | 12/16/2013 | FIELD |
| NBZ_DG | SL-519-NBZ-SB-0.0-0.5 | PH155 | SO | 12/16/2013 | FIELD |
| NBZ_DG | SL-520-NBZ-SB-0.0-0.5 | PH155 | SO | 12/16/2013 | FIELD |
| | TB2-121613 | PH155 | WQ | 12/16/2013 | FIELD |
| NBZ_DG | SL-551-NBZ-SB-0.0-0.5 | PH157 | SO | 12/17/2013 | FIELD |

**Laboratory Data Consultants, Inc.**

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CDM
555 17th Street, Suite 1100
Denver, CO 80202
ATTN: Mrs. Cherie Zakowski

July 3, 2013

SUBJECT: Santa Susana Field Laboratory, Data Validation

Dear Mrs. Zakowski,

Enclosed is the final validation report for the fractions listed below. These SDGs were received on May 31, 2013.

**LDC project# 29836:**

| SDG # | Fraction |
|---|---|
| PH027, PH028 | Volatiles (EPA SW 846 Method 8260B) |
| PH029, PH030 | 1,4-Dioxane (EPA SW 846 Method 8260B-SIM) |
| PH031, PH032 | Semivolatiles (EPA SW 846 Method 8270D) |
| PH033, PH034, | PAHs (EPA SW 846 Method 8270C-SIM) |
| PH035, PH036 | Chlorinated Pesticides (EPA SW 846 Method 8081A) |
| PH037, PH038 | PCBs (EPA SW 846 Method 8082) |
| PH039, PH040 | Metals (EPA SW 846 Method 6010C/6020A/7471A/7470A) |
| | Herbicides (EPA SW 846 Method 8151A) |
| | Terphenyls (EPA SW 846 Method 8015B) |
| | TPH-G (EPA SW 846 Method 8015M) |
| | TPH-E (EPA SW 846 Method 8015M) |
| | Perchlorate (EPA SW 846 Method 6850) |
| | Glycols (EPA SW 846 Method 8015C) |
| | Alcohols (EPA SW 846 Method 8015C) |
| | Explosives (EPA SW 846 Method 8330A) |
| | Dioxins/Dibenzofurans (EPA Method 1613B) |
| | Formaldehyde (EPA SW 846 Method 8315A) |
| | Hexavalent Chromium (EPA Method 7199) |
| | Wet Chemistry (EPA SW 846 Method 9012B and EPA Method 300.0, 350.0, and 314.0) |

The following deliverables are submitted under this report:

- Attachment I Sample ID Cross Reference and Data Review Level
- Attachment II Overall Data Qualification Summary
- Enclosure I Level III ADR Outliers (including manual review outliers)
- Enclosure II Level IV Validation Reports

The data validation was performed in accordance to the Quality Assurance Project Plan for Santa Susana Field Laboratory, RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4), USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008), Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005), and for Inorganic Data Review (January 2010). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience. The following items were evaluated during the review::

- Holding Times
- Sample Preservation
- Cooler Temperatures
- Initial Calibration (Level IV only)
- Continuing Calibration (Level IV only)
- Blanks
- Surrogates
- Matrix Spike/Matrix Spike Duplicates
- Laboratory Duplicates
- Laboratory Control Samples
- Internal Standards (Level IV only)
- ICP Serial Dilution (Manual Review)
- Detection and Quantitation Limits
- Field QC Samples

Please feel free to contact us if you have any questions.

Sincerely,

Shauna McKellar
Project Manager/Chemist

# Attachment I

# Sample ID Cross Reference and Data Review Level

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 08-Apr-2013 | SL-539-SA7-SB-0.0-0.5 | 7016766 | N | 3050B | 6010C | III |
| 08-Apr-2013 | SL-539-SA7-SB-0.0-0.5 | 7016766 | N | 3050B | 6020A | III |
| 08-Apr-2013 | SL-539-SA7-SB-0.0-0.5 | 7016766 | N | 3546 | 8015M | III |
| 08-Apr-2013 | SL-539-SA7-SB-0.0-0.5 | 7016766 | N | 3546 | 8082A | III |
| 08-Apr-2013 | SL-539-SA7-SB-0.0-0.5 | 7016766 | N | 3546 | 8270D SIM | III |
| 08-Apr-2013 | SL-539-SA7-SB-0.0-0.5 | 7016766 | N | METHOD | 1613B | III |
| 08-Apr-2013 | SL-539-SA7-SB-0.0-0.5 | 7016766 | N | METHOD | 7471B | III |
| 09-Apr-2013 | SL-542-SA7-SB-0.0-0.5 | 7016767 | N | 3050B | 6010C | III |
| 09-Apr-2013 | SL-542-SA7-SB-0.0-0.5 | 7016767 | N | 3050B | 6020A | III |
| 09-Apr-2013 | SL-542-SA7-SB-0.0-0.5 | 7016767 | N | 3546 | 8015M | III |
| 09-Apr-2013 | SL-542-SA7-SB-0.0-0.5 | 7016767 | N | 3546 | 8082A | III |
| 09-Apr-2013 | SL-542-SA7-SB-0.0-0.5 | 7016767 | N | 3546 | 8270D SIM | III |
| 09-Apr-2013 | SL-542-SA7-SB-0.0-0.5 | 7016767 | N | METHOD | 1613B | III |
| 09-Apr-2013 | SL-542-SA7-SB-0.0-0.5 | 7016767 | N | METHOD | 7471B | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5 | 7016768 | N | 3050B | 6010C | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5 | 7016768 | N | 3050B | 6020A | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5 | 7016768 | N | 3060A | 7199 | IV |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5 | 7016768 | N | 3546 | 8015M | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5 | 7016768 | N | 3546 | 8082A | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5 | 7016768 | N | 3546 | 8270D SIM | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5 | 7016768 | N | METHOD | 1613B | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5 | 7016768 | N | METHOD | 7471B | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5 | 7016768 | N | METHOD | 8315A | IV |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MS | 7016769 | MS | 3050B | 6010C | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MS | 7016769 | MS | 3050B | 6020A | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MS | 7016769 | MS | 3546 | 8015M | III |

*III = EPA Level 3 Data Review* *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
*IV = EPA Level 4 Data Validation* *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MS | 7016769 | MS | 3546 | 8082A | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MS | 7016769 | MS | 3546 | 8270D SIM | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MS | 7016769 | MS | METHOD | 1613B | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MS | 7016769 | MS | METHOD | 7471B | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MS | 7016769 | MS | METHOD | 8315A | IV |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MSD | 7016770 | MSD | 3050B | 6010C | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MSD | 7016770 | MSD | 3050B | 6020A | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MSD | 7016770 | MSD | 3546 | 8015M | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MSD | 7016770 | MSD | 3546 | 8082A | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MSD | 7016770 | MSD | 3546 | 8270D SIM | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MSD | 7016770 | MSD | METHOD | 1613B | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MSD | 7016770 | MSD | METHOD | 7471B | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MSD | 7016770 | MSD | METHOD | 8315A | IV |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5DUP | 7016771 | DUP | 3050B | 6010C | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5DUP | 7016771 | DUP | 3050B | 6020A | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5DUP | 7016771 | DUP | 3060A | 7199 | IV |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5DUP | 7016771 | DUP | METHOD | 7471B | III |
| 09-Apr-2013 | SL-540-SA7-SB-0.0-0.5MS | P016768R271701A | MS | 3060A | 7199 | IV |
| 09-Apr-2013 | SL-840-SA7-SB-0.0-0.5 | 7016772 | FD | 3050B | 6010C | III |
| 09-Apr-2013 | SL-840-SA7-SB-0.0-0.5 | 7016772 | FD | 3050B | 6020A | III |
| 09-Apr-2013 | SL-840-SA7-SB-0.0-0.5 | 7016772 | FD | 3060A | 7199 | IV |
| 09-Apr-2013 | SL-840-SA7-SB-0.0-0.5 | 7016772 | FD | 3546 | 8015M | III |
| 09-Apr-2013 | SL-840-SA7-SB-0.0-0.5 | 7016772 | FD | 3546 | 8082A | III |
| 09-Apr-2013 | SL-840-SA7-SB-0.0-0.5 | 7016772 | FD | 3546 | 8270D SIM | III |
| 09-Apr-2013 | SL-840-SA7-SB-0.0-0.5 | 7016772 | FD | METHOD | 1613B | III |
| 09-Apr-2013 | SL-840-SA7-SB-0.0-0.5 | 7016772 | FD | METHOD | 7471B | III |

*III = EPA Level 3 Data Review* *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
*IV = EPA Level 4 Data Validation* *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 09-Apr-2013 | SL-840-SA7-SB-0.0-0.5 | 7016772 | FD | METHOD | 8315A | IV |
| 09-Apr-2013 | SL-544-SA7-SB-0.0-0.5 | 7016773 | N | 3050B | 6010C | III |
| 09-Apr-2013 | SL-544-SA7-SB-0.0-0.5 | 7016773 | N | 3050B | 6020A | III |
| 09-Apr-2013 | SL-544-SA7-SB-0.0-0.5 | 7016773 | N | 3546 | 8015M | III |
| 09-Apr-2013 | SL-544-SA7-SB-0.0-0.5 | 7016773 | N | 3546 | 8082A | III |
| 09-Apr-2013 | SL-544-SA7-SB-0.0-0.5 | 7016773 | N | 3546 | 8270D SIM | III |
| 09-Apr-2013 | SL-544-SA7-SB-0.0-0.5 | 7016773 | N | METHOD | 1613B | III |
| 09-Apr-2013 | SL-544-SA7-SB-0.0-0.5 | 7016773 | N | METHOD | 7471B | III |
| 09-Apr-2013 | SL-546-SA7-SB-0.0-0.5 | 7016774 | N | METHOD | 1613B | III |

*III = EPA Level 3 Data Review*
*IV = EPA Level 4 Data Validation*
*N = Normal Sample*
*FD = Field Duplicate*
*TB = Trip Blank*
*FB = Field Blank*
*MS = Matrix Spike*
*MSD = Matrix Spike Duplicate*

# Attachment II

# Overall Data Qualification Summary

# Data Qualifier Summary

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

*Sample ID:* SL-539-SA7-SB-0.0-0.5 *Collected:* 4/8/2013 12:45:00 *Analysis Type:* REA/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BORON | 4.32 | J | 0.850 | MDL | 10.2 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-539-SA7-SB-0.0-0.5 *Collected:* 4/8/2013 12:45:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.10 | U | 0.512 | MDL | 4.10 | PQL | mg/Kg | UJ | Q |
| BERYLLIUM | 0.480 | J | 0.0686 | MDL | 1.02 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.161 | J | 0.0338 | MDL | 1.02 | PQL | mg/Kg | J | Z |
| CALCIUM | 3360 | | 4.12 | MDL | 20.5 | PQL | mg/Kg | J | E |
| PHOSPHORUS | 396 | | 0.523 | MDL | 10.2 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 3290 | | 13.8 | MDL | 102 | PQL | mg/Kg | J | Q |
| SODIUM | 66.5 | J | 17.1 | MDL | 102 | PQL | mg/Kg | J | Z |
| TIN | 2.66 | J | 0.225 | MDL | 10.2 | PQL | mg/Kg | U | B |

*Sample ID:* SL-540-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:10:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.10 | U | 0.512 | MDL | 4.10 | PQL | mg/Kg | UJ | Q |
| BERYLLIUM | 0.556 | J | 0.0686 | MDL | 1.02 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.0727 | J | 0.0338 | MDL | 1.02 | PQL | mg/Kg | J | Z |
| CALCIUM | 3100 | | 4.12 | MDL | 20.5 | PQL | mg/Kg | J | E |
| MOLYBDENUM | 0.672 | J | 0.174 | MDL | 2.05 | PQL | mg/Kg | UJ | FD, B, F, F |
| PHOSPHORUS | 399 | | 0.522 | MDL | 10.2 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 3560 | | 13.8 | MDL | 102 | PQL | mg/Kg | J | Q |
| SODIUM | 69.3 | J | 17.1 | MDL | 102 | PQL | mg/Kg | J | Z |
| TIN | 2.76 | J | 0.225 | MDL | 10.2 | PQL | mg/Kg | U | B |
| Zirconium | 0.921 | J | 0.850 | MDL | 5.12 | PQL | mg/Kg | J | Z, FD |

*Sample ID:* SL-542-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 8:40:00 AM *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.08 | U | 0.510 | MDL | 4.08 | PQL | mg/Kg | UJ | Q |
| BERYLLIUM | 0.527 | J | 0.0684 | MDL | 1.02 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.118 | J | 0.0337 | MDL | 1.02 | PQL | mg/Kg | J | Z |
| CALCIUM | 3600 | | 4.10 | MDL | 20.4 | PQL | mg/Kg | J | E |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

*Sample ID:* SL-542-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 8:40:00 AM *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| PHOSPHORUS | 369 | | 0.520 | MDL | 10.2 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 2560 | | 13.8 | MDL | 102 | PQL | mg/Kg | J | Q |
| SODIUM | 71.7 | J | 17.0 | MDL | 102 | PQL | mg/Kg | J | Z |
| TIN | 2.51 | J | 0.224 | MDL | 10.2 | PQL | mg/Kg | U | B |

*Sample ID:* SL-544-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 1:05:00 PM *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 3.94 | U | 0.492 | MDL | 3.94 | PQL | mg/Kg | UJ | Q |
| ARSENIC | 3.40 | J | 0.325 | MDL | 3.94 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.465 | J | 0.0659 | MDL | 0.984 | PQL | mg/Kg | U | B |
| CADMIUM | 0.0699 | J | 0.0325 | MDL | 0.984 | PQL | mg/Kg | U | B |
| CALCIUM | 2460 | | 3.96 | MDL | 19.7 | PQL | mg/Kg | J | E |
| PHOSPHORUS | 405 | | 0.502 | MDL | 9.84 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 3280 | | 13.3 | MDL | 98.4 | PQL | mg/Kg | J | Q |
| SODIUM | 66.5 | J | 16.4 | MDL | 98.4 | PQL | mg/Kg | J | Z |
| TIN | 2.61 | J | 0.217 | MDL | 9.84 | PQL | mg/Kg | U | B |

*Sample ID:* SL-840-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:15:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 3.99 | U | 0.499 | MDL | 3.99 | PQL | mg/Kg | UJ | Q |
| BERYLLIUM | 0.613 | J | 0.0669 | MDL | 0.998 | PQL | mg/Kg | U | B |
| CADMIUM | 0.0728 | J | 0.0329 | MDL | 0.998 | PQL | mg/Kg | U | B |
| CALCIUM | 2670 | | 4.01 | MDL | 20.0 | PQL | mg/Kg | J | E |
| MOLYBDENUM | 2.00 | U | 0.170 | MDL | 2.00 | PQL | mg/Kg | UJ | FD |
| PHOSPHORUS | 426 | | 0.509 | MDL | 9.98 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 3400 | | 13.5 | MDL | 99.8 | PQL | mg/Kg | J | Q |
| SODIUM | 69.5 | J | 16.7 | MDL | 99.8 | PQL | mg/Kg | J | Z |
| TIN | 2.64 | J | 0.220 | MDL | 9.98 | PQL | mg/Kg | U | B |
| Zirconium | 4.99 | U | 0.828 | MDL | 4.99 | PQL | mg/Kg | UJ | FD |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

*Sample ID:* SL-539-SA7-SB-0.0-0.5 *Collected:* 4/8/2013 12:45:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0585 | J | 0.0205 | MDL | 0.205 | PQL | mg/Kg | J | Z |
| STRONTIUM | 13.9 | | 0.0348 | MDL | 0.410 | PQL | mg/Kg | J | Q |

*Sample ID:* SL-540-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:10:00 *Analysis Type:* REA/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.102 | J | 0.102 | MDL | 0.410 | PQL | mg/Kg | J | Z, FD |

*Sample ID:* SL-540-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:10:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0240 | J | 0.0205 | MDL | 0.205 | PQL | mg/Kg | J | Z, FD |
| STRONTIUM | 19.4 | | 0.0348 | MDL | 0.410 | PQL | mg/Kg | J | Q |

*Sample ID:* SL-542-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 8:40:00 AM *Analysis Type:* REA/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.187 | J | 0.102 | MDL | 0.408 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-542-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 8:40:00 AM *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| STRONTIUM | 18.2 | | 0.0347 | MDL | 0.408 | PQL | mg/Kg | J | Q |

*Sample ID:* SL-544-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 1:05:00 PM *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0205 | J | 0.0197 | MDL | 0.197 | PQL | mg/Kg | J | Z |
| STRONTIUM | 10.0 | | 0.0335 | MDL | 0.394 | PQL | mg/Kg | J | Q |

*Sample ID:* SL-840-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:15:00 *Analysis Type:* REA/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.399 | U | 0.0998 | MDL | 0.399 | PQL | mg/Kg | UJ | FD |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

*Sample ID:* SL-840-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:15:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.200 | U | 0.0200 | MDL | 0.200 | PQL | mg/Kg | UJ | FD |
| STRONTIUM | 14.9 | | 0.0339 | MDL | 0.399 | PQL | mg/Kg | J | Q |

**Method Category: METALS**

**Method: 7199** **Matrix: SO**

*Sample ID:* SL-540-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:10:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | 0.37 | J | 0.15 | MDL | 0.42 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-840-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:15:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | 0.26 | J | 0.15 | MDL | 0.43 | PQL | mg/Kg | J | Z |

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-539-SA7-SB-0.0-0.5 *Collected:* 4/8/2013 12:45:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HPCDF | 2.65 | JB | 0.0339 | MDL | 4.99 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 1.72 | JB | 0.0596 | MDL | 4.99 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 2.00 | JB | 0.0488 | MDL | 4.99 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 4.86 | JB | 0.0611 | MDL | 4.99 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 1.24 | JB | 0.0483 | MDL | 4.99 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 2.77 | JB | 0.0570 | MDL | 4.99 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.745 | J | 0.0501 | MDL | 4.99 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.615 | JBQ | 0.0804 | MDL | 4.99 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 3.51 | JB | 0.0476 | MDL | 4.99 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 1.28 | JB | 0.0480 | MDL | 4.99 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.783 | JB | 0.0430 | MDL | 4.99 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.0932 | J | 0.0389 | MDL | 0.998 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-539-SA7-SB-0.0-0.5 *Collected:* 4/8/2013 12:45:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDF | 0.730 | J | 0.0830 | MDL | 0.998 | PQL | ng/Kg | J | Z |

*Sample ID:* SL-540-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:10:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 1.52 | JB | 0.0219 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.159 | JBQ | 0.0288 | MDL | 5.12 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HxCDD | 0.150 | JB | 0.0459 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.150 | JBQ | 0.0350 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 0.361 | JBQ | 0.0442 | MDL | 5.12 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,6,7,8-HXCDF | 0.136 | JBQ | 0.0319 | MDL | 5.12 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDD | 0.339 | JB | 0.0439 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.0774 | JQ | 0.0371 | MDL | 5.12 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,7,8-PECDD | 0.106 | JBQ | 0.0390 | MDL | 5.12 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.154 | JB | 0.0244 | MDL | 5.12 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.122 | JB | 0.0329 | MDL | 5.12 | PQL | ng/Kg | U | B |
| 2,3,4,7,8-PECDF | 0.0829 | JBQ | 0.0233 | MDL | 5.12 | PQL | ng/Kg | U | B |
| OCDD | 86.5 | B | 0.0236 | MDL | 10.2 | PQL | ng/Kg | J | FD |
| OCDF | 3.16 | JB | 0.0287 | MDL | 10.2 | PQL | ng/Kg | J | Z |
| TEQ WHO 2005 - EDLx0.0 | 0.193 | | 0 | MDL | 0 | PQL | ng/Kg | J | FD |

*Sample ID:* SL-542-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 8:40:00 AM *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HPCDF | 0.401 | JB | 0.0268 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.365 | JB | 0.0412 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.270 | JB | 0.0287 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 0.986 | JB | 0.0418 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.347 | JB | 0.0270 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 0.602 | JB | 0.0404 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.0737 | JQ | 0.0289 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.187 | JBQ | 0.0341 | MDL | 4.92 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.161 | JBQ | 0.0214 | MDL | 4.92 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.388 | JB | 0.0258 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.180 | JBQ | 0.0199 | MDL | 4.92 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-542-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 8:40:00 AM *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 0.0325 | JQ | 0.0287 | MDL | 0.984 | PQL | ng/Kg | J | Z |

*Sample ID:* SL-544-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 1:05:00 PM *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 3.09 | JB | 0.0219 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,4,6,7,8-HPCDF | 0.518 | JB | 0.0128 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.119 | JB | 0.0165 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HxCDD | 0.0644 | JBQ | 0.0286 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HXCDF | 0.0972 | JB | 0.0205 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDD | 0.164 | JB | 0.0288 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.0818 | JB | 0.0192 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDD | 0.153 | JBQ | 0.0284 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDF | 0.0801 | JQ | 0.0194 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.0609 | JB | 0.0292 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.0861 | JBQ | 0.0156 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.0429 | JBQ | 0.0185 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 2,3,4,7,8-PECDF | 0.0669 | JBQ | 0.0153 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDD | 0.0275 | JQ | 0.0218 | MDL | 1.02 | PQL | ng/Kg | J | Z |
| OCDF | 0.856 | JB | 0.0232 | MDL | 10.2 | PQL | ng/Kg | J | Z |

*Sample ID:* SL-546-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 2:15:00 PM *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HPCDF | 1.68 | JB | 0.0728 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 1.80 | JB | 0.0939 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 1.62 | JB | 0.0764 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 1.03 | JB | 0.0745 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 3.26 | JB | 0.0957 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.605 | J | 0.101 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.952 | JBQ | 0.0619 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.704 | JB | 0.0565 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 1.27 | JB | 0.0853 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 1.56 | JB | 0.0531 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.149 | J | 0.0300 | MDL | 0.993 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-546-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 2:15:00 PM *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDF | 0.801 | J | 0.0896 | MDL | 0.993 | PQL | ng/Kg | J | Z |

*Sample ID:* SL-840-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:15:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 2.35 | JB | 0.0210 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.239 | JB | 0.0266 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.197 | JB | 0.0383 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.196 | JB | 0.0263 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 0.661 | JB | 0.0386 | MDL | 4.90 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,6,7,8-HXCDF | 0.173 | JBQ | 0.0248 | MDL | 4.90 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDD | 0.443 | JB | 0.0344 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.204 | J | 0.0271 | MDL | 4.90 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,7,8-PECDD | 0.175 | JB | 0.0370 | MDL | 4.90 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.148 | JBQ | 0.0208 | MDL | 4.90 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.187 | JB | 0.0251 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.117 | JB | 0.0195 | MDL | 4.90 | PQL | ng/Kg | U | B |
| OCDD | 161 | B | 0.0297 | MDL | 9.80 | PQL | ng/Kg | J | FD |
| OCDF | 4.40 | JB | 0.0236 | MDL | 9.80 | PQL | ng/Kg | J | Z |
| TEQ WHO 2005 - EDLx0.0 | 0.602 | | 0 | MDL | 0 | PQL | ng/Kg | J | FD |

**Method Category: SVOA**

**Method: 8015M** **Matrix: SO**

*Sample ID:* SL-540-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:10:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 3.0 | J | 2.0 | MDL | 5.1 | PQL | mg/Kg | J | Z, Q |
| EFH (C21-C30) | 4.9 | J | 2.0 | MDL | 5.1 | PQL | mg/Kg | J | Z |
| EFH (C30-C40) | 17 | | 4.1 | MDL | 10 | PQL | mg/Kg | J | Q, Q, Q, FD |

*Sample ID:* SL-542-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 8:40:00 AM *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 3.5 | J | 2.0 | MDL | 5.1 | PQL | mg/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**
**Method: 8015M** **Matrix: SO**

*Sample ID:* SL-840-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:15:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 4.3 | J | 2.0 | MDL | 5.1 | PQL | mg/Kg | J | Z |
| EFH (C30-C40) | 46 | | 4.1 | MDL | 10 | PQL | mg/Kg | J | FD |

**Method Category: SVOA**
**Method: 8082A** **Matrix: SO**

*Sample ID:* SL-539-SA7-SB-0.0-0.5 *Collected:* 4/8/2013 12:45:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor 5460 | 23 | J | 10 | MDL | 34 | PQL | ug/Kg | J | Z |

**Method Category: SVOA**
**Method: 8270D SIM** **Matrix: SO**

*Sample ID:* SL-539-SA7-SB-0.0-0.5 *Collected:* 4/8/2013 12:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTHRACENE | 6.0 | J | 3.4 | MDL | 17 | PQL | ug/Kg | J | Z |
| BENZO(B)FLUORANTHENE | 11 | J | 6.8 | MDL | 17 | PQL | ug/Kg | J | Z |

*Sample ID:* SL-540-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(A)ANTHRACENE | 1.7 | U | 0.69 | MDL | 1.7 | PQL | ug/Kg | UJ | FD |
| BENZO(A)PYRENE | 0.74 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(B)FLUORANTHENE | 1.4 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(E)PYRENE | 18 | U | 3.4 | MDL | 18 | PQL | ug/Kg | UJ | Q |
| BENZO(G,H,I)PERYLENE | 0.98 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 15 | J | 6.2 | MDL | 19 | PQL | ug/Kg | J | Z |
| Butylbenzylphthalate | 6.7 | J | 6.2 | MDL | 19 | PQL | ug/Kg | J | Z |
| CHRYSENE | 1.6 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| FLUORANTHENE | 1.4 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| NAPHTHALENE | 0.83 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | UJ | F, FD |
| PHENANTHRENE | 0.77 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result
**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category:** SVOA

**Method:** 8270D SIM **Matrix:** SO

*Sample ID:* SL-540-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| PYRENE | 1.5 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |

*Sample ID:* SL-542-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 8:40:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(E)PYRENE | 4.0 | J | 3.4 | MDL | 17 | PQL | ug/Kg | J | Z |
| DIBENZO(A,H)ANTHRACENE | 1.0 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| FLUORENE | 0.71 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| NAPHTHALENE | 1.2 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

*Sample ID:* SL-544-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 1:05:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(A)PYRENE | 0.71 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(B)FLUORANTHENE | 1.4 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(G,H,I)PERYLENE | 1.2 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| CHRYSENE | 1.6 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| FLUORANTHENE | 1.1 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PHENANTHRENE | 0.84 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PYRENE | 1.1 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

*Sample ID:* SL-840-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 10:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(A)ANTHRACENE | 0.80 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z, FD |
| BENZO(A)PYRENE | 0.89 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(B)FLUORANTHENE | 1.6 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(G,H,I)PERYLENE | 0.77 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 13 | J | 6.2 | MDL | 19 | PQL | ug/Kg | J | Z |
| Butylbenzylphthalate | 8.7 | J | 6.2 | MDL | 19 | PQL | ug/Kg | J | Z |
| CHRYSENE | 1.5 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| NAPHTHALENE | 1.7 | U | 0.69 | MDL | 1.7 | PQL | ug/Kg | UJ | FD |
| PHENANTHRENE | 1.1 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# *Data Qualifier Summary*

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

## Reason Code Legend

| *Reason Code* | *Description* |
|---|---|
| B | Calibration Blank Contamination |
| B | Method Blank Contamination |
| E | Laboratory Duplicate Precision |
| E | Matrix Spike Precision |
| F | Equipment Blank Contamination |
| F | Field Blank Contamination |
| FD | Field Duplicate Precision |
| L | Laboratory Control Spike Upper Estimation |
| Q | Laboratory Duplicate Precision |
| Q | Matrix Spike Lower Estimation |
| Q | Matrix Spike Lower Rejection |
| Q | Matrix Spike Precision |
| Q | Matrix Spike Upper Estimation |
| Z | Reporting Limit Trace Value |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Enclosure I

# Level III ADR Outliers
# (including Manual Review Outliers)

# Quality Control
# Outlier Reports

# PH027

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **1613B**
***Matrix:*** **SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| BLK1010B371822 | 4/12/2013 6:22:00 PM | 1,2,3,4,6,7,8-HPCDD | 0.0607 ng/Kg | SL-539-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,6,7,8-HPCDF | 0.0395 ng/Kg | SL-540-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8,9-HPCDF | 0.0369 ng/Kg | SL-542-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8-HxCDD | 0.0258 ng/Kg | SL-544-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8-HXCDF | 0.0274 ng/Kg | SL-546-SA7-SB-0.0-0.5 |
| | | 1,2,3,6,7,8-HXCDD | 0.0317 ng/Kg | SL-840-SA7-SB-0.0-0.5 |
| | | 1,2,3,6,7,8-HXCDF | 0.0363 ng/Kg | |
| | | 1,2,3,7,8,9-HXCDD | 0.0327 ng/Kg | |
| | | 1,2,3,7,8-PECDD | 0.0393 ng/Kg | |
| | | 1,2,3,7,8-PECDF | 0.0399 ng/Kg | |
| | | 2,3,4,6,7,8-HXCDF | 0.0246 ng/Kg | |
| | | 2,3,4,7,8-PECDF | 0.0324 ng/Kg | |
| | | OCDD | 0.181 ng/Kg | |
| | | OCDF | 0.120 ng/Kg | |
| | | TEQ WHO 2005 - EDLx0.0 | 0.0000540 ng/Kg | |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-540-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8,9-HPCDF | 0.159 ng/Kg | 0.159U ng/Kg |
| SL-540-SA7-SB-0.0-0.5(RES) | 1,2,3,6,7,8-HXCDF | 0.136 ng/Kg | 0.136U ng/Kg |
| SL-540-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDD | 0.106 ng/Kg | 0.106U ng/Kg |
| SL-540-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDF | 0.154 ng/Kg | 0.154U ng/Kg |
| SL-540-SA7-SB-0.0-0.5(RES) | 2,3,4,6,7,8-HXCDF | 0.122 ng/Kg | 0.122U ng/Kg |
| SL-540-SA7-SB-0.0-0.5(RES) | 2,3,4,7,8-PECDF | 0.0829 ng/Kg | 0.0829U ng/Kg |
| SL-542-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDD | 0.187 ng/Kg | 0.187U ng/Kg |
| SL-542-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDF | 0.161 ng/Kg | 0.161U ng/Kg |
| SL-544-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8,9-HPCDF | 0.119 ng/Kg | 0.119U ng/Kg |
| SL-544-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8-HxCDD | 0.0644 ng/Kg | 0.0644U ng/Kg |
| SL-544-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8-HXCDF | 0.0972 ng/Kg | 0.0972U ng/Kg |
| SL-544-SA7-SB-0.0-0.5(RES) | 1,2,3,6,7,8-HXCDF | 0.0818 ng/Kg | 0.0818U ng/Kg |
| SL-544-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDD | 0.153 ng/Kg | 0.153U ng/Kg |
| SL-544-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDD | 0.0609 ng/Kg | 0.0609U ng/Kg |
| SL-544-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDF | 0.0861 ng/Kg | 0.0861U ng/Kg |
| SL-544-SA7-SB-0.0-0.5(RES) | 2,3,4,6,7,8-HXCDF | 0.0429 ng/Kg | 0.0429U ng/Kg |
| SL-544-SA7-SB-0.0-0.5(RES) | 2,3,4,7,8-PECDF | 0.0669 ng/Kg | 0.0669U ng/Kg |
| SL-840-SA7-SB-0.0-0.5(RES) | 1,2,3,6,7,8-HXCDF | 0.173 ng/Kg | 0.173U ng/Kg |
| SL-840-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDD | 0.175 ng/Kg | 0.175U ng/Kg |
| SL-840-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDF | 0.148 ng/Kg | 0.148U ng/Kg |
| SL-840-SA7-SB-0.0-0.5(RES) | 2,3,4,7,8-PECDF | 0.117 ng/Kg | 0.117U ng/Kg |

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **6010C**
***Matrix:*** **SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| P10537CB221641 | 4/19/2013 4:41:00 PM | CALCIUM | 4.23 mg/Kg | SL-539-SA7-SB-0.0-0.5 |
| | | PHOSPHORUS | 14.4 mg/Kg | SL-540-SA7-SB-0.0-0.5 |
| | | TIN | 1.39 mg/Kg | SL-542-SA7-SB-0.0-0.5 |
| | | ZINC | 0.273 mg/Kg | SL-544-SA7-SB-0.0-0.5 |
| | | | | SL-840-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-539-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.66 mg/Kg | 2.66U mg/Kg |
| SL-540-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.76 mg/Kg | 2.76U mg/Kg |
| SL-542-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.51 mg/Kg | 2.51U mg/Kg |
| SL-544-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.61 mg/Kg | 2.61U mg/Kg |
| SL-840-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.64 mg/Kg | 2.64U mg/Kg |

# Equipment Rinsate Blank Outlier Report

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **6010C**
***Matrix:*** **SO**

| Equipment Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| EB-041113(REA2) | 4/11/2013 3:15:00 PM | CALCIUM | 0.131 mg/L | SL-539-SA7-SB-0.0-0.5 |
| | | COPPER | 0.0035 mg/L | SL-540-SA7-SB-0.0-0.5 |
| | | MANGANESE | 0.0012 mg/L | SL-542-SA7-SB-0.0-0.5 |
| | | MOLYBDENUM | 0.0143 mg/L | SL-544-SA7-SB-0.0-0.5 |
| | | TIN | 0.0024 mg/L | SL-546-SA7-SB-0.0-0.5 |
| | | ZINC | 0.0041 mg/L | SL-840-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-540-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.672 mg/Kg | 0.672U mg/Kg |

# Field Blank Outlier Report

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **6010C**
***Matrix:*** **SO**

| Field Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| FB-041113(REA2) | 4/11/2013 3:00:00 PM | COPPER | 0.0036 mg/L | SL-539-SA7-SB-0.0-0.5 |
| | | MOLYBDENUM | 0.0036 mg/L | SL-540-SA7-SB-0.0-0.5 |
| | | | | SL-542-SA7-SB-0.0-0.5 |
| | | | | SL-544-SA7-SB-0.0-0.5 |
| | | | | SL-546-SA7-SB-0.0-0.5 |
| | | | | SL-840-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-540-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.672 mg/Kg | 0.672U mg/Kg |

***Method:*** **8270D SIM**
***Matrix:*** **SO**

| Field Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| FB-041113(RES) | 4/11/2013 3:00:00 PM | 1-Methylnaphthalene | 0.019 ug/L | SL-539-SA7-SB-0.0-0.5 |
| | | 2-METHYLNAPHTHALENE | 0.024 ug/L | SL-540-SA7-SB-0.0-0.5 |
| | | BIS(2-ETHYLHEXYL)PHTHALATE | 0.082 ug/L | SL-542-SA7-SB-0.0-0.5 |
| | | Diethylphthalate | 0.18 ug/L | SL-544-SA7-SB-0.0-0.5 |
| | | Di-n-butylphthalate | 0.17 ug/L | SL-546-SA7-SB-0.0-0.5 |
| | | NAPHTHALENE | 0.17 ug/L | SL-840-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-540-SA7-SB-0.0-0.5(RES) | NAPHTHALENE | 0.83 ug/Kg | 1.7U ug/Kg |

# Matrix Spike/Matrix Spike Duplicate Outlier Report

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PH027_v1** **eQAPP Name: CDM_SSFL_130516_Lan**

**Method: 6010C**
**Matrix: SO**

| QC Sample ID (Associated Samples) | Compound | MS %R | MSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| SL-540-SA7-SB-0.0-0.5MS (TOT)<br>SL-540-SA7-SB-0.0-0.5MSD (TOT)<br>(SL-539-SA7-SB-0.0-0.5<br>SL-540-SA7-SB-0.0-0.5<br>SL-542-SA7-SB-0.0-0.5<br>SL-544-SA7-SB-0.0-0.5<br>SL-840-SA7-SB-0.0-0.5) | ALUMINUM<br>MAGNESIUM<br>TITANIUM | 1818<br>169<br>325 | 1689<br>-<br>208 | 75.00-125.00<br>75.00-125.00<br>75.00-125.00 | -<br>-<br>- | ALUMINUM<br>MAGNESIUM<br>TITANIUM | No Qual, >4x |
| SL-540-SA7-SB-0.0-0.5MS (TOT)<br>SL-540-SA7-SB-0.0-0.5MSD (TOT)<br>(SL-539-SA7-SB-0.0-0.5<br>SL-540-SA7-SB-0.0-0.5<br>SL-542-SA7-SB-0.0-0.5<br>SL-544-SA7-SB-0.0-0.5<br>SL-840-SA7-SB-0.0-0.5) | CALCIUM<br>IRON | 17<br>-545 | 365<br>-1097 | 75.00-125.00<br>75.00-125.00 | 37 (20.00)<br>- | CALCIUM<br>IRON | J(all detects)<br>UJ(all non-detects)<br>Fe, Ca,<br>No Qual %R, >4x |
| SL-540-SA7-SB-0.0-0.5MS (TOT)<br>SL-540-SA7-SB-0.0-0.5MSD (TOT)<br>(SL-539-SA7-SB-0.0-0.5<br>SL-540-SA7-SB-0.0-0.5<br>SL-542-SA7-SB-0.0-0.5<br>SL-544-SA7-SB-0.0-0.5<br>SL-840-SA7-SB-0.0-0.5) | ANTIMONY<br>MANGANESE<br>PHOSPHORUS<br>POTASSIUM | 48<br>131<br>56<br>- | 47<br>65<br>127<br>65 | 75.00-125.00<br>75.00-125.00<br>75.00-125.00<br>75.00-125.00 | -<br>-<br>-<br>- | ANTIMONY<br>MANGANESE<br>PHOSPHORUS<br>POTASSIUM | J(all detects)<br>UJ(all non-detects)<br>Mn, No Qual, >4x |

**Method: 6020A**
**Matrix: SO**

| QC Sample ID (Associated Samples) | Compound | MS %R | MSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| SL-540-SA7-SB-0.0-0.5MSD (TOT)<br>(SL-539-SA7-SB-0.0-0.5<br>SL-540-SA7-SB-0.0-0.5<br>SL-542-SA7-SB-0.0-0.5<br>SL-544-SA7-SB-0.0-0.5<br>SL-840-SA7-SB-0.0-0.5) | STRONTIUM | - | 153 | 75.00-125.00 | - | STRONTIUM | J(all detects) |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Matrix Spike/Matrix Spike Duplicate Outlier Report

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PrepPH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 8270D SIM**
**Matrix: SO**

| QC Sample ID (Associated Samples) | Compound | MS %R | MSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| **SL-540-SA7-SB-0.0-0.5MS**<br>**SL-540-SA7-SB-0.0-0.5MSD**<br>(SL-540-SA7-SB-0.0-0.5) | Diethylphthalate | 135 | 133 | 76.00-127.00 | - | Diethylphthalate | J(all detects) |
| **SL-540-SA7-SB-0.0-0.5MS**<br>**SL-540-SA7-SB-0.0-0.5MSD**<br>(SL-540-SA7-SB-0.0-0.5) | BENZO(E)PYRENE | 1 | 1 | 70.00-130.00 | - | BENZO(E)PYRENE | J(all detects)<br>UJ(all non-detects) |

**Method: 8015M**
**Matrix: SO**

| QC Sample ID (Associated Samples) | Compound | MS %R | MSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| **SL-540-SA7-SB-0.0-0.5MSD**<br>(SL-540-SA7-SB-0.0-0.5) | EFH (C15-C20) | - | - | 49.00-123.00 | 27 (20.00) | EFH (C15-C20) | J(all detects) |
| **SL-540-SA7-SB-0.0-0.5MS**<br>**SL-540-SA7-SB-0.0-0.5MSD**<br>(SL-540-SA7-SB-0.0-0.5) | EFH (C30-C40) | 40 | 134 | 49.00-123.00 | 22 (20.00) | EFH (C30-C40) | J(all detects)<br>UJ(all non-detects) |

# Lab Duplicate Outlier Report

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method: 6010C***
***Matrix: SO***

| QC Sample ID (Associated Sample ID) | Analyte | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|
| SL-540-SA7-SB-0.0-0.5DUP (TOT) (SL-539-SA7-SB-0.0-0.5 SL-540-SA7-SB-0.0-0.5 SL-542-SA7-SB-0.0-0.5 SL-544-SA7-SB-0.0-0.5 SL-840-SA7-SB-0.0-0.5) | CADMIUM | 49 | 20.00 | No Qual, OK by Difference |
| | MOLYBDENUM | 94 | 20.00 | |
| | Zirconium | 63 | 20.00 | |

***Method: 6020A***
***Matrix: SO***

| QC Sample ID (Associated Sample ID) | Analyte | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|
| SL-540-SA7-SB-0.0-0.5DUP (TOT) (SL-539-SA7-SB-0.0-0.5 SL-540-SA7-SB-0.0-0.5 SL-542-SA7-SB-0.0-0.5 SL-544-SA7-SB-0.0-0.5 SL-840-SA7-SB-0.0-0.5) | SELENIUM | 50 | 20.00 | No Qual, OK by Difference |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Field Duplicate RPD Report

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method: 160.3M***
***Matrix: SO***

| Analyte | Concentration (%) | | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| | SL-540-SA7-SB-0.0-0.5 | SL-840-SA7-SB-0.0-0.5 | | | |
| MOISTURE | 3.3 | 2.7 | 20 | | No Qualifiers Applied |

***Method: 1613B***
***Matrix: SO***

| Analyte | Concentration (ng/Kg) | | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| | SL-540-SA7-SB-0.0-0.5 | SL-840-SA7-SB-0.0-0.5 | | | |
| 1,2,3,4,6,7,8-HPCDD | 8.49 | 12.7 | 40 | 50.00 | |
| 1,2,3,4,6,7,8-HPCDF | 1.52 | 2.35 | 43 | 50.00 | |
| 1,2,3,4,7,8,9-HPCDF | 0.159 | 0.239 | 40 | 50.00 | |
| 1,2,3,4,7,8-HxCDD | 0.150 | 0.197 | 27 | 50.00 | |
| 1,2,3,4,7,8-HXCDF | 0.150 | 0.196 | 27 | 50.00 | |
| 1,2,3,6,7,8-HXCDF | 0.136 | 0.173 | 24 | 50.00 | No Qualifiers Applied |
| 1,2,3,7,8,9-HXCDD | 0.339 | 0.443 | 27 | 50.00 | |
| 1,2,3,7,8-PECDD | 0.106 | 0.175 | 49 | 50.00 | |
| 1,2,3,7,8-PECDF | 0.154 | 0.148 | 4 | 50.00 | |
| 2,3,4,6,7,8-HXCDF | 0.122 | 0.187 | 42 | 50.00 | |
| 2,3,4,7,8-PECDF | 0.0829 | 0.117 | 34 | 50.00 | |
| OCDF | 3.16 | 4.40 | 33 | 50.00 | |
| 1,2,3,6,7,8-HXCDD | 0.361 | 0.661 | 59 | 50.00 | |
| 1,2,3,7,8,9-HXCDF | 0.0774 | 0.204 | 90 | 50.00 | J(all detects) |
| OCDD | 86.5 | 161 | 60 | 50.00 | |
| TEQ WHO 2005 - EDLx0.0 | 0.193 | 0.602 | 103 | 50.00 | |

# Field Duplicate RPD Report

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6010C**
**Matrix: SO**

| Analyte | Concentration (mg/Kg) SL-540-SA7-SB-0.0-0.5 (TOT) | Concentration (mg/Kg) SL-840-SA7-SB-0.0-0.5 (TOT) | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| ALUMINUM | 13300 | 14800 | 11 | 50.00 | |
| ARSENIC | 4.19 | 4.74 | 12 | 50.00 | |
| BARIUM | 72.7 | 73.5 | 1 | 50.00 | |
| BERYLLIUM | 0.556 | 0.613 | 10 | 50.00 | |
| CADMIUM | 0.0727 | 0.0728 | 0 | 50.00 | |
| CALCIUM | 3100 | 2670 | 15 | 50.00 | |
| CHROMIUM | 15.2 | 15.4 | 1 | 50.00 | |
| COBALT | 4.28 | 4.00 | 7 | 50.00 | |
| COPPER | 6.71 | 6.02 | 11 | 50.00 | |
| IRON | 19000 | 19100 | 1 | 50.00 | |
| LEAD | 5.22 | 4.92 | 6 | 50.00 | No Qualifiers Applied |
| LITHIUM | 22.4 | 23.6 | 5 | 50.00 | |
| MAGNESIUM | 4080 | 4100 | 0 | 50.00 | |
| MANGANESE | 244 | 245 | 0 | 50.00 | |
| NICKEL | 8.81 | 8.86 | 1 | 50.00 | |
| PHOSPHORUS | 399 | 426 | 7 | 50.00 | |
| POTASSIUM | 3560 | 3400 | 5 | 50.00 | |
| SODIUM | 69.3 | 69.5 | 0 | 50.00 | |
| TIN | 2.76 | 2.64 | 4 | 50.00 | |
| TITANIUM | 888 | 983 | 10 | 50.00 | |
| VANADIUM | 29.8 | 32.0 | 7 | 50.00 | |
| ZINC | 55.8 | 52.3 | 6 | 50.00 | |
| MOLYBDENUM | 0.672 | 2.00 U | 200 | 50.00 | J(all detects) |
| Zirconium | 0.921 | 4.99 U | 200 | 50.00 | UJ(all non-detects) |

**Method: 6020A**
**Matrix: SO**

| Analyte | Concentration (mg/Kg) SL-540-SA7-SB-0.0-0.5 (TOT) | Concentration (mg/Kg) SL-840-SA7-SB-0.0-0.5 (TOT) | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| STRONTIUM | 19.4 | 14.9 | 26 | 50.00 | No Qualifiers Applied |
| THALLIUM | 0.223 | 0.244 | 9 | 50.00 | |
| SELENIUM | 0.102 | 0.399 U | 200 | 50.00 | J(all detects) |
| SILVER | 0.0240 | 0.200 U | 200 | 50.00 | UJ(all non-detects) |

**Method: 7199**
**Matrix: SO**

| Analyte | Concentration (mg/Kg) SL-540-SA7-SB-0.0-0.5 (TOT) | Concentration (mg/Kg) SL-840-SA7-SB-0.0-0.5 (TOT) | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | 0.37 | 0.26 | 35 | 50.00 | No Qualifiers Applied |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Field Duplicate RPD Report

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PH027_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 8015M**
**Matrix: SO**

| Analyte | Concentration (mg/Kg) | | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| | SL-540-SA7-SB-0.0-0.5 | SL-840-SA7-SB-0.0-0.5 | | | |
| EFH (C15-C20) | 3.0 | 4.3 | 36 | 50.00 | No Qualifiers Applied |
| EFH (C21-C30) | 4.9 | 7.0 | 35 | 50.00 | |
| EFH (C30-C40) | 17 | 46 | 92 | 50.00 | J(all detects) |

**Method: 8270D SIM**
**Matrix: SO**

| Analyte | Concentration (ug/Kg) | | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| | SL-540-SA7-SB-0.0-0.5 | SL-840-SA7-SB-0.0-0.5 | | | |
| BENZO(A)PYRENE | 0.74 | 0.89 | 18 | 50.00 | |
| BENZO(B)FLUORANTHENE | 1.4 | 1.6 | 13 | 50.00 | |
| BENZO(G,H,I)PERYLENE | 0.98 | 0.77 | 24 | 50.00 | |
| BIS(2-ETHYLHEXYL)PHTHALATE | 15 | 13 | 14 | 50.00 | |
| Butylbenzylphthalate | 6.7 | 8.7 | 26 | 50.00 | No Qualifiers Applied |
| CHRYSENE | 1.6 | 1.5 | 6 | 50.00 | |
| FLUORANTHENE | 1.4 | 1.7 | 19 | 50.00 | |
| PHENANTHRENE | 0.77 | 1.1 | 35 | 50.00 | |
| PYRENE | 1.5 | 2.1 | 33 | 50.00 | |
| BENZO(A)ANTHRACENE | 1.7 U | 0.80 | 200 | 50.00 | J(all detects) |
| NAPHTHALENE | 0.83 | 1.7 U | 200 | 50.00 | UJ(all non-detects) |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PH027_v1** **eQAPP Name: CDM_SSFL_130516_Lan**

**Method: 1613B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-539-SA7-SB-0.0-0.5 | 1,2,3,4,7,8,9-HPCDF | JB | 2.65 | 4.99 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 1.72 | 4.99 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 2.00 | 4.99 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 4.86 | 4.99 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 1.24 | 4.99 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 2.77 | 4.99 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | J | 0.745 | 4.99 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JBQ | 0.615 | 4.99 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 3.51 | 4.99 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 1.28 | 4.99 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.783 | 4.99 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | J | 0.0932 | 0.998 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.730 | 0.998 | PQL | ng/Kg | |
| SL-540-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 1.52 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JBQ | 0.159 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.150 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JBQ | 0.150 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JBQ | 0.361 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JBQ | 0.136 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.339 | 5.12 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | JQ | 0.0774 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JBQ | 0.106 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.154 | 5.12 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.122 | 5.12 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.0829 | 5.12 | PQL | ng/Kg | |
| | OCDF | JB | 3.16 | 10.2 | PQL | ng/Kg | |
| SL-542-SA7-SB-0.0-0.5 | 1,2,3,4,7,8,9-HPCDF | JB | 0.401 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.365 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.270 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 0.986 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.347 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.602 | 4.92 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | JQ | 0.0737 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JBQ | 0.187 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.161 | 4.92 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.388 | 4.92 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.180 | 4.92 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JQ | 0.0325 | 0.984 | PQL | ng/Kg | |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PH027_v1** **eQAPP Name: CDM_SSFL_130516_Lan**

***Method:*** **1613B**

***Matrix:*** **SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-544-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDD | JB | 3.09 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,4,6,7,8-HPCDF | JB | 0.518 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.119 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JBQ | 0.0644 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.0972 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 0.164 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.0818 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JBQ | 0.153 | 5.09 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | JQ | 0.0801 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JB | 0.0609 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.0861 | 5.09 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.0429 | 5.09 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.0669 | 5.09 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JQ | 0.0275 | 1.02 | PQL | ng/Kg | |
| | OCDF | JB | 0.856 | 10.2 | PQL | ng/Kg | |
| SL-546-SA7-SB-0.0-0.5 | 1,2,3,4,7,8,9-HPCDF | JB | 1.68 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 1.80 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 1.62 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 1.03 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 3.26 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | J | 0.605 | 4.97 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JBQ | 0.952 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.704 | 4.97 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 1.27 | 4.97 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 1.56 | 4.97 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | J | 0.149 | 0.993 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.801 | 0.993 | PQL | ng/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PH027_v1** **eQAPP Name: CDM_SSFL_130516_Lan**

**Method: 1613B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-840-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 2.35 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.239 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.197 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.196 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 0.661 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JBQ | 0.173 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.443 | 4.90 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | J | 0.204 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JB | 0.175 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.148 | 4.90 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.187 | 4.90 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.117 | 4.90 | PQL | ng/Kg | |
| | OCDF | JB | 4.40 | 9.80 | PQL | ng/Kg | |

**Method: 6010C**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-539-SA7-SB-0.0-0.5 | BERYLLIUM | J | 0.480 | 1.02 | PQL | mg/Kg | |
| | BORON | J | 4.32 | 10.2 | PQL | mg/Kg | |
| | CADMIUM | J | 0.161 | 1.02 | PQL | mg/Kg | J (all detects) |
| | SODIUM | J | 66.5 | 102 | PQL | mg/Kg | |
| | TIN | J | 2.66 | 10.2 | PQL | mg/Kg | |
| SL-540-SA7-SB-0.0-0.5 | BERYLLIUM | J | 0.556 | 1.02 | PQL | mg/Kg | |
| | CADMIUM | J | 0.0727 | 1.02 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.672 | 2.05 | PQL | mg/Kg | J (all detects) |
| | SODIUM | J | 69.3 | 102 | PQL | mg/Kg | |
| | TIN | J | 2.76 | 10.2 | PQL | mg/Kg | |
| | Zirconium | J | 0.921 | 5.12 | PQL | mg/Kg | |
| SL-542-SA7-SB-0.0-0.5 | BERYLLIUM | J | 0.527 | 1.02 | PQL | mg/Kg | |
| | CADMIUM | J | 0.118 | 1.02 | PQL | mg/Kg | J (all detects) |
| | SODIUM | J | 71.7 | 102 | PQL | mg/Kg | |
| | TIN | J | 2.51 | 10.2 | PQL | mg/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PH027_v1** **eQAPP Name: CDM_SSFL_130516_Lan**

**Method: 6010C**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-544-SA7-SB-0.0-0.5 | ARSENIC | J | 3.40 | 3.94 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.465 | 0.984 | PQL | mg/Kg | |
| | CADMIUM | J | 0.0699 | 0.984 | PQL | mg/Kg | J (all detects) |
| | SODIUM | J | 66.5 | 98.4 | PQL | mg/Kg | |
| | TIN | J | 2.61 | 9.84 | PQL | mg/Kg | |
| SL-840-SA7-SB-0.0-0.5 | BERYLLIUM | J | 0.613 | 0.998 | PQL | mg/Kg | |
| | CADMIUM | J | 0.0728 | 0.998 | PQL | mg/Kg | J (all detects) |
| | SODIUM | J | 69.5 | 99.8 | PQL | mg/Kg | |
| | TIN | J | 2.64 | 9.98 | PQL | mg/Kg | |

**Method: 6020A**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-539-SA7-SB-0.0-0.5 | SILVER | J | 0.0585 | 0.205 | PQL | mg/Kg | J (all detects) |
| SL-540-SA7-SB-0.0-0.5 | SELENIUM | J | 0.102 | 0.410 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0240 | 0.205 | PQL | mg/Kg | |
| SL-542-SA7-SB-0.0-0.5 | SELENIUM | J | 0.187 | 0.408 | PQL | mg/Kg | J (all detects) |
| SL-544-SA7-SB-0.0-0.5 | SILVER | J | 0.0205 | 0.197 | PQL | mg/Kg | J (all detects) |

**Method: 7199**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-540-SA7-SB-0.0-0.5 | HEXAVALENT CHROMIUM | J | 0.37 | 0.42 | PQL | mg/Kg | J (all detects) |
| SL-840-SA7-SB-0.0-0.5 | HEXAVALENT CHROMIUM | J | 0.26 | 0.43 | PQL | mg/Kg | J (all detects) |

**Method: 8015M**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-540-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 3.0 | 5.1 | PQL | mg/Kg | J (all detects) |
| | EFH (C21-C30) | J | 4.9 | 5.1 | PQL | mg/Kg | |
| SL-542-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 3.5 | 5.1 | PQL | mg/Kg | J (all detects) |
| SL-840-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 4.3 | 5.1 | PQL | mg/Kg | J (all detects) |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH027** **Laboratory: LL**

**EDD Filename: PH027_v1** **eQAPP Name: CDM_SSFL_130516_Lan**

**Method: 8082A**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-539-SA7-SB-0.0-0.5 | Aroclor 5460 | J | 23 | 34 | PQL | ug/Kg | J (all detects) |

**Method: 8270D SIM**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-539-SA7-SB-0.0-0.5 | ANTHRACENE | J | 6.0 | 17 | PQL | ug/Kg | J (all detects) |
| | BENZO(B)FLUORANTHENE | J | 11 | 17 | PQL | ug/Kg | |
| SL-540-SA7-SB-0.0-0.5 | BENZO(A)PYRENE | J | 0.74 | 1.7 | PQL | ug/Kg | |
| | BENZO(B)FLUORANTHENE | J | 1.4 | 1.7 | PQL | ug/Kg | |
| | BENZO(G,H,I)PERYLENE | J | 0.98 | 1.7 | PQL | ug/Kg | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 15 | 19 | PQL | ug/Kg | |
| | Butylbenzylphthalate | J | 6.7 | 19 | PQL | ug/Kg | J (all detects) |
| | CHRYSENE | J | 1.6 | 1.7 | PQL | ug/Kg | |
| | FLUORANTHENE | J | 1.4 | 1.7 | PQL | ug/Kg | |
| | NAPHTHALENE | J | 0.83 | 1.7 | PQL | ug/Kg | |
| | PHENANTHRENE | J | 0.77 | 1.7 | PQL | ug/Kg | |
| | PYRENE | J | 1.5 | 1.7 | PQL | ug/Kg | |
| SL-542-SA7-SB-0.0-0.5 | BENZO(E)PYRENE | J | 4.0 | 17 | PQL | ug/Kg | |
| | DIBENZO(A,H)ANTHRACENE | J | 1.0 | 1.7 | PQL | ug/Kg | J (all detects) |
| | FLUORENE | J | 0.71 | 1.7 | PQL | ug/Kg | |
| | NAPHTHALENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| SL-544-SA7-SB-0.0-0.5 | BENZO(A)PYRENE | J | 0.71 | 1.7 | PQL | ug/Kg | |
| | BENZO(B)FLUORANTHENE | J | 1.4 | 1.7 | PQL | ug/Kg | |
| | BENZO(G,H,I)PERYLENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| | CHRYSENE | J | 1.6 | 1.7 | PQL | ug/Kg | J (all detects) |
| | FLUORANTHENE | J | 1.1 | 1.7 | PQL | ug/Kg | |
| | PHENANTHRENE | J | 0.84 | 1.7 | PQL | ug/Kg | |
| | PYRENE | J | 1.1 | 1.7 | PQL | ug/Kg | |
| SL-840-SA7-SB-0.0-0.5 | BENZO(A)ANTHRACENE | J | 0.80 | 1.7 | PQL | ug/Kg | |
| | BENZO(A)PYRENE | J | 0.89 | 1.7 | PQL | ug/Kg | |
| | BENZO(B)FLUORANTHENE | J | 1.6 | 1.7 | PQL | ug/Kg | |
| | BENZO(G,H,I)PERYLENE | J | 0.77 | 1.7 | PQL | ug/Kg | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 13 | 19 | PQL | ug/Kg | J (all detects) |
| | Butylbenzylphthalate | J | 8.7 | 19 | PQL | ug/Kg | |
| | CHRYSENE | J | 1.5 | 1.7 | PQL | ug/Kg | |
| | PHENANTHRENE | J | 1.1 | 1.7 | PQL | ug/Kg | |

LDC #: 29836A4
SDG #: PH027
Laboratory: Eurofins Lancaster Laboratories

# VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 6/11/13
Page: 1 of 1
Reviewer: CR
2nd Reviewer: LC

**METHOD:** Metals (EPA SW 846 Method 6010C/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

| | Validation Area | | Comments |
|---|---|---|---|
| I. | Technical holding times | — | Sampling dates: 4/9/13 |
| II. | ICP/MS Tune | — | |
| III. | Calibration | — | |
| IV. | Blanks | SW | |
| V. | ICP Interference Check Sample (ICS) Analysis | — | |
| VI. | Matrix Spike Analysis | SW | MS/D |
| VII. | Duplicate Sample Analysis | SW | Dup |
| VIII. | Laboratory Control Samples (LCS) | A | LCS |
| IX. | Internal Standard (ICP-MS) | N | |
| X. | Furnace Atomic Absorption QC | N | |
| XI. | ICP Serial Dilution | A | |
| XII. | Sample Result Verification | N | |
| XIII. | Overall Assessment of Data | N | |
| XIV. | Field Duplicates | — | (3,4) |
| XV | Field Blanks | SW | EB=EB-041113 FB=FB-041113 |

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate (PH029)
TB = Trip blank
EB = Equipment blank

Validated Samples: Soil

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | SL-539-SB-SA7-0.0-0.5 | 11 | | 21 | | 31 | |
| 2 | SL-542-SB-SA7-0.0-0.5 | 12 | | 22 | | 32 | |
| 3 | SL-540-SB-SA7-0.0-0.5 | 13 | | 23 | | 33 | |
| 4 | SL-840-SB-SA7-0.0-0.5 | 14 | | 24 | | 34 | |
| 5 | SL-544-SB-SA7-0.0-0.5 | 15 | | 25 | | 35 | |
| 6 | SL-540-SB-SA7-0.0-0.5MS | 16 | | 26 | | 36 | |
| 7 | SL-540-SB-SA7-0.0-0.5MSD | 17 | | 27 | | 37 | |
| 8 | SL-540-SB-SA7-0.0-0.5DUP | 18 | | 28 | | 38 | |
| 9 | | 19 | | 29 | | 39 | |
| 10 | | 20 | | 30 | | 40 | |

Notes: _____

LDC #: 29836A4

**VALIDATION FINDINGS WORKSHEET**
**PB/ICB/CCB QUALIFIED SAMPLES**



**METHOD:** Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x Reason: B

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 4, 5

| Analyte | Maximum PB[a] (mg/Kg) | Maximum PB[a] (ug/L) | Maximum ICB/CCB[a] (ug/L) | Action Level | 4 | 5 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| As | | | 5.0 | 2.5 | | | | | | | | | |
| Be | | | 2.0 | 1 | 0.61 | 0.46 | | | | | | | |
| Cd | | | 2.0 | 1 | 0.073 | 0.070 | | | | | | | |
| Co | | | 2.1 | 1.05 | | | | | | | | | |
| Cu | | | 3.4 | 1.7 | | | | | | | | | |
| Ni | | | 2.5 | 1.25 | | | | | | | | | |

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: All

| Analyte | Maximum PB[a] (mg/Kg) | Maximum PB[a] (ug/L) | Maximum ICB/CCB[a] (ug/L) | Action Level | 3 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mo | | | 4.6 | 2.3 | 0.67 | | | | | | | | |

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".

Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 29836A4

# VALIDATION FINDINGS WORKSHEET
## Field Blanks


Reviewer: OL
2nd Reviewer: LW

**METHOD:** Trace Metals (EPA SW846 6010B/7000)

**Blank units:** mg/L **Associated sample units:** mg/Kg Reason: F
**Sampling date:** 4/11/13 Soil factor applied 100x
**Field blank type:** (circle one) Field Blank / Rinsate / Other: Associated Samples: All

| Analyte | Blank ID | Blank ID | Sample Identification | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB-041113 | FB-041113 | Action Limit | 3 | | | | | | | | | |
| Ca | 0.131 | | 65.5 | | | | | | | | | | |
| Cu | 0.0035 | 0.0036 | 1.8 | | | | | | | | | | |
| Mn | 0.0012 | | 0.6 | | | | | | | | | | |
| Mo | 0.0143 | 0.0036 | 7.15 | 0.67 | | | | | | | | | |
| Sn | 0.0024 | | 1.2 | | | | | | | | | | |
| Zn | 0.0041 | | 2.05 | | | | | | | | | | |
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CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH027
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7016768BKG Matrix Spike Lab Sample ID: 7016769MS Matrix Spike Duplicate Lab Sample ID: 7016770MSD
Batch Id(s): P10537C, P10638C

| Analyte | Mass | BKG Sample Result | C | MS Sample Result | C | MSD Sample Result | C | MS Spike Added | MSD Spike Added | Units | MS %R | Q | MSD %R | Q | RPD | Q | Control Limit %R | Control Limit RPD | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | 12839.0406 | | 16368.8495 | | 16184.0139 | | 194.1748 | 198.0198 | MG/KG | [redacted] | | [redacted] | | 1 | | | 20 | P |
| Antimony | | 0.4950 | U | 23.4233 | | 23.3564 | | 48.5437 | 49.5050 | MG/KG | 48 | N | 47 | N | 0 | | 75 - 125 | 20 | P |
| Arsenic | | 4.0525 | | 17.7854 | | 18.3663 | | 14.5631 | 14.8515 | MG/KG | 94 | | 96 | | 3 | | 75 - 125 | 20 | P |
| Barium | | 70.3337 | | 258.2786 | | 266.0614 | | 194.1748 | 198.0198 | MG/KG | 97 | | 99 | | 3 | | 75 - 125 | 20 | P |
| Beryllium | | 0.5376 | B | 5.4650 | | 5.5277 | | 4.8544 | 4.9505 | MG/KG | 102 | | 101 | | 1 | | 75 - 125 | 20 | P |
| Boron | | 0.8218 | U | 191.5282 | | 209.0099 | | 194.1748 | 198.0198 | MG/KG | 99 | | 106 | | 9 | | 75 - 125 | 20 | P |
| Cadmium | | 0.0703 | B | 4.6214 | | 4.9634 | | 4.8544 | 4.9505 | MG/KG | 94 | | 99 | | 7 | | 75 - 125 | 20 | P |
| Calcium | | 2993.7921 | | 3060.2107 | | 4437.9059 | | 388.3495 | 396.0396 | MG/KG | [redacted] | | [redacted] | | 37 | * | | 20 | P |
| Chromium | | 14.7436 | | 34.5883 | | 35.2594 | | 19.4175 | 19.8020 | MG/KG | 102 | | 104 | | 2 | | 75 - 125 | 20 | P |
| Cobalt | | 4.1416 | | 48.9398 | | 50.6297 | | 48.5437 | 49.5050 | MG/KG | 92 | | 94 | | 3 | | 75 - 125 | 20 | P |
| Copper | | 6.4861 | | 29.8272 | | 32.0772 | | 24.2718 | 24.7525 | MG/KG | 96 | | 103 | | 7 | | 75 - 125 | 20 | P |
| Iron | | 18415.1356 | | 17885.8184 | | 17328.9584 | | 97.0874 | 99.0099 | MG/KG | 545 | | 1097 | | 3 | | | 20 | P |
| Lead | | 5.0465 | | 18.1689 | | 18.8337 | | 14.5631 | 14.8515 | MG/KG | 90 | | 93 | | 4 | | 75 - 125 | 20 | P |
| Lithium | | 21.6752 | | 118.9602 | | 120.4485 | | 97.0874 | 99.0099 | MG/KG | 100 | | 100 | | 1 | | 75 - 125 | 20 | P |
| Magnesium | | 3948.7000 | | 4276.6417 | | 4103.3376 | | 194.1748 | 198.0198 | MG/KG | [redacted] | | [redacted] | | 4 | | | 20 | P |
| Manganese | | 236.0020 | | 299.7563 | | 268.2604 | | 48.5437 | 49.5050 | MG/KG | [redacted] | | [redacted] | | 11 | | | 20 | P |
| Mercury | | 0.0101 | U | 0.1808 | | 0.1821 | | 0.1590 | 0.1588 | MG/KG | 114 | | 115 | | 1 | | 65 - 135 | 20 | CV |
| Molybdenum | | 0.6495 | B | 183.1330 | | 189.1446 | | 194.1748 | 198.0198 | MG/KG | 94 | | 95 | | 3 | | 75 - 125 | 20 | P |
| Nickel | | 8.5198 | | 53.8194 | | 56.3614 | | 48.5437 | 49.5050 | MG/KG | 93 | | 97 | | 5 | | 75 - 125 | 20 | P |
| Phosphorus | | 385.3980 | | 440.0233 | | 511.1752 | | 97.0874 | 99.0099 | MG/KG | 56 | N | 127 | N | 15 | | 75 - 125 | 20 | P |
| Potassium | | 3443.7762 | | 4230.2893 | | 4088.7614 | | 970.8738 | 990.0990 | MG/KG | 81 | | 65 | N | 3 | | 75 - 125 | 20 | P |
| Selenium | 78 | 0.0990 | B | 1.9406 | | 1.8576 | | 1.9417 | 1.9802 | MG/KG | 95 | | 89 | | 4 | | 75 - 125 | 20 | MS |
| Silver | 107 | 0.0232 | B | 9.4039 | | 10.0634 | | 9.7087 | 9.9010 | MG/KG | 97 | | 101 | | 7 | | 75 - 125 | 20 | MS |
| Sodium | | 67.0465 | B | 1014.2903 | | 1030.5248 | | 970.8738 | 990.0990 | MG/KG | 98 | | 97 | | 2 | | 75 - 125 | 20 | P |
| Strontium | 88 | 18.7584 | | 25.9223 | | 30.8911 | | 7.7670 | 7.9208 | MG/KG | 92 | | 153 | N | 17 | | 75 - 125 | 20 | MS |
| Thallium | 203 | 0.2160 | | 0.6231 | | 0.6622 | | 0.3883 | 0.3960 | MG/KG | 105 | | 113 | | 6 | | 75 - 125 | 20 | MS |
| Tin | | 2.6673 | B | 341.0447 | | 353.4564 | | 388.3495 | 396.0396 | MG/KG | 87 | | 89 | | 4 | | 75 - 125 | 20 | P |
| Titanium | | 858.8386 | | 1173.9282 | | 1064.6743 | | 97.0874 | 99.0099 | MG/KG | 325 | | 208 | | 10 | | | 20 | P |
| Vanadium | | 28.7921 | | 80.3922 | | 79.5149 | | 48.5437 | 49.5050 | MG/KG | 106 | | 102 | | 1 | | 75 - 125 | 20 | P |
| Zinc | | 53.9574 | | 94.4845 | | 103.4109 | | 48.5437 | 49.5050 | MG/KG | 83 | | 100 | | 9 | | 75 - 125 | 20 | P |
| Zirconium | | 0.8911 | B | 95.6728 | | 97.0782 | | 97.0874 | 99.0099 | MG/KG | 98 | | 97 | | 1 | | 75 - 125 | 20 | P |

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
CV = Cold Vapor
MS = ICP Mass Spectrometry
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

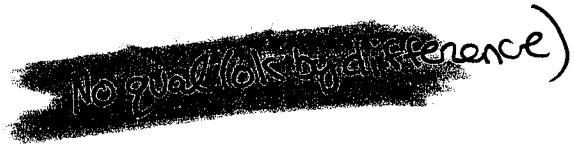
eurofins | Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: PH027
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7016768BKG
Duplicate Lab Sample ID: 7016771DUP
Batch ID(s): P10537C, P10638C
Concentration Units: MG/KG

| Analyte | Mass | Control Limit | Samples (S) | C | Duplicate (D) | C | RPD | Q | M |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | 12839.0406 | | 13450.5196 | | 5 | | P |
| Antimony | | | -0.7149 | B | -0.7843 | B | -9 | | P |
| Arsenic | | 4.0 | 4.0525 | | 4.4902 | | 10 | | P |
| Barium | | | 70.3337 | | 69.8980 | | 1 | | P |
| Beryllium | | | 0.5376 | B | 0.5500 | B | 2 | | P |
| Boron | | | 0.8218 | U | 0.8137 | U | | | P |
| Cadmium | | | 0.0703 | B | 0.1157 | B | 49 | * | P |
| Calcium | | | 2993.7921 | | 2907.0578 | | 3 | | P |
| Chromium | | 3.0 | 14.7436 | | 14.2863 | | 3 | | P |
| Cobalt | | 1.0 | 4.1416 | | 3.7098 | | 11 | | P |
| Copper | | 2.0 | 6.4861 | | 6.1245 | | 6 | | P |
| Iron | | | 18415.1356 | | 17254.5500 | | 7 | | P |
| Lead | | 3.0 | 5.0465 | | 5.1235 | | 2 | | P |
| Lithium | | | 21.6752 | | 20.3706 | | 6 | | P |
| Magnesium | | | 3948.7000 | | 3707.6716 | | 6 | | P |
| Manganese | | | 236.0020 | | 220.2824 | | 7 | | P |
| Mercury | | | 0.0101 | U | 0.0098 | U | | | CV |
| Molybdenum | | | 0.6495 | B | 0.2343 | B | 94 | * | P |
| Nickel | | 2.0 | 8.5198 | | 8.2373 | | 3 | | P |
| Phosphorus | | | 385.3980 | | 365.3902 | | 5 | | P |
| Potassium | | | 3443.7762 | | 3286.0049 | | 5 | | P |
| Selenium | 78 | | 0.0990 | B | 0.1653 | B | 50 | * | MS |
| Silver | 107 | | 0.0232 | B | 0.0211 | B | 9 | | MS |
| Sodium | | | 67.0465 | B | 65.9608 | B | 2 | | P |
| Strontium | 88 | | 18.7584 | | 17.7373 | | 6 | | MS |
| Thallium | 203 | 0.2 | 0.2160 | | 0.2237 | | 4 | | MS |
| Tin | | | 2.6673 | B | 2.5725 | B | 4 | | P |
| Titanium | | | 858.8386 | | 879.7010 | | 2 | | P |
| Vanadium | | | 28.7921 | | 28.6049 | | 1 | | P |
| Zinc | | | 53.9574 | | 50.3725 | | 7 | | P |
| Zirconium | | | 0.8911 | B | 1.7069 | B | 63 | * | P |

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.




Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

FLAGS:
* = Duplicate Out of Spec

# Enclosure II

# Level IV Validation Reports

# Laboratory Data Consultants, Inc.
# Data Validation Report

| | |
|---|---|
| **Project/Site Name:** | Santa Susana Field Laboratory |
| **Collection Date:** | April 9, 2013 |
| **LDC Report Date:** | June 18, 2013 |
| **Matrix:** | Soil |
| **Parameters:** | Hexavalent Chromium |
| **Validation Level:** | Level IV |
| **Laboratory:** | Eurofins |

**Sample Delivery Group (SDG):** PH027

**Sample Identification**

SL-540-SB-SA7-0.0-0.5
SL-840-SB-SA7-0.0-0.5
SL-540-SB-SA7-0.0-0.5DUP
SL-540-SB-SA7-0.0-0.5MS

## Introduction

This data review covers 4 soil sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 7199 for Hexavalent Chromium.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

## I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

## II. Initial Calibration

All criteria for the initial calibration were met.

## III. Calibration Verification

Continuing calibration frequency and analysis criteria were met.

## IV. Blanks

Method blanks were reviewed for each matrix as applicable. No hexavalent chromium was found in the initial, continuing and preparation blanks.

Sample EB-041113 (from SDG PH029) was identified as an equipment blank. No hexavalent chromium was found.

Sample FB-041113 (from SDG PH029) was identified as a field blank. No hexavalent chromium was found.

## V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

## VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

## VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

## VIII. Sample Result Verification

All sample result verifications were acceptable.

All analytes reported below the RL and above the MDL were qualified as follows:

| Sample | Analyte | Flag | A or P |
|---|---|---|---|
| All samples in SDG PH027 | All analytes reported below the RL and above the MDL. | J (all detects) | A |

## IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

## X. Field Duplicates

Samples SL-540-SB-SA7-0.0-0.5 and SL-840-SB-SA7-0.0-0.5 were identified as field duplicates. No hexavalent chromium was detected in any of the samples with the following exceptions:

| Analyte | Concentration (ug/L) | | RPD (Limits) | Flag | A or P |
|---|---|---|---|---|---|
| | SL-540-SB-SA7-0.0-0.5 | SL-840-SB-SA7-0.0-0.5 | | | |
| Hexavalent chromium | 0.37 | 0.26 | 35 (≤50) | - | - |

## Santa Susana Field Laboratory
## Hexavalent Chromium - Data Qualification Summary - SDG PH027

| SDG | Sample | Analyte | Flag | A or P | Reason (Code) |
|---|---|---|---|---|---|
| PH027 | SL-540-SB-SA7-0.0-0.5<br>SL-840-SB-SA7-0.0-0.5 | All analytes reported below the RL and above the MDL. | J (all detects) | A | Sample result verification (Z) |

## Santa Susana Field Laboratory
## Hexavalent Chromium – Laboratory Blank Data Qualification Summary - SDG PH027

No Sample Data Qualified in this SDG

## Santa Susana Field Laboratory
## Hexavalent Chromium - Field Blank Data Qualification Summary - SDG PH027

No Sample Data Qualified in this SDG

LDC #: 29836A6 **VALIDATION COMPLETENESS WORKSHEET** Date: 6/11/13

SDG #: PH027 Level IV Page: 1 of 1

Laboratory: Eurofins Lancaster Laboratories Reviewer: CR

2nd Reviewer: W

**METHOD: (Analyte)** Hexavalent Chromium (EPA SW846 Method 7199)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

| | Validation Area | | Comments |
|---|---|---|---|
| I. | Technical holding times | A | Sampling dates: 4/9/13 |
| IIa. | Initial calibration | A | |
| IIb. | Calibration verification | A | |
| III. | Blanks | A | |
| IV | Matrix Spike/Matrix Spike Duplicates | A | MS |
| V | Duplicates | A | DUP |
| VI. | Laboratory control samples | A | LCS |
| VII. | Sample result verification | A | |
| VIII. | Overall assessment of data | A | |
| IX. | Field duplicates | SW | (1,2) |
| X | Field blanks | ND | EB= EB-041113 TB=FB-041113 (both from PH029) |

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | SL-540-SB-SA7-0.0-0.5 | 11 | | 21 | | 31 | |
| 2 | SL-840-SB-SA7-0.0-0.5 | 12 | | 22 | | 32 | |
| 3 | SL-540-SB-SA7-0.0-0.5DUP | 13 | | 23 | | 33 | |
| 4 | ↓ MS | 14 | | 24 | | 34 | |
| 5 | | 15 | | 25 | | 35 | |
| 6 | | 16 | | 26 | | 36 | |
| 7 | | 17 | | 27 | | 37 | |
| 8 | | 18 | | 28 | | 38 | |
| 9 | | 19 | | 29 | | 39 | |
| 10 | | 20 | | 30 | | 40 | |

Notes:

LDC #: 29836A6

# VALIDATION FINDINGS CHECKLIST


Reviewer: QR
2nd Reviewer: W

**Method:** Inorganics (EPA Method See cover)

| Validation Area | Yes | No | NA | Findings/Comments |
|---|---|---|---|---|
| ***I. Technical holding times*** | | | | |
| All technical holding times were met. | ✓ | | | |
| Cooler temperature criteria was met. | | ✓ | | |
| ***II. Calibration*** | | | | |
| Were all instruments calibrated daily, each set-up time? | ✓ | | | |
| Were the proper number of standards used? | ✓ | | | |
| Were all initial calibration correlation coefficients ≥ 0.995? | ✓ | | | |
| Were all initial and continuing calibration verification %Rs within the 90-110% QC limits? | ✓ | | | |
| Were titrant checks performed as required? (Level IV only) | | | ✓ | |
| Were balance checks performed as required? (Level IV only) | | | ✓ | |
| ***III. Blanks*** | | | | |
| Was a method blank associated with every sample in this SDG? | ✓ | | | |
| Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet. | | ✓ | | |
| ***IV. Matrix spike/Matrix spike duplicates and Duplicates*** | | | | |
| Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water. | ✓ | | | |
| Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken. | ✓ | | | |
| Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL. | ✓ | | | |
| ***V. Laboratory control samples*** | | | | |
| Was an LCS anaylzed for this SDG? | ✓ | | | |
| Was an LCS analyzed per extraction batch? | ✓ | | | |
| Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits? | ✓ | | | |
| ***VI. Regional Quality Assurance and Quality Control*** | | | | |
| Were performance evaluation (PE) samples performed? | | ✓ | | |
| Were the performance evaluation (PE) samples within the acceptance limits? | | | ✓ | |

| Validation Area | Yes | No | NA | Findings/Comments |
|---|---|---|---|---|
| ***VII. Sample Result Verification*** | | | | |
| Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation? | ✓ | | | |
| Were detection limits < RL? | ✓ | | | |
| ***VIII. Overall assessment of data*** | | | | |
| Overall assessment of data was found to be acceptable. | ✓ | | | |
| ***IX. Field duplicates*** | | | | |
| Field duplicate pairs were identified in this SDG. | ✓ | | | |
| Target analytes were detected in the field duplicates. | ✓ | | | |
| ***X. Field blanks*** | | | | |
| Field blanks were identified in this SDG. | ✓ | | | |
| Target analytes were detected in the field blanks. | | ✓ | | |

LDC# 29836A6

# VALIDATION FINDINGS WORKSHEET

## Field Duplicates


Reviewer: A
2nd Reviewer: V

**Inorganics**: Method See Cover

| Analyte | Concentration (mg/Kg) | | RPD (≤50) | Qual. Parent Only |
|---|---|---|---|---|
| | 1 | 2 | | |
| Hexavalent Chromium | 0.37 | 0.26 | 35 | |

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LDC #: 2F1836A6

# Validation Findings Worksheet
## Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

**Method:** Inorganics, Method See Cover

The correlation coefficient (r) for the calibration of $Cr^{6+}$ was recalculated.Calibration date: 4/19/13

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found} \times 100}{\text{True}}$$

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

| Type of analysis | Analyte | Standard | Conc. (mg/L) | Area | Recalculated r or $r^2$ | Reported r or $r^2$ | Acceptable (Y/N) |
|---|---|---|---|---|---|---|---|
| Initial calibration | $Cr^{6+}$ | s1 | 10 | 0.11468 | *0.9999* | 0.9990 | Y |
| | | s2 | 50 | 0.565937 | | | |
| | | s3 | 100 | 1.134329 | | | |
| | | s4 | 200 | 2.248478 | | | |
| | | s5 | 300 | 3.42253 | | | |
| Calibration verification | | ICV | 50 | 50.4145 | 101 | 101 | |
| Calibration verification | | CCV | 200 | 194.7139 | 97 | 97 | |
| Calibration verification | | | | 188.9043 | 94 | 94 | |

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 29883A6

# VALIDATION FINDINGS WORKSHEET
## Level IV Recalculation Worksheet


Reviewer: GR
2nd Reviewer: VV

**METHOD:** Inorganics, Method See cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$$\%R = \frac{Found}{True} \times 100$$

Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$$RPD = \frac{|S-D|}{(S+D)/2} \times 100$$

Where, S = Original sample concentration
D = Duplicate sample concentration

| Sample ID | Type of Analysis | Element | Found / S (units) | True / D (units) | Recalculated %R / RPD | Reported %R / RPD | Acceptable (Y/N) |
|---|---|---|---|---|---|---|---|
| LCS | Laboratory control sample | ↑ | 4.38 | 5 | 88 | 88 | Y |
| 4 | Matrix spike sample | Cr6+ | (SSR-SR) 34.92 | 39.8 | 88 | 88 | ↓ |
| 3 | Duplicate sample | ↓ | 0.36 | 0.43 | 19 | 19 | ↓ |

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 29536B6

# VALIDATION FINDINGS WORKSHEET
## Sample Calculation Verification

Page: 1 of 1
Reviewer: QR
2nd reviewer: [illegible]

**METHOD:** Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for $Cr^{6+}$ reported with a positive detect were recalculated and verified using the following equation:

Concentration =

Area(87.89)+0.413

Recalculation:

$$\frac{(0.0957(87.89)+0.413)(100mL)}{0.967(2.48g)(1000)} = 0.368 mg/kg$$

| # | Sample ID | Analyte | Reported Concentration (mg/kg) | Calculated Concentration (mg/kg) | Acceptable (Y/N) |
|---|---|---|---|---|---|
| | 1 | $Cr^{6+}$ | 0.37 | 0.37 | Y |
| | | | | | |
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Note:

# Laboratory Data Consultants, Inc.
# Data Validation Report

| | |
|---|---|
| **Project/Site Name:** | Santa Susana Field Laboratory |
| **Collection Date:** | April 9, 2013 |
| **LDC Report Date:** | June 18, 2013 |
| **Matrix:** | Soil |
| **Parameters:** | Formaldehyde |
| **Validation Level:** | Level IV |
| **Laboratory:** | Eurofins |
| **Sample Delivery Group (SDG):** | PT027 |

**Sample Identification**

SL-540-SB-SA7-0.0-0.5
SL-840-SB-SA7-0.0-0.5
SL-540-SB-SA7-0.0-0.5MS
SL-540-SB-SA7-0.0-0.5MSD

## Introduction

This data review covers 4 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8315A for Formaldehyde.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

## I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

## II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination ($r^2$) was greater than or equal to 0.990 .

Retention time windows were evaluated and considered technically acceptable.

## III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

## IV. Blanks

Method blanks were reviewed for each matrix as applicable. No formaldehyde was found in the method blanks.

Sample EB-041213 (from SDG PH030) was identified as an equipment blank. No formaldehyde was found.

Sample FB-041113 (from SDG PH029) was identified as a field blank. No formaldehyde was found.

## V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

## VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

## VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

## VIII. Target Compound Identification

All target compound identifications were within validation criteria.

## IX. Compound Quantitation

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

| Sample | Finding | Flag | A or P |
|---|---|---|---|
| All samples in SDG PT027 | All compounds reported below the RL. | J (all detects) | A |

## X. System Performance

The system performance was acceptable.

## XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

## XII. Field Duplicates

Samples SL-540-SB-SA7-0.0-0.5 and SL-840-SB-SA7-0.0-0.5 were identified as field duplicates. No formaldehyde was detected in any of the samples.

## Santa Susana Field Laboratory
## Formaldehyde - Data Qualification Summary - SDG PT027

| SDG | Sample | Compound | Flag | A or P | Reason (Code) |
|---|---|---|---|---|---|
| PT027 | SL-540-SB-SA7-0.0-0.5<br>SL-840-SB-SA7-0.0-0.5 | All compounds reported below the RL. | J (all detects) | A | Compound quantitation (Z) |

## Santa Susana Field Laboratory
## Formaldehyde - Laboratory Blank Data Qualification Summary - SDG PT027

No Sample Data Qualified in this SDG

## Santa Susana Field Laboratory
## Formaldehyde - Field Blank Data Qualification Summary - SDG PT027

No Sample Data Qualified in this SDG

LDC #: 29836A71 **VALIDATION COMPLETENESS WORKSHEET** Date: 6/12/13

SDG #: PT027 Level IV Page: 1 of 1

Laboratory: Eurofins Lancaster Laboratories Reviewer: D

2nd Reviewer: A

**METHOD:** HPLC Formaldehyde (EPA SW 846 Method 8315A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

| | Validation Area | | Comments |
|---|---|---|---|
| I. | Technical holding times | A | Sampling dates: 4/9/13 |
| II | Initial calibration | A | 1, 2 |
| III. | Calibration verification/ICV | A | ICV/CCV ≤ 20 |
| IV. | Blanks | A | |
| V | Surrogate recovery | A | |
| VI. | Matrix spike/Matrix spike duplicates | A | |
| VII. | Laboratory control samples | A | LCS |
| VIII. | Target compound identification | A | |
| IX. | Compound quantitation/RL/LOQ/LODs | A | |
| X. | System Performance | A | |
| XI. | Overall assessment of data | A | |
| XII. | Field duplicates | ND | D = 1, 2 |
| XIII. | Field blanks | ND | EB = EB-041213 SDG # PH030 FB = FB-041113 SDG # PH029 |

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | SL-540-SB-SA7-0.0-0.5 | 11 | PBLK02105 | 21 | | 31 | |
| 2 | SL-840-SB-SA7-0.0-0.5 | 12 | | 22 | | 32 | |
| 3 | SL-540-SB-SA7-0.0-0.5MS | 13 | | 23 | | 33 | |
| 4 | SL-540-SB-SA7-0.0-0.5MSD | 14 | | 24 | | 34 | |
| 5 | | 15 | | 25 | | 35 | |
| 6 | | 16 | | 26 | | 36 | |
| 7 | | 17 | | 27 | | 37 | |
| 8 | | 18 | | 28 | | 38 | |
| 9 | | 19 | | 29 | | 39 | |
| 10 | | 20 | | 30 | | 40 | |

Notes:

LDC #: 29836A7| **VALIDATION FINDINGS CHECKLIST** Page: 1 of 2
Reviewer: FT
2nd Reviewer: A

**Method:** ✓ GC _____ HPLC

| Validation Area | Yes | No | NA | Findings/Comments |
|---|---|---|---|---|
| I. Technical holding times | | | | |
| All technical holding times were met. | ✓ | | | |
| Cooler temperature criteria was met. | ✓ | | | |
| II. Initial calibration | | | | |
| Did the laboratory perform a 5 point calibration prior to sample analysis? | ✓ | | | |
| Were all percent relative standard deviations (%RSD) ≤ 20%? | | ✓ | | |
| Was a curve fit used for evaluation? | ✓ | | | |
| Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990? | ✓ | | | |
| Were the RT windows properly established? | ✓ | | | |
| IV. Continuing calibration | | | | |
| Was a continuing calibration analyzed daily? | ✓ | | | |
| Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%? | ✓ | | | |
| Were all the retention times within the acceptance windows? | ✓ | | | |
| V. Blanks | | | | |
| Was a method blank associated with every sample in this SDG? | ✓ | | | |
| Was a method blank analyzed for each matrix and concentration? | ✓ | | | |
| Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet. | | ✓ | | |
| VI. Surrogate spikes | | | | |
| Were all surrogate %R within the QC limits? | ✓ | | | |
| If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria? | | | ✓ | |
| VII. Matrix spike/Matrix spike duplicates | | | | |
| Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water. | ✓ | | | |
| Was a MS/MSD analyzed every 20 samples of each matrix? | ✓ | | | |
| Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits? | ✓ | | | |
| VIII. Laboratory control samples | | | | |
| Was an LCS analyzed for this SDG? | ✓ | | | |
| Was an LCS analyzed per extraction batch? | ✓ | | | |
| Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits? | ✓ | | | |
| IX. Regional Quality Assurance and Quality Control | | | | |
| Were performance evaluation (PE) samples performed? | | | ✓ | |
| Were the performance evaluation (PE) samples within the acceptance limits? | | | ✓ | |

LDC #: 29836471

# VALIDATION FINDINGS CHECKLIST


Reviewer: FT
2nd Reviewer: A

| Validation Area | Yes | No | NA | Findings/Comments |
|---|---|---|---|---|
| X. Target compound identification | | | | |
| Were the retention times of reported detects within the RT windows? | | | ✓ | |
| XI. Compound quantitation/CRQLs | | | | |
| Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation? | ✓ | | | |
| XII. System performance | | | | |
| System performance was found to be acceptable. | | ✓ | | |
| XIII. Overall assessment of data | | | | |
| Overall assessment of data was found to be acceptable. | ✓ | | | |
| XIV. Field duplicates | | | | |
| Field duplicate pairs were identified in this SDG. | ✓ | ~~✓~~ FT | | |
| Target compounds were detected in the field duplicates. | | ✓ | | |
| XV. Field blanks | | | | |
| Field blanks were identified in this SDG. | ✓ | | | |
| Target compounds were detected in the field blanks. | | ✓ | | |

LDC # 29836471

# VALIDATION FINDINGS WORKSHEET
## Initial Calibration Calculation Verification


Reviewer: F?
2nd Reviewer: K

**METHOD:** method 8315A

Parameter: formaldehyde

| Date | Column | Compound | y | x | |
|---|---|---|---|---|---|
| 04/16/2013 | ns | formaldehyde | 34928.70 | 500.0 | |
| | | | 56101.30 | 1000.0 | |
| | | | 94476.80 | 2000.0 | |
| | | | 265167.00 | 6000.0 | |
| | | | 470716.70 | 10000.0 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| Regression Output: | | Regression Output: | Reported | |
|---|---|---|---|---|
| Constant | | 6788.30445 | | |
| Std Err of Y Est | | 10771.03283 | | |
| R Squared | | 0.99743 | | 0.99500 |
| No. of Observations | | 5.00000 | | |
| Degrees of Freedom | | 3.00000 | | |
| | | | | |
| X Coefficient(s) | 4.551E+001 | 0.25 | | |
| Std Err of Coef. | 1.333932 | 0.04 | | |

LDC #: 29836A7 /

# VALIDATION FINDINGS WORKSHEET
## Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

**METHOD:** GC _____ HPLC ✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

| # | Standard ID | Calibration Date | Compound | Average CF(Ical)/ CCV Conc. | Reported CF/ Conc. CCV | Recalculated CF/ Conc. CCV | Reported %D | Recalculated %D |
|---|---|---|---|---|---|---|---|---|
| 1 | CCV 17:11 | 4/16/13 | Formaldehyde | 2000.00 | 1860.66 | 1860.66 | 7 | 7 |
| | | | | | | | | |
| | CCV 18:51 | 4/16/13 | ↓ | 2000.00 | 1811.43 | 1811.43 | 9 | 9 |
| 2 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 3 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 4 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 29836A7/

# VALIDATION FINDINGS WORKSHEET
## Surrogate Results Verification


Reviewer: FT
2nd reviewer: [signature]

METHOD: __ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

| Surrogate | Column/Detector | Surrogate Spiked | Surrogate Found | Percent Recovery | Percent Recovery | Percent Difference |
|---|---|---|---|---|---|---|
| | | | | Reported | Recalculated | |
| Butyraldehyde | NS | 790U | 7032.83 | 89 | 89 | 0 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Sample ID: _____

| Surrogate | Column/Detector | Surrogate Spiked | Surrogate Found | Percent Recovery | Percent Recovery | Percent Difference |
|---|---|---|---|---|---|---|
| | | | | Reported | Recalculated | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Sample ID: _____

| Surrogate | Column/Detector | Surrogate Spiked | Surrogate Found | Percent Recovery | Percent Recovery | Percent Difference |
|---|---|---|---|---|---|---|
| | | | | Reported | Recalculated | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

LDC #: 29836A71

# VALIDATION FINDINGS WORKSHEET
## Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: KT
2nd Reviewer: [illegible]

**METHOD:** ___ GC ✓ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA  Where  SSC = Spiked sample concentration  SC = Sample concentration
SA = Spike added
RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100  MS = Matrix spike  MSD = Matrix spike duplicate

**MS/MSD** samples: 3 + 4

| Compound | Spike Added (ug/kg) | | Sample Conc. (ug/kg) | Spike Sample Concentration (ug/kg) | | Matrix spike Percent Recovery | | Matrix Spike Duplicate Percent Recovery | | MS/MSD RPD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | MSD | --- | MS | MSD | Reported | Recalc. | Reported | Recalc. | Reported | Recalc. |
| Gasoline (8015) | | | | | | | | | | | |
| Diesel (8015) | | | | | | | | | | | |
| Benzene (8021B) | | | | | | | | | | | |
| Methane (RSK-175) | | | | | | | | | | | |
| 2,4-D (8151) | | | | | | | | | | | |
| Dinoseb (8151) | | | | | | | | | | | |
| Naphthalene (8310) | | | | | | | | | | | |
| Anthracene (8310) | | | | | | | | | | | |
| HMX (8330) | | | | | | | | | | | |
| 2,4,6-Trinitrotoluene (8330) | | | | | | | | | | | |
| Formaldehyde | 10000 | 10000 | Nb | 10654.53 | 10348.66 | 107 | 107 | 103 | 103 | 3 | 3 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 29836A77

# VALIDATION FINDINGS WORKSHEET

## Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

**METHOD:** __ GC __ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

Where SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

**LCS/LCSD** samples: LCS0210S

| Compound | Spike Added (ug/kg) | | Sample Conc (ug/kg) | Spike Sample Concentration (ug/kg) | | LCS Percent Recovery | | LCSD Percent Recovery | | LCS/LCSD RPD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | LCS | LCSD | --- | LCS | LCSD | Reported | Recalc. | Reported | Recalc. | Reported | Recalc. |
| Gasoline (8015) | | | | | | | | | | | |
| Diesel (8015) | | | | | | | | | | | |
| Benzene (8021B) | | | | | | | | | | | |
| Methane (RSK-175) | | | | | | | | | | | |
| 2,4-D (8151) | | | | | | | | | | | |
| Dinoseb (8151) | | | | | | | | | | | |
| Naphthalene (8310) | | | | | | | | | | | |
| Anthracene (8310) | | | | | | | | | | | |
| HMX (8330) | | | | | | | | | | | |
| 2,4,6-Trinitrotoluene (8330) | | | | | | | | | | | |
| Formaldehyde | 10000 | NA | ND | 11705.07 | NA | 117 | 117 | NA | — | — | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 29836A71

# VALIDATION FINDINGS WORKSHEET
## Sample Calculation Verification


Reviewer: FT
2nd Reviewer: [illegible]

**METHOD:** __ GC ✓ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration =_____

MP

| # | Sample ID | Compound | Reported Concentrations ( ) | Recalculated Results Concentrations ( ) | Qualifications |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Comments: _____

# Attachment I

# Sample ID Cross Reference and Data Review Level

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 09-Apr-2013 | SL-547-SA7-SB-0.0-0.5 | 7018431 | N | 3050B | 6010C | III |
| 09-Apr-2013 | SL-547-SA7-SB-0.0-0.5 | 7018431 | N | 3050B | 6020A | III |
| 09-Apr-2013 | SL-547-SA7-SB-0.0-0.5 | 7018431 | N | 3546 | 8015M | III |
| 09-Apr-2013 | SL-547-SA7-SB-0.0-0.5 | 7018431 | N | 3546 | 8082A | III |
| 09-Apr-2013 | SL-547-SA7-SB-0.0-0.5 | 7018431 | N | 3546 | 8270D SIM | III |
| 09-Apr-2013 | SL-547-SA7-SB-0.0-0.5 | 7018431 | N | METHOD | 1613B | III |
| 09-Apr-2013 | SL-547-SA7-SB-0.0-0.5 | 7018431 | N | METHOD | 7471B | III |
| 09-Apr-2013 | SL-547-SA7-SB-0.0-0.5DUP | P018431D220528 | DUP | 3050B | 6010C | III |
| 09-Apr-2013 | SL-547-SA7-SB-0.0-0.5MSD | P018431M220536 | MSD | 3050B | 6010C | III |
| 09-Apr-2013 | SL-547-SA7-SB-0.0-0.5MS | P018431R220532 | MS | 3050B | 6010C | III |
| 10-Apr-2013 | TB-041013 | 7018435 | TB | 5030B | 8015M | III |
| 10-Apr-2013 | SL-552-SA7-SB-0.0-0.5 | 7018432 | N | 3050B | 6010C | III |
| 10-Apr-2013 | SL-552-SA7-SB-0.0-0.5 | 7018432 | N | 3050B | 6020A | III |
| 10-Apr-2013 | SL-552-SA7-SB-0.0-0.5 | 7018432 | N | 3546 | 8015M | III |
| 10-Apr-2013 | SL-552-SA7-SB-0.0-0.5 | 7018432 | N | 3546 | 8082A | III |
| 10-Apr-2013 | SL-552-SA7-SB-0.0-0.5 | 7018432 | N | 3546 | 8270D SIM | III |
| 10-Apr-2013 | SL-552-SA7-SB-0.0-0.5 | 7018432 | N | METHOD | 1613B | III |
| 10-Apr-2013 | SL-552-SA7-SB-0.0-0.5 | 7018432 | N | METHOD | 7471B | III |
| 10-Apr-2013 | SL-551-SA7-SB-0.0-0.5 | 7018433 | N | 3050B | 6010C | III |
| 10-Apr-2013 | SL-551-SA7-SB-0.0-0.5 | 7018433 | N | 3050B | 6020A | III |
| 10-Apr-2013 | SL-551-SA7-SB-0.0-0.5 | 7018433 | N | 3546 | 8015M | III |
| 10-Apr-2013 | SL-551-SA7-SB-0.0-0.5 | 7018433 | N | 3546 | 8082A | III |
| 10-Apr-2013 | SL-551-SA7-SB-0.0-0.5 | 7018433 | N | 3546 | 8270D SIM | III |
| 10-Apr-2013 | SL-551-SA7-SB-0.0-0.5 | 7018433 | N | METHOD | 1613B | III |
| 10-Apr-2013 | SL-551-SA7-SB-0.0-0.5 | 7018433 | N | METHOD | 7471B | III |
| 10-Apr-2013 | SL-551-SA7-SB-2.0-3.0 | 7018434 | N | 3050B | 6010C | III |

*III = EPA Level 3 Data Review* *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
*IV = EPA Level 4 Data Validation* *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 10-Apr-2013 | SL-551-SA7-SB-2.0-3.0 | 7018434 | N | 3050B | 6020A | III |
| 10-Apr-2013 | SL-551-SA7-SB-2.0-3.0 | 7018434 | N | 3546 | 8015M | III |
| 10-Apr-2013 | SL-551-SA7-SB-2.0-3.0 | 7018434 | N | 3546 | 8082A | III |
| 10-Apr-2013 | SL-551-SA7-SB-2.0-3.0 | 7018434 | N | 3546 | 8270D SIM | III |
| 10-Apr-2013 | SL-551-SA7-SB-2.0-3.0 | 7018434 | N | 5035A | 8015M | III |
| 10-Apr-2013 | SL-551-SA7-SB-2.0-3.0 | 7018434 | N | METHOD | 1613B | III |
| 10-Apr-2013 | SL-551-SA7-SB-2.0-3.0 | 7018434 | N | METHOD | 7471B | III |
| 10-Apr-2013 | SL-548-SA7-SB-0.0-0.5 | 7018436 | N | 3050B | 6010C | III |
| 10-Apr-2013 | SL-548-SA7-SB-0.0-0.5 | 7018436 | N | 3050B | 6020A | III |
| 10-Apr-2013 | SL-548-SA7-SB-0.0-0.5 | 7018436 | N | 3546 | 8015M | III |
| 10-Apr-2013 | SL-548-SA7-SB-0.0-0.5 | 7018436 | N | 3546 | 8082A | III |
| 10-Apr-2013 | SL-548-SA7-SB-0.0-0.5 | 7018436 | N | 3546 | 8270D SIM | III |
| 10-Apr-2013 | SL-548-SA7-SB-0.0-0.5 | 7018436 | N | METHOD | 1613B | III |
| 10-Apr-2013 | SL-548-SA7-SB-0.0-0.5 | 7018436 | N | METHOD | 7471B | III |
| 10-Apr-2013 | SL-549-SA7-SB-0.0-0.5 | 7018437 | N | 3050B | 6010C | III |
| 10-Apr-2013 | SL-549-SA7-SB-0.0-0.5 | 7018437 | N | 3050B | 6020A | III |
| 10-Apr-2013 | SL-549-SA7-SB-0.0-0.5 | 7018437 | N | 3546 | 8015M | III |
| 10-Apr-2013 | SL-549-SA7-SB-0.0-0.5 | 7018437 | N | 3546 | 8082A | III |
| 10-Apr-2013 | SL-549-SA7-SB-0.0-0.5 | 7018437 | N | 3546 | 8270D SIM | III |
| 10-Apr-2013 | SL-549-SA7-SB-0.0-0.5 | 7018437 | N | METHOD | 1613B | III |
| 10-Apr-2013 | SL-549-SA7-SB-0.0-0.5 | 7018437 | N | METHOD | 7471B | III |

*III = EPA Level 3 Data Review*
*IV = EPA Level 4 Data Validation*
*N = Normal Sample*
*FD = Field Duplicate*
*TB = Trip Blank*
*FB = Field Blank*
*MS = Matrix Spike*
*MSD = Matrix Spike Duplicate*

# Attachment II

# Overall Data Qualification Summary

# Data Qualifier Summary

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

*Sample ID:* SL-547-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 3:10:00 PM *Analysis Type:* REA/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BORON | 2.59 | J | 0.832 | MDL | 10.0 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-547-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 3:10:00 PM *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.01 | U | 0.501 | MDL | 4.01 | PQL | mg/Kg | UJ | Q |
| ARSENIC | 3.78 | J | 0.331 | MDL | 4.01 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.475 | J | 0.0672 | MDL | 1.00 | PQL | mg/Kg | U | B |
| CADMIUM | 0.0531 | J | 0.0331 | MDL | 1.00 | PQL | mg/Kg | U | B |
| CALCIUM | 1360 | | 4.03 | MDL | 20.0 | PQL | mg/Kg | J | E |
| POTASSIUM | 3600 | | 13.5 | MDL | 100 | PQL | mg/Kg | J | Q |
| SODIUM | 66.5 | J | 16.7 | MDL | 100 | PQL | mg/Kg | J | Z |
| TIN | 2.60 | J | 0.221 | MDL | 10.0 | PQL | mg/Kg | U | B |

*Sample ID:* SL-548-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 1:50:00 *Analysis Type:* REA2/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.41 | J | 0.498 | MDL | 3.99 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 1.72 | J | 0.329 | MDL | 3.99 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.408 | J | 0.0668 | MDL | 0.996 | PQL | mg/Kg | J | Z |
| BORON | 4.15 | J | 0.827 | MDL | 9.96 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.448 | J | 0.0329 | MDL | 0.996 | PQL | mg/Kg | J | Z |
| CALCIUM | 2230 | | 4.01 | MDL | 19.9 | PQL | mg/Kg | J | E |
| MOLYBDENUM | 0.403 | J | 0.169 | MDL | 1.99 | PQL | mg/Kg | J | Z |
| PHOSPHORUS | 406 | | 0.508 | MDL | 9.96 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 3750 | | 13.5 | MDL | 99.6 | PQL | mg/Kg | J | Q |
| SODIUM | 56.7 | J | 16.6 | MDL | 99.6 | PQL | mg/Kg | J | Z |
| TIN | 2.72 | J | 0.219 | MDL | 9.96 | PQL | mg/Kg | U | B |

*Sample ID:* SL-549-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 2:40:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.08 | U | 0.510 | MDL | 4.08 | PQL | mg/Kg | UJ | Q |
| BERYLLIUM | 0.528 | J | 0.0683 | MDL | 1.02 | PQL | mg/Kg | U | B |
| CADMIUM | 0.175 | J | 0.0336 | MDL | 1.02 | PQL | mg/Kg | U | B |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method Category:*** **METALS**

***Method:*** **6010C** ***Matrix:*** **SO**

***Sample ID:*** **SL-549-SA7-SB-0.0-0.5** ***Collected:*** **4/10/2013 2:40:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| CALCIUM | 6380 | | 4.10 | MDL | 20.4 | PQL | mg/Kg | J | E |
| PHOSPHORUS | 438 | | 0.520 | MDL | 10.2 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 4180 | | 13.8 | MDL | 102 | PQL | mg/Kg | J | Q |
| SODIUM | 62.7 | J | 17.0 | MDL | 102 | PQL | mg/Kg | J | Z |
| TIN | 2.69 | J | 0.224 | MDL | 10.2 | PQL | mg/Kg | U | B |

***Sample ID:*** **SL-551-SA7-SB-0.0-0.5** ***Collected:*** **4/10/2013 9:55:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.05 | U | 0.506 | MDL | 4.05 | PQL | mg/Kg | UJ | Q |
| ARSENIC | 4.03 | J | 0.334 | MDL | 4.05 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.509 | J | 0.0679 | MDL | 1.01 | PQL | mg/Kg | U | B |
| CADMIUM | 0.164 | J | 0.0334 | MDL | 1.01 | PQL | mg/Kg | U | B |
| CALCIUM | 2720 | | 4.07 | MDL | 20.3 | PQL | mg/Kg | J | E |
| PHOSPHORUS | 405 | | 0.517 | MDL | 10.1 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 3880 | | 13.7 | MDL | 101 | PQL | mg/Kg | J | Q |
| SODIUM | 65.0 | J | 16.9 | MDL | 101 | PQL | mg/Kg | J | Z |
| TIN | 2.56 | J | 0.223 | MDL | 10.1 | PQL | mg/Kg | U | B |

***Sample ID:*** **SL-551-SA7-SB-2.0-3.0** ***Collected:*** **4/10/2013 11:00:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.16 | U | 0.520 | MDL | 4.16 | PQL | mg/Kg | UJ | Q |
| ARSENIC | 4.02 | J | 0.343 | MDL | 4.16 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.467 | J | 0.0696 | MDL | 1.04 | PQL | mg/Kg | U | B |
| CADMIUM | 0.142 | J | 0.0343 | MDL | 1.04 | PQL | mg/Kg | U | B |
| CALCIUM | 4750 | | 4.18 | MDL | 20.8 | PQL | mg/Kg | J | E |
| PHOSPHORUS | 366 | | 0.530 | MDL | 10.4 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 3280 | | 14.0 | MDL | 104 | PQL | mg/Kg | J | Q |
| SODIUM | 62.5 | J | 17.4 | MDL | 104 | PQL | mg/Kg | J | Z |
| TIN | 2.59 | J | 0.229 | MDL | 10.4 | PQL | mg/Kg | U | B |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

*Sample ID:* SL-552-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 9:05:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.04 | U | 0.505 | MDL | 4.04 | PQL | mg/Kg | UJ | Q |
| ARSENIC | 3.35 | J | 0.334 | MDL | 4.04 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.442 | J | 0.0677 | MDL | 1.01 | PQL | mg/Kg | U | B |
| CADMIUM | 0.111 | J | 0.0334 | MDL | 1.01 | PQL | mg/Kg | U | B |
| CALCIUM | 3470 | | 4.06 | MDL | 20.2 | PQL | mg/Kg | J | E |
| PHOSPHORUS | 430 | | 0.515 | MDL | 10.1 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 2950 | | 13.6 | MDL | 101 | PQL | mg/Kg | J | Q |
| SODIUM | 86.7 | J | 16.9 | MDL | 101 | PQL | mg/Kg | J | Z |
| TIN | 2.36 | J | 0.222 | MDL | 10.1 | PQL | mg/Kg | U | B |

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

*Sample ID:* SL-547-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 3:10:00 PM *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| STRONTIUM | 7.03 | | 0.0341 | MDL | 0.401 | PQL | mg/Kg | J | Q |

*Sample ID:* SL-548-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 1:50:00 *Analysis Type:* REA2/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0315 | J | 0.0199 | MDL | 0.199 | PQL | mg/Kg | J | Z |
| STRONTIUM | 8.13 | | 0.0339 | MDL | 0.399 | PQL | mg/Kg | J | Q |

*Sample ID:* SL-549-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 2:40:00 *Analysis Type:* REA/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.196 | J | 0.102 | MDL | 0.408 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-549-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 2:40:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0306 | J | 0.0204 | MDL | 0.204 | PQL | mg/Kg | J | Z |
| STRONTIUM | 12.5 | | 0.0347 | MDL | 0.408 | PQL | mg/Kg | J | Q |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

*Sample ID:* SL-551-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 9:55:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0411 | J | 0.0203 | MDL | 0.203 | PQL | mg/Kg | J | Z |
| STRONTIUM | 12.3 | | 0.0344 | MDL | 0.405 | PQL | mg/Kg | J | Q |

*Sample ID:* SL-551-SA7-SB-2.0-3.0 *Collected:* 4/10/2013 11:00:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| STRONTIUM | 11.3 | | 0.0353 | MDL | 0.416 | PQL | mg/Kg | J | Q |

*Sample ID:* SL-552-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 9:05:00 *Analysis Type:* REA/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.106 | J | 0.101 | MDL | 0.404 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-552-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 9:05:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| STRONTIUM | 10.8 | | 0.0344 | MDL | 0.404 | PQL | mg/Kg | J | Q |

**Method Category: METALS**

**Method: 7471B** **Matrix: SO**

*Sample ID:* SL-551-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 9:55:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0110 | J | 0.0101 | MDL | 0.0196 | PQL | mg/Kg | J | Z |

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-547-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 3:10:00 PM *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 1.81 | JB | 0.0302 | MDL | 5.11 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.435 | JB | 0.0703 | MDL | 5.11 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.315 | JB | 0.0449 | MDL | 5.11 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-547-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 3:10:00 PM *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8-HXCDF | 0.321 | JB | 0.0517 | MDL | 5.11 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 1.35 | J | 0.0472 | MDL | 5.11 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.512 | JB | 0.0401 | MDL | 5.11 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 0.687 | JB | 0.0463 | MDL | 5.11 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.243 | JB | 0.0703 | MDL | 5.11 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.263 | JBQ | 0.0513 | MDL | 5.11 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.365 | JBQ | 0.0324 | MDL | 5.11 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.445 | JB | 0.0472 | MDL | 5.11 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.485 | JB | 0.0361 | MDL | 5.11 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.105 | JQ | 0.0394 | MDL | 1.02 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.183 | J | 0.0641 | MDL | 1.02 | PQL | ng/Kg | J | Z |
| OCDF | 3.66 | JB | 0.116 | MDL | 10.2 | PQL | ng/Kg | J | Z |

*Sample ID:* SL-548-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 1:50:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HPCDF | 1.05 | JB | 0.0492 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 1.02 | JBQ | 0.0563 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.516 | JB | 0.0548 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 3.24 | J | 0.0595 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.595 | JBQ | 0.0471 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 2.10 | JBQ | 0.0577 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.596 | JB | 0.0665 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.235 | JBQ | 0.0325 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.909 | JBQ | 0.0504 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.255 | JBQ | 0.0338 | MDL | 4.97 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDD | 0.0614 | JQ | 0.0495 | MDL | 0.994 | PQL | ng/Kg | J | Z |

*Sample ID:* SL-549-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 2:40:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 1.08 | JB | 0.0161 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.0925 | JBQ | 0.0298 | MDL | 4.92 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HxCDD | 0.231 | JB | 0.0447 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.133 | JBQ | 0.0357 | MDL | 4.92 | PQL | ng/Kg | U | B |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-549-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 2:40:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,6,7,8-HXCDD | 0.597 | J | 0.0470 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.168 | JB | 0.0302 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 0.492 | JB | 0.0436 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.156 | JB | 0.0371 | MDL | 4.92 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.355 | JB | 0.0257 | MDL | 4.92 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.147 | JBQ | 0.0312 | MDL | 4.92 | PQL | ng/Kg | U | B |
| 2,3,4,7,8-PECDF | 0.263 | JBQ | 0.0263 | MDL | 4.92 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDF | 0.109 | J | 0.0578 | MDL | 0.984 | PQL | ng/Kg | J | Z |
| OCDF | 2.07 | JB | 0.0480 | MDL | 9.84 | PQL | ng/Kg | J | Z |

*Sample ID:* SL-551-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 9:55:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 3.99 | JB | 0.0194 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.574 | JB | 0.0472 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.417 | JB | 0.0358 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.300 | JB | 0.0351 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 1.12 | JQ | 0.0369 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.276 | JB | 0.0272 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 0.704 | JB | 0.0361 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.123 | JBQ | 0.0468 | MDL | 5.14 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.244 | JBQ | 0.0360 | MDL | 5.14 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.177 | JB | 0.0212 | MDL | 5.14 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.401 | JB | 0.0318 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.186 | JB | 0.0244 | MDL | 5.14 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDD | 0.0747 | JQ | 0.0330 | MDL | 1.03 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.153 | JQ | 0.0414 | MDL | 1.03 | PQL | ng/Kg | J | Z |
| OCDF | 8.50 | JB | 0.0507 | MDL | 10.3 | PQL | ng/Kg | J | Z |

*Sample ID:* SL-551-SA7-SB-2.0-3.0 *Collected:* 4/10/2013 11:00:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 2.24 | JB | 0.0122 | MDL | 5.03 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.298 | JB | 0.0272 | MDL | 5.03 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HxCDD | 0.161 | JBQ | 0.0319 | MDL | 5.03 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category:** SVOA

**Method:** 1613B **Matrix:** SO

*Sample ID:* SL-551-SA7-SB-2.0-3.0 *Collected:* 4/10/2013 11:00:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8-HXCDF | 0.203 | JB | 0.0313 | MDL | 5.03 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDD | 0.472 | J | 0.0332 | MDL | 5.03 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.182 | JB | 0.0249 | MDL | 5.03 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 0.360 | JB | 0.0316 | MDL | 5.03 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.106 | JBQ | 0.0412 | MDL | 5.03 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.102 | JBQ | 0.0317 | MDL | 5.03 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.143 | JBQ | 0.0175 | MDL | 5.03 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.238 | JB | 0.0283 | MDL | 5.03 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.0893 | JBQ | 0.0192 | MDL | 5.03 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDF | 0.0596 | JQ | 0.0370 | MDL | 1.01 | PQL | ng/Kg | J | Z |
| OCDF | 5.49 | JB | 0.0452 | MDL | 10.1 | PQL | ng/Kg | J | Z |

*Sample ID:* SL-552-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 9:05:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 3.39 | JB | 0.0210 | MDL | 4.96 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.405 | JB | 0.0447 | MDL | 4.96 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.372 | JBQ | 0.0411 | MDL | 4.96 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.192 | JB | 0.0389 | MDL | 4.96 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDD | 0.860 | J | 0.0435 | MDL | 4.96 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.262 | JB | 0.0320 | MDL | 4.96 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 0.787 | JB | 0.0412 | MDL | 4.96 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.228 | JBQ | 0.0341 | MDL | 4.96 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.153 | JB | 0.0193 | MDL | 4.96 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.344 | JB | 0.0347 | MDL | 4.96 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.138 | JB | 0.0215 | MDL | 4.96 | PQL | ng/Kg | U | B |
| OCDF | 6.59 | JB | 0.0603 | MDL | 9.91 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 8015M** **Matrix: SO**

*Sample ID:* SL-547-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 3:10:00 PM *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C21-C30) | 4.7 | J | 2.0 | MDL | 5.1 | PQL | mg/Kg | J | Z |
| EFH (C30-C40) | 9.6 | J | 4.1 | MDL | 10 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-548-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 1:50:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 2.2 | J | 2.0 | MDL | 5.1 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-551-SA7-SB-2.0-3.0 *Collected:* 4/10/2013 11:00:00 *Analysis Type:* REA *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 2.3 | J | 2.1 | MDL | 5.2 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-552-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 9:05:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 2.2 | J | 2.1 | MDL | 5.2 | PQL | mg/Kg | J | Z |
| EFH (C21-C30) | 4.6 | J | 2.1 | MDL | 5.2 | PQL | mg/Kg | J | Z |

**Method Category: SVOA**

**Method: 8270D SIM** **Matrix: SO**

*Sample ID:* SL-547-SA7-SB-0.0-0.5 *Collected:* 4/9/2013 3:10:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(A)ANTHRACENE | 1.1 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(A)PYRENE | 1.4 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(G,H,I)PERYLENE | 1.0 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(K)FLUORANTHENE | 0.93 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| INDENO(1,2,3-CD)PYRENE | 1.0 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

*Sample ID:* SL-548-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 1:50:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.94 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 8270D SIM** **Matrix: SO**

*Sample ID:* SL-548-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 1:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2-METHYLNAPHTHALENE | 1.6 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| ANTHRACENE | 0.35 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(A)ANTHRACENE | 1.2 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(A)PYRENE | 1.5 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(G,H,I)PERYLENE | 1.3 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(K)FLUORANTHENE | 1.2 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| INDENO(1,2,3-CD)PYRENE | 1.0 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

*Sample ID:* SL-549-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 2:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2-METHYLNAPHTHALENE | 0.73 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(B)FLUORANTHENE | 1.5 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| FLUORANTHENE | 1.6 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| NAPHTHALENE | 1.0 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PHENANTHRENE | 0.93 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PYRENE | 1.6 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

*Sample ID:* SL-551-SA7-SB-0.0-0.5 *Collected:* 4/10/2013 9:55:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 1.0 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| ANTHRACENE | 0.47 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 9.0 | J | 6.2 | MDL | 19 | PQL | ug/Kg | J | Z |
| INDENO(1,2,3-CD)PYRENE | 1.6 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |

*Sample ID:* SL-551-SA7-SB-2.0-3.0 *Collected:* 4/10/2013 11:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| CHRYSENE | 0.76 | J | 0.35 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| FLUORANTHENE | 0.72 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PYRENE | 0.74 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method Category:*** **SVOA**

***Method:*** **8270D SIM** ***Matrix:*** **SO**

***Sample ID:*** SL-552-SA7-SB-0.0-0.5 ***Collected:*** 4/10/2013 9:05:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

| *Analyte* | *Lab Result* | *Lab Qual* | *DL* | *DL Type* | *RL* | *RL Type* | *Units* | *Data Review Qual* | *Reason Code* |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(A)ANTHRACENE | 1.3 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| Butylbenzylphthalate | 6.4 | J | 6.2 | MDL | 19 | PQL | ug/Kg | J | Z |
| INDENO(1,2,3-CD)PYRENE | 1.3 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

## Reason Code Legend

| *Reason Code* | *Description* |
|---|---|
| B | Calibration Blank Contamination |
| B | Method Blank Contamination |
| E | Matrix Spike Precision |
| L | Laboratory Control Spike Upper Estimation |
| Q | Matrix Spike Lower Estimation |
| Q | Matrix Spike Precision |
| Q | Matrix Spike Upper Estimation |
| Z | Reporting Limit Trace Value |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Enclosure I

# Level III ADR Outliers
# (including Manual Review Outliers)

# Quality Control
# Outlier Reports

# PH028

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **1613B**
***Matrix:*** **SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| BLK1020B371418 | 4/15/2013 2:18:00 PM | 1,2,3,4,6,7,8-HPCDD | 0.0738 ng/Kg | SL-547-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,6,7,8-HPCDF | 0.0663 ng/Kg | SL-548-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8,9-HPCDF | 0.0735 ng/Kg | SL-549-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8-HxCDD | 0.0211 ng/Kg | SL-551-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8-HXCDF | 0.0555 ng/Kg | SL-551-SA7-SB-2.0-3.0 |
| | | 1,2,3,6,7,8-HXCDF | 0.0300 ng/Kg | SL-552-SA7-SB-0.0-0.5 |
| | | 1,2,3,7,8,9-HXCDD | 0.0541 ng/Kg | |
| | | 1,2,3,7,8,9-HXCDF | 0.0734 ng/Kg | |
| | | 1,2,3,7,8-PECDD | 0.0495 ng/Kg | |
| | | 1,2,3,7,8-PECDF | 0.0431 ng/Kg | |
| | | 2,3,4,6,7,8-HXCDF | 0.0447 ng/Kg | |
| | | 2,3,4,7,8-PECDF | 0.0684 ng/Kg | |
| | | OCDD | 0.157 ng/Kg | |
| | | OCDF | 0.166 ng/Kg | |
| | | TEQ WHO 2005 - EDLx0.0 | 0.0118 ng/Kg | |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-547-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDF | 0.243 ng/Kg | 0.243U ng/Kg |
| SL-548-SA7-SB-0.0-0.5(RES) | 2,3,4,7,8-PECDF | 0.255 ng/Kg | 0.255U ng/Kg |
| SL-549-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8,9-HPCDF | 0.0925 ng/Kg | 0.0925U ng/Kg |
| SL-549-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8-HXCDF | 0.133 ng/Kg | 0.133U ng/Kg |
| SL-549-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDD | 0.156 ng/Kg | 0.156U ng/Kg |
| SL-549-SA7-SB-0.0-0.5(RES) | 2,3,4,6,7,8-HXCDF | 0.147 ng/Kg | 0.147U ng/Kg |
| SL-549-SA7-SB-0.0-0.5(RES) | 2,3,4,7,8-PECDF | 0.263 ng/Kg | 0.263U ng/Kg |
| SL-551-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDF | 0.123 ng/Kg | 0.123U ng/Kg |
| SL-551-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDD | 0.244 ng/Kg | 0.244U ng/Kg |
| SL-551-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDF | 0.177 ng/Kg | 0.177U ng/Kg |
| SL-551-SA7-SB-0.0-0.5(RES) | 2,3,4,7,8-PECDF | 0.186 ng/Kg | 0.186U ng/Kg |
| SL-551-SA7-SB-2.0-3.0(RES) | 1,2,3,4,7,8,9-HPCDF | 0.298 ng/Kg | 0.298U ng/Kg |
| SL-551-SA7-SB-2.0-3.0(RES) | 1,2,3,4,7,8-HXCDF | 0.203 ng/Kg | 0.203U ng/Kg |
| SL-551-SA7-SB-2.0-3.0(RES) | 1,2,3,7,8,9-HXCDF | 0.106 ng/Kg | 0.106U ng/Kg |
| SL-551-SA7-SB-2.0-3.0(RES) | 1,2,3,7,8-PECDD | 0.102 ng/Kg | 0.102U ng/Kg |
| SL-551-SA7-SB-2.0-3.0(RES) | 1,2,3,7,8-PECDF | 0.143 ng/Kg | 0.143U ng/Kg |
| SL-551-SA7-SB-2.0-3.0(RES) | 2,3,4,7,8-PECDF | 0.0893 ng/Kg | 0.0893U ng/Kg |
| SL-552-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8-HXCDF | 0.192 ng/Kg | 0.192U ng/Kg |
| SL-552-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDD | 0.228 ng/Kg | 0.228U ng/Kg |
| SL-552-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDF | 0.153 ng/Kg | 0.153U ng/Kg |
| SL-552-SA7-SB-0.0-0.5(RES) | 2,3,4,7,8-PECDF | 0.138 ng/Kg | 0.138U ng/Kg |

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **6010C**
***Matrix:*** **SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| P10537CB221641 | 4/19/2013 4:41:00 PM | CALCIUM | 4.23 mg/Kg | SL-547-SA7-SB-0.0-0.5 |
| | | PHOSPHORUS | 14.4 mg/Kg | SL-549-SA7-SB-0.0-0.5 |
| | | TIN | 1.39 mg/Kg | SL-551-SA7-SB-0.0-0.5 |
| | | ZINC | 0.273 mg/Kg | SL-551-SA7-SB-2.0-3.0 |
| | | | | SL-552-SA7-SB-0.0-0.5 |
| P10737AB221907 | 4/21/2013 7:07:00 PM | MAGNESIUM | 1.82 mg/Kg | SL-548-SA7-SB-0.0-0.5 |
| | | PHOSPHORUS | 10.9 mg/Kg | |
| | | TIN | 1.40 mg/Kg | |
| P11237AB220512 | 4/23/2013 5:12:00 AM | PHOSPHORUS | 0.876 mg/Kg | SL-547-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-547-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.60 mg/Kg | 2.60U mg/Kg |
| SL-548-SA7-SB-0.0-0.5(REA2/TOT) | TIN | 2.72 mg/Kg | 2.72U mg/Kg |
| SL-549-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.69 mg/Kg | 2.69U mg/Kg |
| SL-551-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.56 mg/Kg | 2.56U mg/Kg |
| SL-551-SA7-SB-2.0-3.0(RES/TOT) | TIN | 2.59 mg/Kg | 2.59U mg/Kg |
| SL-552-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.36 mg/Kg | 2.36U mg/Kg |

# Lab Control Spike/Lab Control Spike Duplicate Outlier Report

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **8270D SIM**
***Matrix:*** **SO**

| *QC Sample ID (Associated Samples)* | *Compound* | *LCS %R* | *LCSD %R* | *%R Limits* | *RPD (Limits)* | *Affected Compounds* | *Flag* |
|---|---|---|---|---|---|---|---|
| **P5LALCSQ260240** (SL-547-SA7-SB-0.0-0.5 SL-548-SA7-SB-0.0-0.5 SL-549-SA7-SB-0.0-0.5 SL-551-SA7-SB-0.0-0.5 SL-551-SA7-SB-2.0-3.0 SL-552-SA7-SB-0.0-0.5) | ACENAPHTHENE | 120 | - | 69.00-114.00 | - | ACENAPHTHENE | J (all detects) |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-547-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 1.81 | 5.11 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.435 | 5.11 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.315 | 5.11 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.321 | 5.11 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | J | 1.35 | 5.11 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.512 | 5.11 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.687 | 5.11 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JB | 0.243 | 5.11 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JBQ | 0.263 | 5.11 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.365 | 5.11 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.445 | 5.11 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.485 | 5.11 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JQ | 0.105 | 1.02 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.183 | 1.02 | PQL | ng/Kg | |
| | OCDF | JB | 3.66 | 10.2 | PQL | ng/Kg | |
| SL-548-SA7-SB-0.0-0.5 | 1,2,3,4,7,8,9-HPCDF | JB | 1.05 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JBQ | 1.02 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.516 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | J | 3.24 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JBQ | 0.595 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JBQ | 2.10 | 4.97 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JB | 0.596 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.235 | 4.97 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.909 | 4.97 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.255 | 4.97 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JQ | 0.0614 | 0.994 | PQL | ng/Kg | |
| SL-549-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 1.08 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JBQ | 0.0925 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.231 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JBQ | 0.133 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | J | 0.597 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.168 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.492 | 4.92 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JB | 0.156 | 4.92 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.355 | 4.92 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.147 | 4.92 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.263 | 4.92 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.109 | 0.984 | PQL | ng/Kg | |
| | OCDF | JB | 2.07 | 9.84 | PQL | ng/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-551-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 3.99 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.574 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.417 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.300 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JQ | 1.12 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.276 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.704 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.123 | 5.14 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JBQ | 0.244 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.177 | 5.14 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.401 | 5.14 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.186 | 5.14 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JQ | 0.0747 | 1.03 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | JQ | 0.153 | 1.03 | PQL | ng/Kg | |
| | OCDF | JB | 8.50 | 10.3 | PQL | ng/Kg | |
| SL-551-SA7-SB-2.0-3.0 | 1,2,3,4,6,7,8-HPCDF | JB | 2.24 | 5.03 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.298 | 5.03 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JBQ | 0.161 | 5.03 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.203 | 5.03 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | J | 0.472 | 5.03 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.182 | 5.03 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.360 | 5.03 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.106 | 5.03 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JBQ | 0.102 | 5.03 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.143 | 5.03 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.238 | 5.03 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.0893 | 5.03 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | JQ | 0.0596 | 1.01 | PQL | ng/Kg | |
| | OCDF | JB | 5.49 | 10.1 | PQL | ng/Kg | |
| SL-552-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 3.39 | 4.96 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.405 | 4.96 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JBQ | 0.372 | 4.96 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.192 | 4.96 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | J | 0.860 | 4.96 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.262 | 4.96 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8,9-HXCDD | JB | 0.787 | 4.96 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JBQ | 0.228 | 4.96 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.153 | 4.96 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.344 | 4.96 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.138 | 4.96 | PQL | ng/Kg | |
| | OCDF | JB | 6.59 | 9.91 | PQL | ng/Kg | |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6010C**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-547-SA7-SB-0.0-0.5 | ARSENIC | J | 3.78 | 4.01 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.475 | 1.00 | PQL | mg/Kg | |
| | BORON | J | 2.59 | 10.0 | PQL | mg/Kg | J (all detects) |
| | CADMIUM | J | 0.0531 | 1.00 | PQL | mg/Kg | |
| | SODIUM | J | 66.5 | 100 | PQL | mg/Kg | |
| | TIN | J | 2.60 | 10.0 | PQL | mg/Kg | |
| SL-548-SA7-SB-0.0-0.5 | ANTIMONY | J | 1.41 | 3.99 | PQL | mg/Kg | |
| | ARSENIC | J | 1.72 | 3.99 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.408 | 0.996 | PQL | mg/Kg | |
| | BORON | J | 4.15 | 9.96 | PQL | mg/Kg | J (all detects) |
| | CADMIUM | J | 0.448 | 0.996 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.403 | 1.99 | PQL | mg/Kg | |
| | SODIUM | J | 56.7 | 99.6 | PQL | mg/Kg | |
| | TIN | J | 2.72 | 9.96 | PQL | mg/Kg | |
| SL-549-SA7-SB-0.0-0.5 | BERYLLIUM | J | 0.528 | 1.02 | PQL | mg/Kg | |
| | CADMIUM | J | 0.175 | 1.02 | PQL | mg/Kg | J (all detects) |
| | SODIUM | J | 62.7 | 102 | PQL | mg/Kg | |
| | TIN | J | 2.69 | 10.2 | PQL | mg/Kg | |
| SL-551-SA7-SB-0.0-0.5 | ARSENIC | J | 4.03 | 4.05 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.509 | 1.01 | PQL | mg/Kg | |
| | CADMIUM | J | 0.164 | 1.01 | PQL | mg/Kg | J (all detects) |
| | SODIUM | J | 65.0 | 101 | PQL | mg/Kg | |
| | TIN | J | 2.56 | 10.1 | PQL | mg/Kg | |
| SL-551-SA7-SB-2.0-3.0 | ARSENIC | J | 4.02 | 4.16 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.467 | 1.04 | PQL | mg/Kg | |
| | CADMIUM | J | 0.142 | 1.04 | PQL | mg/Kg | J (all detects) |
| | SODIUM | J | 62.5 | 104 | PQL | mg/Kg | |
| | TIN | J | 2.59 | 10.4 | PQL | mg/Kg | |
| SL-552-SA7-SB-0.0-0.5 | ARSENIC | J | 3.35 | 4.04 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.442 | 1.01 | PQL | mg/Kg | |
| | CADMIUM | J | 0.111 | 1.01 | PQL | mg/Kg | J (all detects) |
| | SODIUM | J | 86.7 | 101 | PQL | mg/Kg | |
| | TIN | J | 2.36 | 10.1 | PQL | mg/Kg | |

**Method: 6020A**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-548-SA7-SB-0.0-0.5 | SILVER | J | 0.0315 | 0.199 | PQL | mg/Kg | J (all detects) |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6020A**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-549-SA7-SB-0.0-0.5 | SELENIUM | J | 0.196 | 0.408 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0306 | 0.204 | PQL | mg/Kg | |
| SL-551-SA7-SB-0.0-0.5 | SILVER | J | 0.0411 | 0.203 | PQL | mg/Kg | J (all detects) |
| SL-552-SA7-SB-0.0-0.5 | SELENIUM | J | 0.106 | 0.404 | PQL | mg/Kg | J (all detects) |

**Method: 7471B**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-551-SA7-SB-0.0-0.5 | MERCURY | J | 0.0110 | 0.0196 | PQL | mg/Kg | J (all detects) |

**Method: 8015M**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-547-SA7-SB-0.0-0.5 | EFH (C21-C30) | J | 4.7 | 5.1 | PQL | mg/Kg | J (all detects) |
| | EFH (C30-C40) | J | 9.6 | 10 | PQL | mg/Kg | |
| SL-548-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 2.2 | 5.1 | PQL | mg/Kg | J (all detects) |
| SL-551-SA7-SB-2.0-3.0 | EFH (C15-C20) | J | 2.3 | 5.2 | PQL | mg/Kg | J (all detects) |
| SL-552-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 2.2 | 5.2 | PQL | mg/Kg | J (all detects) |
| | EFH (C21-C30) | J | 4.6 | 5.2 | PQL | mg/Kg | |

**Method: 8270D SIM**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-547-SA7-SB-0.0-0.5 | BENZO(A)ANTHRACENE | J | 1.1 | 1.7 | PQL | ug/Kg | |
| | BENZO(A)PYRENE | J | 1.4 | 1.7 | PQL | ug/Kg | |
| | BENZO(G,H,I)PERYLENE | J | 1.0 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BENZO(K)FLUORANTHENE | J | 0.93 | 1.7 | PQL | ug/Kg | |
| | INDENO(1,2,3-CD)PYRENE | J | 1.0 | 1.7 | PQL | ug/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH028** **Laboratory: LL**

**EDD Filename: PrepPH028_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 8270D SIM**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-548-SA7-SB-0.0-0.5 | 1-Methylnaphthalene | J | 0.94 | 1.7 | PQL | ug/Kg | |
| | 2-METHYLNAPHTHALENE | J | 1.6 | 1.7 | PQL | ug/Kg | |
| | ANTHRACENE | J | 0.35 | 1.7 | PQL | ug/Kg | |
| | BENZO(A)ANTHRACENE | J | 1.2 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BENZO(A)PYRENE | J | 1.5 | 1.7 | PQL | ug/Kg | |
| | BENZO(G,H,I)PERYLENE | J | 1.3 | 1.7 | PQL | ug/Kg | |
| | BENZO(K)FLUORANTHENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| | INDENO(1,2,3-CD)PYRENE | J | 1.0 | 1.7 | PQL | ug/Kg | |
| SL-549-SA7-SB-0.0-0.5 | 2-METHYLNAPHTHALENE | J | 0.73 | 1.7 | PQL | ug/Kg | |
| | BENZO(B)FLUORANTHENE | J | 1.5 | 1.7 | PQL | ug/Kg | |
| | FLUORANTHENE | J | 1.6 | 1.7 | PQL | ug/Kg | J (all detects) |
| | NAPHTHALENE | J | 1.0 | 1.7 | PQL | ug/Kg | |
| | PHENANTHRENE | J | 0.93 | 1.7 | PQL | ug/Kg | |
| | PYRENE | J | 1.6 | 1.7 | PQL | ug/Kg | |
| SL-551-SA7-SB-0.0-0.5 | 1-Methylnaphthalene | J | 1.0 | 1.7 | PQL | ug/Kg | |
| | ANTHRACENE | J | 0.47 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 9.0 | 19 | PQL | ug/Kg | |
| | INDENO(1,2,3-CD)PYRENE | J | 1.6 | 1.7 | PQL | ug/Kg | |
| SL-551-SA7-SB-2.0-3.0 | CHRYSENE | J | 0.76 | 1.7 | PQL | ug/Kg | |
| | FLUORANTHENE | J | 0.72 | 1.7 | PQL | ug/Kg | J (all detects) |
| | PYRENE | J | 0.74 | 1.7 | PQL | ug/Kg | |
| SL-552-SA7-SB-0.0-0.5 | BENZO(A)ANTHRACENE | J | 1.3 | 1.7 | PQL | ug/Kg | |
| | Butylbenzylphthalate | J | 6.4 | 19 | PQL | ug/Kg | J (all detects) |
| | INDENO(1,2,3-CD)PYRENE | J | 1.3 | 1.7 | PQL | ug/Kg | |

LDC #: 29836B4 **VALIDATION COMPLETENESS WORKSHEET** Date: 6/11/13
SDG #: PH028 ADR Page: 1 of 1
Laboratory: Eurofins Lancaster Laboratories Reviewer: AR
2nd Reviewer: ✓

**METHOD:** Metals (EPA SW 846 Method 6010C/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

| | Validation Area | | Comments |
|---|---|---|---|
| I. | Technical holding times | — | Sampling dates: 4/9/13 - 4/10/13 |
| II. | ICP/MS Tune | — | |
| III. | Calibration | — | |
| IV. | Blanks | SW | |
| V. | ICP Interference Check Sample (ICS) Analysis | — | |
| VI. | Matrix Spike Analysis | N | MS/D (from PH027*) |
| VII. | Duplicate Sample Analysis | N | Dup ↓ |
| VIII. | Laboratory Control Samples (LCS) | A | LCS |
| IX. | Internal Standard (ICP-MS) | N | |
| X. | Furnace Atomic Absorption QC | N | |
| XI. | ICP Serial Dilution | A | |
| XII. | Sample Result Verification | N | |
| XIII. | Overall Assessment of Data | N | |
| XIV. | Field Duplicates | — | |
| XV | Field Blanks | SW | EB= EB-041113 FB=FB-041113 (PH029) |

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 (31) | SL-547-SA7-SB-0.0-0.5 | 11 | | 21 | | 31 | |
| 2 (32) | SL-552-SA7-SB-0.0-0.5 | 12 | | 22 | | 32 | |
| 3 (33) | SL-551-SA7-SB-0.0-0.5 | 13 | | 23 | | 33 | |
| 4 (34) | SL-551-SA7-SB-2.0-3.0 | 14 | | 24 | | 34 | |
| 5 (35) | SL-548-SA7-SB-0.0-0.5 | 15 | | 25 | | 35 | |
| 6 (37) | SL-549-SA7-SB-0.0-0.5 | 16 | | 26 | | 36 | |
| 7 | (#1) MS (P only) | 17 | | 27 | | 37 | |
| 8 | ↓ MSD | 18 | only associate w/ #1 | 28 | | 38 | |
| 9 | ↓ Dup | 19 | | 29 | | 39 | |
| 10 | | 20 | | 30 | | 40 | |

Notes: * MS/D and Dup from PH027 associates all metals / all samples except for P. P from PH027 associates with 2-6.

LDC #: 29836B4

**VALIDATION FINDINGS WORKSHEET**
**PB/ICB/CCB QUALIFIED SAMPLES**

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

**METHOD:** Trace metals (EPA SW 864 Method 6010B/6020/7000)

Soil preparation factor applied: 100x Reason: B

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 1-4, 6

| Analyte | Maximum PB[a] (mg/Kg) | Maximum PB[a] (ug/L) | Maximum ICB/CCB[a] (ug/L) | Action Level | 1 | 2 | 3 | 4 | 6 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| As | | | 5.0 | 2.5 | | | | | | | | | |
| Be | | | 2.0 | 1 | 0.48 | 0.44 | 0.51 | 0.47 | 0.53 | | | | |
| Cd | | | 2.0 | 1 | 0.053 | 0.11 | 0.16 | 0.14 | 0.18 | | | | |
| Co | | | 2.1 | 1.05 | | | | | | | | | |
| Cu | | | 3.4 | 1.7 | | | | | | | | | |
| Mo | | | 4.6 | 2.3 | | | | | | | | | |
| Ni | | | 2.5 | 1.25 | | | | | | | | | |

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".

Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 29836B4

# VALIDATION FINDINGS WORKSHEET
## Field Blanks


Reviewer: CA
2nd Reviewer: LW

**METHOD:** Trace Metals (EPA SW846 6010B/7000)

**Blank units:** mg/L **Associated sample units:** mg/Kg Reason: F
**Sampling date:** 4/11/13 Soil factor applied 100x
**Field blank type:** (circle one) Field Blank / Rinsate / Other: Associated Samples: All

| Analyte | Blank ID | Blank ID | Sample Identification | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB-041113 | FB-041113 | Action Limit | No Qualifiers | | | | | | | | | |
| Ca | 0.131 | | 65.5 | | | | | | | | | | |
| Cu | 0.0035 | 0.0036 | 1.8 | | | | | | | | | | |
| Mn | 0.0012 | | 0.6 | | | | | | | | | | |
| Mo | 0.0143 | 0.0036 | 7.15 | | | | | | | | | | |
| Sn | 0.0024 | | 1.2 | | | | | | | | | | |
| Zn | 0.0041 | | 2.05 | | | | | | | | | | |

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

# Attachment I

# Sample ID Cross Reference and Data Review Level

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 11-Apr-2013 | SL-553-SA7-SB-0.0-0.5 | 7020345 | N | 3050B | 6010C | III |
| 11-Apr-2013 | SL-553-SA7-SB-0.0-0.5 | 7020345 | N | 3050B | 6020A | III |
| 11-Apr-2013 | SL-553-SA7-SB-0.0-0.5 | 7020345 | N | 3546 | 8015M | III |
| 11-Apr-2013 | SL-553-SA7-SB-0.0-0.5 | 7020345 | N | 3546 | 8082A | III |
| 11-Apr-2013 | SL-553-SA7-SB-0.0-0.5 | 7020345 | N | 3546 | 8270D SIM | III |
| 11-Apr-2013 | SL-553-SA7-SB-0.0-0.5 | 7020345 | N | METHOD | 1613B | III |
| 11-Apr-2013 | SL-553-SA7-SB-0.0-0.5 | 7020345 | N | METHOD | 7471B | III |
| 11-Apr-2013 | SL-554-SA7-SB-0.0-0.5 | 7020346 | N | 3050B | 6010C | III |
| 11-Apr-2013 | SL-554-SA7-SB-0.0-0.5 | 7020346 | N | 3050B | 6020A | III |
| 11-Apr-2013 | SL-554-SA7-SB-0.0-0.5 | 7020346 | N | 3546 | 8015M | III |
| 11-Apr-2013 | SL-554-SA7-SB-0.0-0.5 | 7020346 | N | 3546 | 8082A | III |
| 11-Apr-2013 | SL-554-SA7-SB-0.0-0.5 | 7020346 | N | 3546 | 8270D SIM | III |
| 11-Apr-2013 | SL-554-SA7-SB-0.0-0.5 | 7020346 | N | METHOD | 1613B | III |
| 11-Apr-2013 | SL-554-SA7-SB-0.0-0.5 | 7020346 | N | METHOD | 7471B | III |
| 11-Apr-2013 | SL-555-SA7-SB-0.0-0.5 | 7020347 | N | 3050B | 6010C | III |
| 11-Apr-2013 | SL-555-SA7-SB-0.0-0.5 | 7020347 | N | 3050B | 6020A | III |
| 11-Apr-2013 | SL-555-SA7-SB-0.0-0.5 | 7020347 | N | 3546 | 8015M | III |
| 11-Apr-2013 | SL-555-SA7-SB-0.0-0.5 | 7020347 | N | 3546 | 8082A | III |
| 11-Apr-2013 | SL-555-SA7-SB-0.0-0.5 | 7020347 | N | 3546 | 8270D SIM | III |
| 11-Apr-2013 | SL-555-SA7-SB-0.0-0.5 | 7020347 | N | METHOD | 1613B | III |
| 11-Apr-2013 | SL-555-SA7-SB-0.0-0.5 | 7020347 | N | METHOD | 7471B | III |
| 11-Apr-2013 | SL-536-SA7-SB-0.0-0.5 | 7020348 | N | 3050B | 6010C | III |
| 11-Apr-2013 | SL-536-SA7-SB-0.0-0.5 | 7020348 | N | 3050B | 6020A | III |
| 11-Apr-2013 | SL-536-SA7-SB-0.0-0.5 | 7020348 | N | 3546 | 8015M | III |
| 11-Apr-2013 | SL-536-SA7-SB-0.0-0.5 | 7020348 | N | 3546 | 8082A | III |
| 11-Apr-2013 | SL-536-SA7-SB-0.0-0.5 | 7020348 | N | 3546 | 8270D SIM | III |

*III = EPA Level 3 Data Review* *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
*IV = EPA Level 4 Data Validation* *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 11-Apr-2013 | SL-536-SA7-SB-0.0-0.5 | 7020348 | N | METHOD | 1613B | III |
| 11-Apr-2013 | SL-536-SA7-SB-0.0-0.5 | 7020348 | N | METHOD | 7471B | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | 3005A | 6010C | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | 3510C | 8015B | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | 3510C | 8015M | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | 3510C | 8081B | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | 3510C | 8082A | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | 3510C | 8270D | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | 3510C | 8270D SIM | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | 5030B | 8015M | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | 5030B | 8260B | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | 5030B | 8260B SIM | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | 8330 | 8330A | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | Gen Prep | 300.0 | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | Gen Prep | 350.3 | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | Gen Prep | 6850 | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | Gen Prep | 7199 | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | Gen Prep | 8015C | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | M3010A | 6020A | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | METHOD | 1613B | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | METHOD | 7470A | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | METHOD | 8151A | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | METHOD | 8315A | III |
| 11-Apr-2013 | FB-041113 | 7020350 | FB | METHOD | 9012B | III |
| 11-Apr-2013 | FB-041113MSD | P020350M241706A | MSD | Gen Prep | 6850 | III |
| 11-Apr-2013 | FB-041113MSD | P020350M321934A | MSD | Gen Prep | 8015C | III |

*III = EPA Level 3 Data Review*
*IV = EPA Level 4 Data Validation*
*N = Normal Sample*
*FD = Field Duplicate*
*TB = Trip Blank*
*FB = Field Blank*
*MS = Matrix Spike*
*MSD = Matrix Spike Duplicate*

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 11-Apr-2013 | FB-041113MS | P020350R241653A | MS | Gen Prep | 6850 | III |
| 11-Apr-2013 | FB-041113MS | P020350R320419A | MS | Gen Prep | 8015C | III |
| 11-Apr-2013 | EB-041113 | 7020349 | EB | 3005A | 6010C | III |
| 11-Apr-2013 | EB-041113 | 7020349 | EB | 3510C | 8015M | III |
| 11-Apr-2013 | EB-041113 | 7020349 | EB | 3510C | 8082A | III |
| 11-Apr-2013 | EB-041113 | 7020349 | EB | 3510C | 8270D SIM | III |
| 11-Apr-2013 | EB-041113 | 7020349 | EB | 5030B | 8015M | III |
| 11-Apr-2013 | EB-041113 | 7020349 | EB | Gen Prep | 7199 | III |
| 11-Apr-2013 | EB-041113 | 7020349 | EB | M3010A | 6020A | III |
| 11-Apr-2013 | EB-041113 | 7020349 | EB | METHOD | 1613B | III |
| 11-Apr-2013 | EB-041113 | 7020349 | EB | METHOD | 7470A | III |

*III = EPA Level 3 Data Review*
*IV = EPA Level 4 Data Validation*
*N = Normal Sample*
*FD = Field Duplicate*
*TB = Trip Blank*
*FB = Field Blank*
*MS = Matrix Spike*
*MSD = Matrix Spike Duplicate*

# Attachment II

# Overall Data Qualification Summary

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: GENCHEM**
**Method: 350.3** **Matrix: AQ**

*Sample ID:* FB-041113 *Collected:* 4/11/2013 3:00:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| AMMONIA AS N | 0.050 | J | 0.050 | MDL | 0.20 | PQL | mg/L | U | B |

**Method Category: METALS**
**Method: 6010C** **Matrix: AQ**

*Sample ID:* EB-041113 *Collected:* 4/11/2013 3:15:00 *Analysis Type:* REA2/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| CALCIUM | 0.131 | J | 0.0640 | MDL | 0.400 | PQL | mg/L | J | Z |
| COPPER | 0.0035 | J | 0.0021 | MDL | 0.0200 | PQL | mg/L | U | B, B |
| MANGANESE | 0.0012 | J | 0.00083 | MDL | 0.0100 | PQL | mg/L | J | Z |
| MOLYBDENUM | 0.0143 | J | 0.0029 | MDL | 0.0200 | PQL | mg/L | U | B |
| TIN | 0.0024 | J | 0.0022 | MDL | 0.0400 | PQL | mg/L | J | Z |
| ZINC | 0.0041 | J | 0.0020 | MDL | 0.0400 | PQL | mg/L | J | Z |

*Sample ID:* FB-041113 *Collected:* 4/11/2013 3:00:00 *Analysis Type:* REA2/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| COPPER | 0.0036 | J | 0.0021 | MDL | 0.0200 | PQL | mg/L | U | B, B |
| MOLYBDENUM | 0.0036 | J | 0.0029 | MDL | 0.0200 | PQL | mg/L | U | B |

**Method Category: METALS**
**Method: 6010C** **Matrix: SO**

*Sample ID:* SL-536-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 12:55:00 *Analysis Type:* REA/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BORON | 2.81 | J | 0.843 | MDL | 10.2 | PQL | mg/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method Category:*** **METALS**

***Method:*** **6010C** ***Matrix:*** **SO**

***Sample ID:*** **SL-536-SA7-SB-0.0-0.5** ***Collected:*** **4/11/2013 12:55:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.07 | U | 0.508 | MDL | 4.07 | PQL | mg/Kg | UJ | Q |
| ARSENIC | 3.54 | J | 0.335 | MDL | 4.07 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.411 | J | 0.0681 | MDL | 1.02 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.162 | J | 0.0335 | MDL | 1.02 | PQL | mg/Kg | J | Z |
| CALCIUM | 2690 | | 4.09 | MDL | 20.3 | PQL | mg/Kg | J | E |
| PHOSPHORUS | 372 | | 0.518 | MDL | 10.2 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 3030 | | 13.7 | MDL | 102 | PQL | mg/Kg | J | Q |
| SODIUM | 55.1 | J | 17.0 | MDL | 102 | PQL | mg/Kg | J | Z |
| TIN | 2.49 | J | 0.224 | MDL | 10.2 | PQL | mg/Kg | U | B |

***Sample ID:*** **SL-553-SA7-SB-0.0-0.5** ***Collected:*** **4/11/2013 8:10:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.00 | U | 0.501 | MDL | 4.00 | PQL | mg/Kg | UJ | Q |
| BERYLLIUM | 0.509 | J | 0.0671 | MDL | 1.00 | PQL | mg/Kg | U | B |
| CADMIUM | 0.229 | J | 0.0330 | MDL | 1.00 | PQL | mg/Kg | U | B |
| CALCIUM | 8930 | | 4.02 | MDL | 20.0 | PQL | mg/Kg | J | E |
| PHOSPHORUS | 459 | | 0.511 | MDL | 10.0 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 3090 | | 13.5 | MDL | 100 | PQL | mg/Kg | J | Q |
| SODIUM | 69.1 | J | 16.7 | MDL | 100 | PQL | mg/Kg | J | Z |
| TIN | 2.70 | J | 0.220 | MDL | 10.0 | PQL | mg/Kg | U | B |

***Sample ID:*** **SL-554-SA7-SB-0.0-0.5** ***Collected:*** **4/11/2013 9:00:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.07 | U | 0.509 | MDL | 4.07 | PQL | mg/Kg | UJ | Q |
| BERYLLIUM | 0.549 | J | 0.0681 | MDL | 1.02 | PQL | mg/Kg | U | B |
| CADMIUM | 0.169 | J | 0.0336 | MDL | 1.02 | PQL | mg/Kg | U | B |
| CALCIUM | 3670 | | 4.09 | MDL | 20.3 | PQL | mg/Kg | J | E |
| PHOSPHORUS | 426 | | 0.519 | MDL | 10.2 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 3430 | | 13.7 | MDL | 102 | PQL | mg/Kg | J | Q |
| SODIUM | 66.8 | J | 17.0 | MDL | 102 | PQL | mg/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

*Sample ID:* SL-554-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 9:00:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| TIN | 2.54 | J | 0.224 | MDL | 10.2 | PQL | mg/Kg | U | B |

*Sample ID:* SL-555-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 10:15:00 *Analysis Type:* REA/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BORON | 6.79 | J | 0.854 | MDL | 10.3 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-555-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 10:15:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.12 | U | 0.515 | MDL | 4.12 | PQL | mg/Kg | UJ | Q |
| ARSENIC | 3.64 | J | 0.340 | MDL | 4.12 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.575 | J | 0.0690 | MDL | 1.03 | PQL | mg/Kg | U | B |
| CADMIUM | 0.397 | J | 0.0340 | MDL | 1.03 | PQL | mg/Kg | U | B |
| CALCIUM | 4940 | | 4.14 | MDL | 20.6 | PQL | mg/Kg | J | E |
| PHOSPHORUS | 445 | | 0.525 | MDL | 10.3 | PQL | mg/Kg | J | Q, Q |
| POTASSIUM | 3660 | | 13.9 | MDL | 103 | PQL | mg/Kg | J | Q |
| SODIUM | 76.8 | J | 17.2 | MDL | 103 | PQL | mg/Kg | J | Z |
| TIN | 2.62 | J | 0.226 | MDL | 10.3 | PQL | mg/Kg | U | B |
| Zirconium | 0.902 | J | 0.854 | MDL | 5.15 | PQL | mg/Kg | J | Z |

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

*Sample ID:* SL-536-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 12:55:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| STRONTIUM | 11.0 | | 0.0346 | MDL | 0.407 | PQL | mg/Kg | J | Q |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

*Sample ID:* SL-553-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 8:10:00 *Analysis Type:* REA/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.107 | J | 0.100 | MDL | 0.400 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-553-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 8:10:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0459 | J | 0.0200 | MDL | 0.200 | PQL | mg/Kg | J | Z |
| STRONTIUM | 19.2 | | 0.0340 | MDL | 0.400 | PQL | mg/Kg | J | Q |

*Sample ID:* SL-554-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 9:00:00 *Analysis Type:* REA/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.117 | J | 0.102 | MDL | 0.407 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-554-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 9:00:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0846 | J | 0.0203 | MDL | 0.203 | PQL | mg/Kg | J | Z |
| STRONTIUM | 15.8 | | 0.0346 | MDL | 0.407 | PQL | mg/Kg | J | Q |

*Sample ID:* SL-555-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 10:15:00 *Analysis Type:* REA/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.134 | J | 0.103 | MDL | 0.412 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-555-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 10:15:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0523 | J | 0.0206 | MDL | 0.206 | PQL | mg/Kg | J | Z |
| STRONTIUM | 23.4 | | 0.0350 | MDL | 0.412 | PQL | mg/Kg | J | Q |
| THALLIUM | 0.188 | J | 0.0309 | MDL | 0.206 | PQL | mg/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 7471B** **Matrix: SO**

*Sample ID:* SL-536-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 12:55:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0113 | J | 0.0099 | MDL | 0.0192 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-555-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 10:15:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0178 | J | 0.0110 | MDL | 0.0213 | PQL | mg/Kg | J | Z |

**Method Category: SVOA**

**Method: 1613B** **Matrix: AQ**

*Sample ID:* EB-041113 *Collected:* 4/11/2013 3:15:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 0.314 | JBQ | 0.183 | MDL | 9.74 | PQL | pg/L | U | B |
| 1,2,3,4,6,7,8-HPCDF | 0.443 | JBQ | 0.0883 | MDL | 9.74 | PQL | pg/L | U | B |
| 1,2,3,4,7,8,9-HPCDF | 0.321 | JB | 0.102 | MDL | 9.74 | PQL | pg/L | U | B |
| 1,2,3,4,7,8-HxCDD | 0.322 | JQ | 0.162 | MDL | 9.74 | PQL | pg/L | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.378 | JB | 0.102 | MDL | 9.74 | PQL | pg/L | U | B |
| 1,2,3,6,7,8-HXCDD | 0.314 | JBQ | 0.175 | MDL | 9.74 | PQL | pg/L | U | B |
| 1,2,3,6,7,8-HXCDF | 0.354 | JBQ | 0.0994 | MDL | 9.74 | PQL | pg/L | U | B |
| 1,2,3,7,8,9-HXCDD | 0.463 | JB | 0.172 | MDL | 9.74 | PQL | pg/L | U | B |
| 1,2,3,7,8,9-HXCDF | 0.272 | JBQ | 0.0946 | MDL | 9.74 | PQL | pg/L | U | B |
| 1,2,3,7,8-PECDD | 1.24 | JBQ | 0.256 | MDL | 9.74 | PQL | pg/L | U | B |
| 1,2,3,7,8-PECDF | 0.820 | JBQ | 0.160 | MDL | 9.74 | PQL | pg/L | U | B |
| 2,3,4,6,7,8-HXCDF | 0.202 | JBQ | 0.0978 | MDL | 9.74 | PQL | pg/L | U | B |
| 2,3,4,7,8-PECDF | 0.492 | JBQ | 0.145 | MDL | 9.74 | PQL | pg/L | U | B |
| OCDD | 1.04 | JBQ | 0.406 | MDL | 19.5 | PQL | pg/L | U | B |
| OCDF | 0.655 | JB | 0.292 | MDL | 19.5 | PQL | pg/L | U | B |

* denotes a non-reportable result

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: AQ**

*Sample ID:* FB-041113 *Collected:* 4/11/2013 3:00:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 0.402 | JBQ | 0.163 | MDL | 9.76 | PQL | pg/L | U | B |
| 1,2,3,4,6,7,8-HPCDF | 0.254 | JBQ | 0.0678 | MDL | 9.76 | PQL | pg/L | U | B |
| 1,2,3,4,7,8-HxCDD | 0.125 | J | 0.122 | MDL | 9.76 | PQL | pg/L | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.324 | JB | 0.0890 | MDL | 9.76 | PQL | pg/L | U | B |
| 1,2,3,6,7,8-HXCDF | 0.221 | JB | 0.0881 | MDL | 9.76 | PQL | pg/L | U | B |
| 1,2,3,7,8,9-HXCDD | 0.134 | JBQ | 0.131 | MDL | 9.76 | PQL | pg/L | U | B |
| 1,2,3,7,8,9-HXCDF | 0.211 | JBQ | 0.0982 | MDL | 9.76 | PQL | pg/L | U | B |
| 1,2,3,7,8-PECDF | 0.398 | JBQ | 0.138 | MDL | 9.76 | PQL | pg/L | U | B |
| 2,3,4,6,7,8-HXCDF | 0.149 | JB | 0.0887 | MDL | 9.76 | PQL | pg/L | U | B |
| 2,3,4,7,8-PECDF | 0.316 | JBQ | 0.135 | MDL | 9.76 | PQL | pg/L | U | B |
| OCDF | 0.840 | JBQ | 0.275 | MDL | 19.5 | PQL | pg/L | U | B |

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-536-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 12:55:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HPCDF | 0.861 | JB | 0.0306 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 1.30 | JB | 0.0355 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.465 | JB | 0.0290 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 3.42 | JB | 0.0376 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.489 | JB | 0.0271 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 2.74 | J | 0.0346 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.158 | JB | 0.0309 | MDL | 4.97 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.799 | J | 0.0431 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.192 | JBQ | 0.0200 | MDL | 4.97 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.695 | JB | 0.0274 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.195 | JB | 0.0190 | MDL | 4.97 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.0447 | JB | 0.0276 | MDL | 0.994 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDF | 0.0619 | J | 0.0261 | MDL | 0.994 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method Category:*** **SVOA**

***Method:*** **1613B** ***Matrix:*** **SO**

***Sample ID:*** **SL-553-SA7-SB-0.0-0.5** ***Collected:*** **4/11/2013 8:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 1.12 | JB | 0.0147 | MDL | 5.02 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.137 | JB | 0.0172 | MDL | 5.02 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HxCDD | 0.147 | JB | 0.0338 | MDL | 5.02 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HXCDF | 0.121 | JB | 0.0252 | MDL | 5.02 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDD | 0.399 | JB | 0.0347 | MDL | 5.02 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.0953 | JB | 0.0231 | MDL | 5.02 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDD | 0.368 | J | 0.0340 | MDL | 5.02 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.0657 | JB | 0.0243 | MDL | 5.02 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.0481 | JQ | 0.0295 | MDL | 5.02 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.149 | JB | 0.0163 | MDL | 5.02 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.122 | JBQ | 0.0239 | MDL | 5.02 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.144 | JB | 0.0154 | MDL | 5.02 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDD | 0.0659 | JBQ | 0.0297 | MDL | 1.00 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDF | 0.0333 | JQ | 0.0332 | MDL | 1.00 | PQL | ng/Kg | J | Z |
| OCDF | 2.38 | JB | 0.0237 | MDL | 10.0 | PQL | ng/Kg | J | Z |

***Sample ID:*** **SL-554-SA7-SB-0.0-0.5** ***Collected:*** **4/11/2013 9:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HPCDF | 0.599 | JB | 0.0483 | MDL | 5.13 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.627 | JB | 0.0336 | MDL | 5.13 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.505 | JB | 0.0313 | MDL | 5.13 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 1.60 | JB | 0.0337 | MDL | 5.13 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.356 | JB | 0.0296 | MDL | 5.13 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 1.41 | J | 0.0331 | MDL | 5.13 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.293 | JB | 0.0305 | MDL | 5.13 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.441 | J | 0.0407 | MDL | 5.13 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.294 | JB | 0.0380 | MDL | 5.13 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.440 | JBQ | 0.0275 | MDL | 5.13 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.865 | JB | 0.0339 | MDL | 5.13 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.0864 | JB | 0.0294 | MDL | 1.03 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDF | 0.389 | J | 0.0823 | MDL | 1.03 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-555-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 10:15:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 4.16 | JB | 0.0600 | MDL | 5.30 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.360 | JB | 0.0702 | MDL | 5.30 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.475 | JB | 0.0346 | MDL | 5.30 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.375 | JB | 0.0320 | MDL | 5.30 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 1.35 | JB | 0.0354 | MDL | 5.30 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.388 | JB | 0.0303 | MDL | 5.30 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 1.20 | JQ | 0.0335 | MDL | 5.30 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.400 | JB | 0.0361 | MDL | 5.30 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.383 | JQ | 0.0572 | MDL | 5.30 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.427 | JBQ | 0.0386 | MDL | 5.30 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.433 | JB | 0.0315 | MDL | 5.30 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.849 | JB | 0.0364 | MDL | 5.30 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.0496 | JBQ | 0.0345 | MDL | 1.06 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDF | 0.395 | J | 0.0790 | MDL | 1.06 | PQL | ng/Kg | J | Z |
| OCDF | 9.21 | JB | 0.0582 | MDL | 10.6 | PQL | ng/Kg | J | Z |

**Method Category: SVOA**

**Method: 8015C** **Matrix: AQ**

*Sample ID:* FB-041113 *Collected:* 4/11/2013 3:00:00 *Analysis Type:* REA *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| DIETHYLENE GLYCOL | 10 | U | 8.0 | MDL | 10 | PQL | mg/L | UJ | H |
| ETHYLENE GLYCOL | 10 | U | 8.0 | MDL | 10 | PQL | mg/L | UJ | H |
| Propylene glycol | 10 | U | 8.0 | MDL | 10 | PQL | mg/L | UJ | H |
| Triethylene glycol | 10 | U | 8.0 | MDL | 10 | PQL | mg/L | UJ | H |

*Sample ID:* FB-041113 *Collected:* 4/11/2013 3:00:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ETHANOL | 1000 | U | 200 | MDL | 1000 | PQL | ug/L | UJ | H |
| Isopropanol | 1000 | U | 200 | MDL | 1000 | PQL | ug/L | UJ | H |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**
**Method: 8015C** **Matrix: AQ**

*Sample ID:* FB-041113 *Collected:* 4/11/2013 3:00:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| METHANOL | 1000 | U | 200 | MDL | 1000 | PQL | ug/L | UJ | H |

**Method Category: SVOA**
**Method: 8015M** **Matrix: AQ**

*Sample ID:* EB-041113 *Collected:* 4/11/2013 3:15:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C8-C11) | 0.57 | U | 0.095 | MDL | 0.57 | PQL | mg/L | UJ | L |

*Sample ID:* FB-041113 *Collected:* 4/11/2013 3:00:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C8-C11) | 0.57 | U | 0.095 | MDL | 0.57 | PQL | mg/L | UJ | L |

**Method Category: SVOA**
**Method: 8015M** **Matrix: SO**

*Sample ID:* SL-536-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 12:55:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 2.2 | J | 2.0 | MDL | 5.1 | PQL | mg/Kg | J | Z |

**Method Category: SVOA**
**Method: 8270D** **Matrix: AQ**

*Sample ID:* FB-041113 *Collected:* 4/11/2013 3:00:00 *Analysis Type:* RES-ACID *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZOIC ACID | 15 | U | 6 | MDL | 15 | PQL | ug/L | UJ | E |
| NAPHTHALENE | 0.2 | J | 0.1 | MDL | 0.5 | PQL | ug/L | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 8270D SIM** **Matrix: AQ**

*Sample ID:* EB-041113 *Collected:* 4/11/2013 3:15:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1-METHYLNAPHTHALENE | 0.020 | J | 0.011 | MDL | 0.055 | PQL | ug/L | J | Z |
| 2-METHYLNAPHTHALENE | 0.027 | J | 0.011 | MDL | 0.055 | PQL | ug/L | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 0.11 | J | 0.055 | MDL | 1.1 | PQL | ug/L | U | B |
| Diethylphthalate | 0.24 | J | 0.055 | MDL | 1.1 | PQL | ug/L | J | Z |
| Di-n-butylphthalate | 0.16 | J | 0.055 | MDL | 1.1 | PQL | ug/L | J | Z |
| Di-n-octylphthalate | 1.1 | U | 0.055 | MDL | 1.1 | PQL | ug/L | UJ | L |

*Sample ID:* FB-041113 *Collected:* 4/11/2013 3:00:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1-METHYLNAPHTHALENE | 0.019 | J | 0.010 | MDL | 0.051 | PQL | ug/L | J | Z |
| 2-METHYLNAPHTHALENE | 0.024 | J | 0.010 | MDL | 0.051 | PQL | ug/L | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 0.082 | J | 0.051 | MDL | 1.0 | PQL | ug/L | U | B |
| Diethylphthalate | 0.18 | J | 0.051 | MDL | 1.0 | PQL | ug/L | J | Z |
| Di-n-butylphthalate | 0.17 | J | 0.051 | MDL | 1.0 | PQL | ug/L | J | Z |
| Di-n-octylphthalate | 1.0 | U | 0.051 | MDL | 1.0 | PQL | ug/L | UJ | L |

**Method Category: SVOA**

**Method: 8270D SIM** **Matrix: SO**

*Sample ID:* SL-536-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 12:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTHRACENE | 0.41 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(E)PYRENE | 4.3 | J | 3.4 | MDL | 17 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 10 | J | 6.1 | MDL | 18 | PQL | ug/Kg | J | Z |
| Di-n-butylphthalate | 7.6 | J | 6.1 | MDL | 18 | PQL | ug/Kg | J | Z |
| FLUORENE | 0.72 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| NAPHTHALENE | 1.2 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 8270D SIM** **Matrix: SO**

*Sample ID:* SL-553-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 8:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(B)FLUORANTHENE | 1.2 | J | 0.67 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 6.8 | J | 6.1 | MDL | 18 | PQL | ug/Kg | J | Z |
| CHRYSENE | 1.1 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| FLUORANTHENE | 1.2 | J | 0.67 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PHENANTHRENE | 0.68 | J | 0.67 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PYRENE | 1.2 | J | 0.67 | MDL | 1.7 | PQL | ug/Kg | J | Z |

*Sample ID:* SL-554-SA7-SB-0.0-0.5 *Collected:* 4/11/2013 9:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(E)PYRENE | 80 | J | 35 | MDL | 180 | PQL | ug/Kg | J | Z |
| PYRENE | 8.3 | J | 6.9 | MDL | 17 | PQL | ug/Kg | J | Z |

**Method Category: SVOA**

**Method: 8330A** **Matrix: AQ**

*Sample ID:* FB-041113 *Collected:* 4/11/2013 3:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,3,5-TRINITROBENZENE | 0.60 | U | 0.20 | MDL | 0.60 | PQL | ug/L | UJ | L |
| 1,3-DINITROBENZENE | 0.60 | U | 0.20 | MDL | 0.60 | PQL | ug/L | UJ | L |
| 2,4,6-TRINITROTOLUENE | 0.60 | U | 0.20 | MDL | 0.60 | PQL | ug/L | UJ | L |
| 2,4-DINITROTOLUENE | 0.60 | U | 0.20 | MDL | 0.60 | PQL | ug/L | UJ | L |
| 2-AMINO-4,6-DINITROTOLUENE | 0.60 | U | 0.20 | MDL | 0.60 | PQL | ug/L | UJ | L |
| 2-NITROTOLUENE | 0.60 | U | 0.20 | MDL | 0.60 | PQL | ug/L | UJ | L |
| 3-NITROTOLUENE | 1.2 | U | 0.40 | MDL | 1.2 | PQL | ug/L | UJ | L |
| 4-NITROTOLUENE | 1.2 | U | 0.60 | MDL | 1.2 | PQL | ug/L | UJ | L |
| HMX | 2.0 | U | 0.65 | MDL | 2.0 | PQL | ug/L | UJ | L |
| Nitroglycerin | 15 | U | 5.2 | MDL | 15 | PQL | ug/L | UJ | L |
| PETN | 18 | U | 6.0 | MDL | 18 | PQL | ug/L | UJ | L |
| RDX | 0.60 | U | 0.20 | MDL | 0.60 | PQL | ug/L | UJ | L |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method Category:*** **VOA**

***Method:*** **8260B** ***Matrix:*** **AQ**

***Sample ID:*** FB-041113 ***Collected:*** 4/11/2013 3:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

| *Analyte* | *Lab Result* | *Lab Qual* | *DL* | *DL Type* | *RL* | *RL Type* | *Units* | *Data Review Qual* | *Reason Code* |
|---|---|---|---|---|---|---|---|---|---|
| METHYLENE CHLORIDE | 2 | J | 2 | MDL | 5 | PQL | ug/L | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

## Reason Code Legend

| *Reason Code* | *Description* |
|---|---|
| B | Calibration Blank Contamination |
| B | Method Blank Contamination |
| E | Laboratory Control Precision |
| E | Matrix Spike Precision |
| H | Sampling to Analysis Estimation |
| L | Laboratory Control Precision |
| L | Laboratory Control Spike Lower Estimation |
| L | Laboratory Control Spike Upper Estimation |
| Q | Matrix Spike Lower Estimation |
| Q | Matrix Spike Precision |
| Q | Matrix Spike Upper Estimation |
| S | Surrogate/Tracer Recovery Upper Estimation |
| Z | Reporting Limit Trace Value |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Enclosure I

# Level III ADR Outliers
# (including Manual Review Outliers)

# Quality Control
# Outlier Reports

# PH029

# QC Outlier Report: HoldingTimes

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 8015C** **Preparation Method: Gen Prep**

**Matrix: AQ**

| Sample ID | Type | Actual | Criteria | Units | Flag |
|---|---|---|---|---|---|
| FB-041113 (RES) | Sampling To Analysis | 8.00 | 7.00 | DAYS | J (all detects) |
| FB-041113 (RES) | | 8.00 | 7.00 | DAYS | UJ (all non-detects) |
| FB-041113 (REA) | | 12.00 | 7.00 | DAYS | |
| FB-041113 (REA) | | 12.00 | 7.00 | DAYS | |
| FB-041113MS (RES) | | 8.00 | 7.00 | DAYS | |
| FB-041113MS (RES) | | 8.00 | 7.00 | DAYS | |
| FB-041113MSD (RES) | | 8.00 | 7.00 | DAYS | |
| FB-041113MSD (RES) | | 8.00 | 7.00 | DAYS | |

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **1613B**
***Matrix:*** **AQ**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| BLK1060B372058 | 4/18/2013 8:58:00 PM | 1,2,3,4,6,7,8-HPCDD | 0.306 pg/L | EB-041113 |
| | | 1,2,3,4,6,7,8-HPCDF | 0.193 pg/L | FB-041113 |
| | | 1,2,3,4,7,8,9-HPCDF | 0.370 pg/L | |
| | | 1,2,3,4,7,8-HXCDF | 0.338 pg/L | |
| | | 1,2,3,6,7,8-HXCDD | 0.538 pg/L | |
| | | 1,2,3,6,7,8-HXCDF | 0.333 pg/L | |
| | | 1,2,3,7,8,9-HXCDD | 0.284 pg/L | |
| | | 1,2,3,7,8,9-HXCDF | 0.394 pg/L | |
| | | 1,2,3,7,8-PECDD | 0.404 pg/L | |
| | | 1,2,3,7,8-PECDF | 0.484 pg/L | |
| | | 2,3,4,6,7,8-HXCDF | 0.281 pg/L | |
| | | 2,3,4,7,8-PECDF | 0.290 pg/L | |
| | | 2,3,7,8-TCDF | 0.231 pg/L | |
| | | OCDD | 0.635 pg/L | |
| | | OCDF | 0.712 pg/L | |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| EB-041113(RES) | 1,2,3,4,6,7,8-HPCDD | 0.314 pg/L | 0.314U pg/L |
| EB-041113(RES) | 1,2,3,4,6,7,8-HPCDF | 0.443 pg/L | 0.443U pg/L |
| EB-041113(RES) | 1,2,3,4,7,8,9-HPCDF | 0.321 pg/L | 0.321U pg/L |
| EB-041113(RES) | 1,2,3,4,7,8-HXCDF | 0.378 pg/L | 0.378U pg/L |
| EB-041113(RES) | 1,2,3,6,7,8-HXCDD | 0.314 pg/L | 0.314U pg/L |
| EB-041113(RES) | 1,2,3,6,7,8-HXCDF | 0.354 pg/L | 0.354U pg/L |
| EB-041113(RES) | 1,2,3,7,8,9-HXCDD | 0.463 pg/L | 0.463U pg/L |
| EB-041113(RES) | 1,2,3,7,8,9-HXCDF | 0.272 pg/L | 0.272U pg/L |
| EB-041113(RES) | 1,2,3,7,8-PECDD | 1.24 pg/L | 1.24U pg/L |
| EB-041113(RES) | 1,2,3,7,8-PECDF | 0.820 pg/L | 0.820U pg/L |
| EB-041113(RES) | 2,3,4,6,7,8-HXCDF | 0.202 pg/L | 0.202U pg/L |
| EB-041113(RES) | 2,3,4,7,8-PECDF | 0.492 pg/L | 0.492U pg/L |
| EB-041113(RES) | OCDD | 1.04 pg/L | 1.04U pg/L |
| EB-041113(RES) | OCDF | 0.655 pg/L | 0.655U pg/L |
| FB-041113(RES) | 1,2,3,4,6,7,8-HPCDD | 0.402 pg/L | 0.402U pg/L |
| FB-041113(RES) | 1,2,3,4,6,7,8-HPCDF | 0.254 pg/L | 0.254U pg/L |
| FB-041113(RES) | 1,2,3,4,7,8-HXCDF | 0.324 pg/L | 0.324U pg/L |
| FB-041113(RES) | 1,2,3,6,7,8-HXCDF | 0.221 pg/L | 0.221U pg/L |
| FB-041113(RES) | 1,2,3,7,8,9-HXCDD | 0.134 pg/L | 0.134U pg/L |
| FB-041113(RES) | 1,2,3,7,8,9-HXCDF | 0.211 pg/L | 0.211U pg/L |
| FB-041113(RES) | 1,2,3,7,8-PECDF | 0.398 pg/L | 0.398U pg/L |
| FB-041113(RES) | 2,3,4,6,7,8-HXCDF | 0.149 pg/L | 0.149U pg/L |
| FB-041113(RES) | 2,3,4,7,8-PECDF | 0.316 pg/L | 0.316U pg/L |
| FB-041113(RES) | OCDF | 0.840 pg/L | 0.840U pg/L |

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**
**Matrix: SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| BLK1060B371944 | 4/17/2013 7:44:00 PM | 1,2,3,4,6,7,8-HPCDD | 0.0840 ng/Kg | SL-536-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,6,7,8-HPCDF | 0.0530 ng/Kg | SL-553-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8,9-HPCDF | 0.0413 ng/Kg | SL-554-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8-HxCDD | 0.0315 ng/Kg | SL-555-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8-HXCDF | 0.0446 ng/Kg | |
| | | 1,2,3,6,7,8-HXCDD | 0.0201 ng/Kg | |
| | | 1,2,3,6,7,8-HXCDF | 0.0356 ng/Kg | |
| | | 1,2,3,7,8,9-HXCDF | 0.0566 ng/Kg | |
| | | 1,2,3,7,8-PECDF | 0.0560 ng/Kg | |
| | | 2,3,4,6,7,8-HXCDF | 0.0222 ng/Kg | |
| | | 2,3,4,7,8-PECDF | 0.0310 ng/Kg | |
| | | 2,3,7,8-TCDD | 0.0457 ng/Kg | |
| | | OCDD | 0.121 ng/Kg | |
| | | OCDF | 0.0815 ng/Kg | |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-536-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDF | 0.158 ng/Kg | 0.158U ng/Kg |
| SL-536-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDF | 0.192 ng/Kg | 0.192U ng/Kg |
| SL-536-SA7-SB-0.0-0.5(RES) | 2,3,7,8-TCDD | 0.0447 ng/Kg | 0.0447U ng/Kg |
| SL-553-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8,9-HPCDF | 0.137 ng/Kg | 0.137U ng/Kg |
| SL-553-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8-HxCDD | 0.147 ng/Kg | 0.147U ng/Kg |
| SL-553-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8-HXCDF | 0.121 ng/Kg | 0.121U ng/Kg |
| SL-553-SA7-SB-0.0-0.5(RES) | 1,2,3,6,7,8-HXCDF | 0.0953 ng/Kg | 0.0953U ng/Kg |
| SL-553-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDF | 0.0657 ng/Kg | 0.0657U ng/Kg |
| SL-553-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDF | 0.149 ng/Kg | 0.149U ng/Kg |
| SL-553-SA7-SB-0.0-0.5(RES) | 2,3,4,7,8-PECDF | 0.144 ng/Kg | 0.144U ng/Kg |
| SL-553-SA7-SB-0.0-0.5(RES) | 2,3,7,8-TCDD | 0.0659 ng/Kg | 0.0659U ng/Kg |
| SL-554-SA7-SB-0.0-0.5(RES) | 2,3,7,8-TCDD | 0.0864 ng/Kg | 0.0864U ng/Kg |
| SL-555-SA7-SB-0.0-0.5(RES) | 2,3,7,8-TCDD | 0.0496 ng/Kg | 0.0496U ng/Kg |

**Method: 350.3**
**Matrix: AQ**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| P008201B292003A | 4/15/2013 8:03:00 PM | AMMONIA AS N | 0.070 mg/L | FB-041113 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| FB-041113(RES) | AMMONIA AS N | 0.050 mg/L | 0.050U mg/L |

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PrepPH029** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6010C**
**Matrix: AQ**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| P10835AB221742 | 4/23/2013 5:42:00 PM | COPPER | 0.0024 mg/L | EB-041113<br>FB-041113 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| EB-041113(REA2/TOT) | COPPER | 0.0035 mg/L | 0.0035U mg/L |
| FB-041113(REA2/TOT) | COPPER | 0.0036 mg/L | 0.0036U mg/L |

**Method: 6010C**
**Matrix: SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| P10537CB221641 | 4/19/2013 4:41:00 PM | CALCIUM<br>PHOSPHORUS<br>TIN<br>ZINC | 4.23 mg/Kg<br>14.4 mg/Kg<br>1.39 mg/Kg<br>0.273 mg/Kg | SL-536-SA7-SB-0.0-0.5<br>SL-553-SA7-SB-0.0-0.5<br>SL-554-SA7-SB-0.0-0.5<br>SL-555-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-536-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.49 mg/Kg | 2.49U mg/Kg |
| SL-553-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.70 mg/Kg | 2.70U mg/Kg |
| SL-554-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.54 mg/Kg | 2.54U mg/Kg |
| SL-555-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.62 mg/Kg | 2.62U mg/Kg |

**Method: 8270D SIM**
**Matrix: AQ**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| PLKWH10B262132 | 4/28/2013 9:32:00 PM | BIS(2-ETHYLHEXYL)PHTHALATE | 0.059 ug/L | EB-041113<br>FB-041113 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| EB-041113(RES) | BIS(2-ETHYLHEXYL)PHTHALATE | 0.11 ug/L | 1.1U ug/L |
| FB-041113(RES) | BIS(2-ETHYLHEXYL)PHTHALATE | 0.082 ug/L | 1.0U ug/L |

# *Surrogate Outlier Report*

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PH029_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **8082A**
***Matrix:*** **SO**

| *Sample ID (Analysis Type)* | *Surrogate* | *Sample % Recovery* | *% Recovery Limits* | *Affected Compounds* | *Flag* |
|---|---|---|---|---|---|
| **SL-553-SA7-SB-0.0 -0.5** | TETRACHLORO-M-XYLENE | 122 | 45.00-120.00 | All Target Analytes | J (all detects) |

# Lab Control Spike/Lab Control Spike Duplicate Outlier Report

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PH029_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 8270D SIM**
**Matrix: AQ**

| QC Sample ID (Associated Samples) | Compound | LCS %R | LCSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| P7WHLCSQ262159<br>P7WHLCSY262226<br>(EB-041113<br>FB-041113) | Di-n-octylphthalate | 53 | 56 | 57.00-145.00 | - | Di-n-octylphthalate | J(all detects)<br>UJ(all non-detects) |

**Method: 8270D**
**Matrix: AQ**

| QC Sample ID (Associated Samples) | Compound | LCS %R | LCSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| P7WILCSQ261540<br>P7WILCSY261607<br>(FB-041113) | 4-NITROPHENOL | 78 | 82 | 13.00-71.00 | - | 4-NITROPHENOL | J(all detects) |
| P7WILCSY261607<br>(FB-041113) | BENZOIC ACID | - | - | 10.00-69.00 | 37 (30.00) | BENZOIC ACID | J(all detects)<br>UJ(all non-detects) |

**Method: 8015M**
**Matrix: AQ**

| QC Sample ID (Associated Samples) | Compound | LCS %R | LCSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| P31037AQ320108A<br>P31037AY320129A<br>(EB-041113<br>FB-041113) | EFH (C8-C11) | 69 | 68 | 70.00-130.00 | - | EFH (C8-C11) | J(all detects)<br>UJ(all non-detects) |

**Method: 8330A**
**Matrix: AQ**

| QC Sample ID (Associated Samples) | Compound | LCS %R | LCSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| P31061AQ240828A<br>P31061AY240910A<br>(FB-041113) | 1,3,5-TRINITROBENZENE | 73 | - | 80.00-111.00 | - | 1,3,5-TRINITROBENZENE | J(all detects)<br>UJ(all non-detects) |
| | 1,3-DINITROBENZENE | 75 | - | 76.00-116.00 | - | 1,3-DINITROBENZENE | |
| | 2,4,6-TRINITROTOLUENE | 71 | - | 76.00-109.00 | - | 2,4,6-TRINITROTOLUENE | |
| | 2,4-DINITROTOLUENE | 67 | - | 76.00-104.00 | - | 2,4-DINITROTOLUENE | |
| | 2-AMINO-4,6-DINITROTOLUENE | 64 | 72 | 74.00-104.00 | - | 2-AMINO-4,6-DINITROTOLUEN | |
| | 2-NITROTOLUENE | 71 | - | 78.00-102.00 | - | 2-NITROTOLUENE | |
| | 3-NITROTOLUENE | 72 | - | 81.00-107.00 | - | 3-NITROTOLUENE | |
| | 4-NITROTOLUENE | 75 | - | 76.00-105.00 | - | 4-NITROTOLUENE | |
| | HMX | 66 | - | 73.00-104.00 | - | HMX | |
| | Nitroglycerin | 68 | 78 | 83.00-104.00 | - | Nitroglycerin | |
| | PETN | 74 | 86 | 88.00-128.00 | - | PETN | |
| | RDX | 72 | - | 74.00-107.00 | - | RDX | |

# Lab Control Spike/Lab Control Spike Duplicate Outlier Report

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PH029_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **8270D SIM**
***Matrix:*** **SO**

| *QC Sample ID (Associated Samples)* | *Compound* | *LCS %R* | *LCSD %R* | *%R Limits* | *RPD (Limits)* | *Affected Compounds* | *Flag* |
|---|---|---|---|---|---|---|---|
| **P5LALCSQ260240** (SL-536-SA7-SB-0.0-0.5 SL-553-SA7-SB-0.0-0.5 SL-554-SA7-SB-0.0-0.5 SL-555-SA7-SB-0.0-0.5) | ACENAPHTHENE | 120 | - | 69.00-114.00 | - | ACENAPHTHENE | J (all detects) |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PH029_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**

**Matrix: AQ**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| EB-041113 | 1,2,3,4,6,7,8-HPCDD | JBQ | 0.314 | 9.74 | PQL | pg/L | |
| | 1,2,3,4,6,7,8-HPCDF | JBQ | 0.443 | 9.74 | PQL | pg/L | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.321 | 9.74 | PQL | pg/L | |
| | 1,2,3,4,7,8-HxCDD | JQ | 0.322 | 9.74 | PQL | pg/L | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.378 | 9.74 | PQL | pg/L | |
| | 1,2,3,6,7,8-HXCDD | JBQ | 0.314 | 9.74 | PQL | pg/L | |
| | 1,2,3,6,7,8-HXCDF | JBQ | 0.354 | 9.74 | PQL | pg/L | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.463 | 9.74 | PQL | pg/L | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.272 | 9.74 | PQL | pg/L | |
| | 1,2,3,7,8-PECDD | JBQ | 1.24 | 9.74 | PQL | pg/L | |
| | 1,2,3,7,8-PECDF | JBQ | 0.820 | 9.74 | PQL | pg/L | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.202 | 9.74 | PQL | pg/L | |
| | 2,3,4,7,8-PECDF | JBQ | 0.492 | 9.74 | PQL | pg/L | |
| | OCDD | JBQ | 1.04 | 19.5 | PQL | pg/L | |
| | OCDF | JB | 0.655 | 19.5 | PQL | pg/L | |
| FB-041113 | 1,2,3,4,6,7,8-HPCDD | JBQ | 0.402 | 9.76 | PQL | pg/L | |
| | 1,2,3,4,6,7,8-HPCDF | JBQ | 0.254 | 9.76 | PQL | pg/L | |
| | 1,2,3,4,7,8-HxCDD | J | 0.125 | 9.76 | PQL | pg/L | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.324 | 9.76 | PQL | pg/L | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.221 | 9.76 | PQL | pg/L | |
| | 1,2,3,7,8,9-HXCDD | JBQ | 0.134 | 9.76 | PQL | pg/L | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.211 | 9.76 | PQL | pg/L | |
| | 1,2,3,7,8-PECDF | JBQ | 0.398 | 9.76 | PQL | pg/L | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.149 | 9.76 | PQL | pg/L | |
| | 2,3,4,7,8-PECDF | JBQ | 0.316 | 9.76 | PQL | pg/L | |
| | OCDF | JBQ | 0.840 | 19.5 | PQL | pg/L | |

**Method: 350.3**

**Matrix: AQ**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| FB-041113 | AMMONIA AS N | J | 0.050 | 0.20 | PQL | mg/L | J (all detects) |

**Method: 6010C**

**Matrix: AQ**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| EB-041113 | CALCIUM | J | 0.131 | 0.400 | PQL | mg/L | |
| | COPPER | J | 0.0035 | 0.0200 | PQL | mg/L | |
| | MANGANESE | J | 0.0012 | 0.0100 | PQL | mg/L | J (all detects) |
| | MOLYBDENUM | J | 0.0143 | 0.0200 | PQL | mg/L | |
| | TIN | J | 0.0024 | 0.0400 | PQL | mg/L | |
| | ZINC | J | 0.0041 | 0.0400 | PQL | mg/L | |
| FB-041113 | COPPER | J | 0.0036 | 0.0200 | PQL | mg/L | J (all detects) |
| | MOLYBDENUM | J | 0.0036 | 0.0200 | PQL | mg/L | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PH029_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 8260B**
**Matrix: AQ**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| FB-041113 | METHYLENE CHLORIDE | J | 2 | 5 | PQL | ug/L | J (all detects) |

**Method: 8270D**
**Matrix: AQ**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| FB-041113 | NAPHTHALENE | J | 0.2 | 0.5 | PQL | ug/L | J (all detects) |

**Method: 8270D SIM**
**Matrix: AQ**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| EB-041113 | 1-METHYLNAPHTHALENE | J | 0.020 | 0.055 | PQL | ug/L | |
| | 2-METHYLNAPHTHALENE | J | 0.027 | 0.055 | PQL | ug/L | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 0.11 | 1.1 | PQL | ug/L | J (all detects) |
| | Diethylphthalate | J | 0.24 | 1.1 | PQL | ug/L | |
| | Di-n-butylphthalate | J | 0.16 | 1.1 | PQL | ug/L | |
| FB-041113 | 1-METHYLNAPHTHALENE | J | 0.019 | 0.051 | PQL | ug/L | |
| | 2-METHYLNAPHTHALENE | J | 0.024 | 0.051 | PQL | ug/L | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 0.082 | 1.0 | PQL | ug/L | J (all detects) |
| | Diethylphthalate | J | 0.18 | 1.0 | PQL | ug/L | |
| | Di-n-butylphthalate | J | 0.17 | 1.0 | PQL | ug/L | |

**Method: 1613B**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-536-SA7-SB-0.0-0.5 | 1,2,3,4,7,8,9-HPCDF | JB | 0.861 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 1.30 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.465 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 3.42 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.489 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | J | 2.74 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JB | 0.158 | 4.97 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | J | 0.799 | 4.97 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.192 | 4.97 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.695 | 4.97 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.195 | 4.97 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JB | 0.0447 | 0.994 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.0619 | 0.994 | PQL | ng/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PH029_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-553-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 1.12 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.137 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.147 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.121 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 0.399 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.0953 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | J | 0.368 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JB | 0.0657 | 5.02 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JQ | 0.0481 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.149 | 5.02 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.122 | 5.02 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.144 | 5.02 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JBQ | 0.0659 | 1.00 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | JQ | 0.0333 | 1.00 | PQL | ng/Kg | |
| | OCDF | JB | 2.38 | 10.0 | PQL | ng/Kg | |
| SL-554-SA7-SB-0.0-0.5 | 1,2,3,4,7,8,9-HPCDF | JB | 0.599 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.627 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.505 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 1.60 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.356 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | J | 1.41 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JB | 0.293 | 5.13 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | J | 0.441 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.294 | 5.13 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.440 | 5.13 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.865 | 5.13 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JB | 0.0864 | 1.03 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.389 | 1.03 | PQL | ng/Kg | |
| SL-555-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 4.16 | 5.30 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.360 | 5.30 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.475 | 5.30 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.375 | 5.30 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 1.35 | 5.30 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.388 | 5.30 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JQ | 1.20 | 5.30 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JB | 0.400 | 5.30 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JQ | 0.383 | 5.30 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.427 | 5.30 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.433 | 5.30 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.849 | 5.30 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JBQ | 0.0496 | 1.06 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.395 | 1.06 | PQL | ng/Kg | |
| | OCDF | JB | 9.21 | 10.6 | PQL | ng/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PH029_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6010C**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-536-SA7-SB-0.0-0.5 | ARSENIC | J | 3.54 | 4.07 | PQL | mg/Kg | J (all detects) |
| | BERYLLIUM | J | 0.411 | 1.02 | PQL | mg/Kg | |
| | BORON | J | 2.81 | 10.2 | PQL | mg/Kg | |
| | CADMIUM | J | 0.162 | 1.02 | PQL | mg/Kg | |
| | SODIUM | J | 55.1 | 102 | PQL | mg/Kg | |
| | TIN | J | 2.49 | 10.2 | PQL | mg/Kg | |
| SL-553-SA7-SB-0.0-0.5 | BERYLLIUM | J | 0.509 | 1.00 | PQL | mg/Kg | J (all detects) |
| | CADMIUM | J | 0.229 | 1.00 | PQL | mg/Kg | |
| | SODIUM | J | 69.1 | 100 | PQL | mg/Kg | |
| | TIN | J | 2.70 | 10.0 | PQL | mg/Kg | |
| SL-554-SA7-SB-0.0-0.5 | BERYLLIUM | J | 0.549 | 1.02 | PQL | mg/Kg | J (all detects) |
| | CADMIUM | J | 0.169 | 1.02 | PQL | mg/Kg | |
| | SODIUM | J | 66.8 | 102 | PQL | mg/Kg | |
| | TIN | J | 2.54 | 10.2 | PQL | mg/Kg | |
| SL-555-SA7-SB-0.0-0.5 | ARSENIC | J | 3.64 | 4.12 | PQL | mg/Kg | J (all detects) |
| | BERYLLIUM | J | 0.575 | 1.03 | PQL | mg/Kg | |
| | BORON | J | 6.79 | 10.3 | PQL | mg/Kg | |
| | CADMIUM | J | 0.397 | 1.03 | PQL | mg/Kg | |
| | SODIUM | J | 76.8 | 103 | PQL | mg/Kg | |
| | TIN | J | 2.62 | 10.3 | PQL | mg/Kg | |
| | Zirconium | J | 0.902 | 5.15 | PQL | mg/Kg | |

**Method: 6020A**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-553-SA7-SB-0.0-0.5 | SELENIUM | J | 0.107 | 0.400 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0459 | 0.200 | PQL | mg/Kg | |
| SL-554-SA7-SB-0.0-0.5 | SELENIUM | J | 0.117 | 0.407 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0846 | 0.203 | PQL | mg/Kg | |
| SL-555-SA7-SB-0.0-0.5 | SELENIUM | J | 0.134 | 0.412 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0523 | 0.206 | PQL | mg/Kg | |
| | THALLIUM | J | 0.188 | 0.206 | PQL | mg/Kg | |

**Method: 7471B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-536-SA7-SB-0.0-0.5 | MERCURY | J | 0.0113 | 0.0192 | PQL | mg/Kg | J (all detects) |
| SL-555-SA7-SB-0.0-0.5 | MERCURY | J | 0.0178 | 0.0213 | PQL | mg/Kg | J (all detects) |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH029** **Laboratory: LL**

**EDD Filename: PH029_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 8015M**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-536-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 2.2 | 5.1 | PQL | mg/Kg | J (all detects) |

**Method: 8270D SIM**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-536-SA7-SB-0.0-0.5 | ANTHRACENE | J | 0.41 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BENZO(E)PYRENE | J | 4.3 | 17 | PQL | ug/Kg | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 10 | 18 | PQL | ug/Kg | |
| | Di-n-butylphthalate | J | 7.6 | 18 | PQL | ug/Kg | |
| | FLUORENE | J | 0.72 | 1.7 | PQL | ug/Kg | |
| | NAPHTHALENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| SL-553-SA7-SB-0.0-0.5 | BENZO(B)FLUORANTHENE | J | 1.2 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 6.8 | 18 | PQL | ug/Kg | |
| | CHRYSENE | J | 1.1 | 1.7 | PQL | ug/Kg | |
| | FLUORANTHENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| | PHENANTHRENE | J | 0.68 | 1.7 | PQL | ug/Kg | |
| | PYRENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| SL-554-SA7-SB-0.0-0.5 | BENZO(E)PYRENE | J | 80 | 180 | PQL | ug/Kg | J (all detects) |
| | PYRENE | J | 8.3 | 17 | PQL | ug/Kg | |

LDC #: 29836C4

# VALIDATION COMPLETENESS WORKSHEET

SDG #: PH029

ADR

Laboratory: Eurofins Lancaster Laboratories

Date: 6/11/13

Page: 1 of 1

Reviewer: CR

2nd Reviewer: [illegible]

**METHOD:** Metals (EPA SW 846 Method 6010C/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

| | Validation Area | | Comments |
|---|---|---|---|
| I. | Technical holding times | – | Sampling dates: 4/11/13 |
| II. | ICP/MS Tune | – | |
| III. | Calibration | – | |
| IV. | Blanks | SW | |
| V. | ICP Interference Check Sample (ICS) Analysis | – | |
| VI. | Matrix Spike Analysis | N | MS/D (from PH027) → all soil |
| VII. | Duplicate Sample Analysis | N | Dup ↓ |
| VIII. | Laboratory Control Samples (LCS) | A | LCS/D |
| IX. | Internal Standard (ICP-MS) | N | |
| X. | Furnace Atomic Absorption QC | N | |
| XI. | ICP Serial Dilution | A | |
| XII. | Sample Result Verification | N | |
| XIII. | Overall Assessment of Data | N | |
| XIV. | Field Duplicates | – | |
| XV | Field Blanks | SW | EB=5 FB=6 |

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | SL-553-SA7-SB-0.0-0.5 | 11 | | 21 | | 31 | |
| 2 | SL-554-SA7-SB-0.0-0.5 | 12 | | 22 | | 32 | |
| 3 | SL-555-SA7-SB-0.0-0.5 | 13 | | 23 | | 33 | |
| 4 | SL-536-SA7-SB-0.0-0.5 | 14 | | 24 | | 34 | |
| 5 | EB-041113 | 15 | | 25 | | 35 | |
| 6 | FB-041113 | 16 | | 26 | | 36 | |
| 7 | | 17 | | 27 | | 37 | |
| 8 | | 18 | | 28 | | 38 | |
| 9 | | 19 | | 29 | | 39 | |
| 10 | | 20 | | 30 | | 40 | |

Notes: _____

LDC #: 29836C4

**VALIDATION FINDINGS WORKSHEET**
**PB/ICB/CCB QUALIFIED SAMPLES**


Reviewer: CA
2nd Reviewer:

**METHOD:** Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x Reason: B

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 1-3

| Analyte | Maximum PB[a] (mg/Kg) | Maximum PB[a] (ug/l ) | Maximum ICB/CCB[a] (ug/l ) | Action Level | 1 | 2 | 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| As | | | 5.0 | 2.5 | | | | | | | | | |
| Be | | | 2.0 | 1 | 0.51 | 0.55 | 0.58 | | | | | | |
| Cd | | | 2.0 | 1 | 0.23 | 0.17 | 0.40 | | | | | | |
| Co | | | 2.1 | 1.05 | | | | | | | | | |
| Cu | | | 3.4 | 1.7 | | | | | | | | | |
| Mo | | | 4.6 | 2.3 | | | | | | | | | |
| Ni | | | 2.5 | 1.25 | | | | | | | | | |

Sample Concentration units, unless otherwise noted: ~~ug/L~~ mg/L Associated Samples: All Water

| Analyte | Maximum PB[a] (mg/Kg) | Maximum PB[a] (ug/l ) | Maximum ICB/CCB[a] (ug/l ) | Action Level | 5 | 6 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cu | | | 3.3 | 0.0165 | 0.0035 | 0.0036 | | | | | | | |
| Mo | | | 4.8 | 0.024 | 0.0143 | 0.0036 | | | | | | | |

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 29836C4

# VALIDATION FINDINGS WORKSHEET
## Field Blanks


Reviewer: A
2nd Reviewer: A

**METHOD:** Trace Metals (EPA SW846 6010B/7000)

**Blank units:** mg/L **Associated sample units:** mg/Kg Reason: F
**Sampling date:** 4/11/13 Soil factor applied 100x
**Field blank type:** (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

| Analyte | Blank ID | Blank ID | Sample Identification | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB-041113 | FB-041113 | Action Limit | No Qualifiers | | | | | | | | | | |
| Ca | 0.131 | | 65.5 | | | | | | | | | | | |
| Cu | 0.0035 | 0.0036 | 1.8 | | | | | | | | | | | |
| Mn | 0.0012 | | 0.6 | | | | | | | | | | | |
| Mo | 0.0143 | 0.0036 | 7.15 | | | | | | | | | | | |
| Sn | 0.0024 | | 1.2 | | | | | | | | | | | |
| Zn | 0.0041 | | 2.05 | | | | | | | | | | | |
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CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

# Attachment I

# Sample ID Cross Reference and Data Review Level

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 12-Apr-2013 | TB-041213 | 7022142 | TB | 5030B | 8015M | III |
| 12-Apr-2013 | EB-041213 | 7022143 | EB | METHOD | 8315A | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0 | 7022144 | N | 3050B | 6010C | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0 | 7022144 | N | 3050B | 6020A | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0 | 7022144 | N | 3546 | 8015M | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0 | 7022144 | N | 3546 | 8082A | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0 | 7022144 | N | 3546 | 8270D SIM | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0 | 7022144 | N | 5035A | 8015M | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0 | 7022144 | N | METHOD | 1613B | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0 | 7022144 | N | METHOD | 7471B | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MS | 7022145 | MS | 3050B | 6010C | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MS | 7022145 | MS | 3050B | 6020A | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MS | 7022145 | MS | 3546 | 8015M | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MS | 7022145 | MS | 3546 | 8082A | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MS | 7022145 | MS | 3546 | 8270D SIM | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MS | 7022145 | MS | 5035A | 8015M | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MS | 7022145 | MS | METHOD | 1613B | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MS | 7022145 | MS | METHOD | 7471B | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MSD | 7022146 | MSD | 3050B | 6010C | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MSD | 7022146 | MSD | 3050B | 6020A | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MSD | 7022146 | MSD | 3546 | 8015M | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MSD | 7022146 | MSD | 3546 | 8082A | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MSD | 7022146 | MSD | 3546 | 8270D SIM | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MSD | 7022146 | MSD | 5035A | 8015M | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MSD | 7022146 | MSD | METHOD | 1613B | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0MSD | 7022146 | MSD | METHOD | 7471B | III |

*III = EPA Level 3 Data Review*
*IV = EPA Level 4 Data Validation*
*N = Normal Sample*
*FD = Field Duplicate*
*TB = Trip Blank*
*FB = Field Blank*
*MS = Matrix Spike*
*MSD = Matrix Spike Duplicate*

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0DUP | 7022147 | DUP | 3050B | 6010C | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0DUP | 7022147 | DUP | 3050B | 6020A | III |
| 12-Apr-2013 | SL-536-SA7-SB-3.0-4.0DUP | 7022147 | DUP | METHOD | 7471B | III |
| 12-Apr-2013 | SL-836-SA7-SB-3.0-4.0 | 7022148 | FD | 3050B | 6010C | III |
| 12-Apr-2013 | SL-836-SA7-SB-3.0-4.0 | 7022148 | FD | 3050B | 6020A | III |
| 12-Apr-2013 | SL-836-SA7-SB-3.0-4.0 | 7022148 | FD | 3546 | 8015M | III |
| 12-Apr-2013 | SL-836-SA7-SB-3.0-4.0 | 7022148 | FD | 3546 | 8082A | III |
| 12-Apr-2013 | SL-836-SA7-SB-3.0-4.0 | 7022148 | FD | 3546 | 8270D SIM | III |
| 12-Apr-2013 | SL-836-SA7-SB-3.0-4.0 | 7022148 | FD | 5035A | 8015M | III |
| 12-Apr-2013 | SL-836-SA7-SB-3.0-4.0 | 7022148 | FD | METHOD | 1613B | III |
| 12-Apr-2013 | SL-836-SA7-SB-3.0-4.0 | 7022148 | FD | METHOD | 7471B | III |
| 12-Apr-2013 | SL-535-SA7-SB-0.0-0.5 | 7022149 | N | 3050B | 6010C | III |
| 12-Apr-2013 | SL-535-SA7-SB-0.0-0.5 | 7022149 | N | 3050B | 6020A | III |
| 12-Apr-2013 | SL-535-SA7-SB-0.0-0.5 | 7022149 | N | 3546 | 8015M | III |
| 12-Apr-2013 | SL-535-SA7-SB-0.0-0.5 | 7022149 | N | 3546 | 8082A | III |
| 12-Apr-2013 | SL-535-SA7-SB-0.0-0.5 | 7022149 | N | 3546 | 8270D SIM | III |
| 12-Apr-2013 | SL-535-SA7-SB-0.0-0.5 | 7022149 | N | METHOD | 1613B | III |
| 12-Apr-2013 | SL-535-SA7-SB-0.0-0.5 | 7022149 | N | METHOD | 7471B | III |
| 12-Apr-2013 | SL-535-SA7-SB-4.0-5.0 | 7022150 | N | 3050B | 6010C | III |
| 12-Apr-2013 | SL-535-SA7-SB-4.0-5.0 | 7022150 | N | 3050B | 6020A | III |
| 12-Apr-2013 | SL-535-SA7-SB-4.0-5.0 | 7022150 | N | 3546 | 8015M | III |
| 12-Apr-2013 | SL-535-SA7-SB-4.0-5.0 | 7022150 | N | 3546 | 8082A | III |
| 12-Apr-2013 | SL-535-SA7-SB-4.0-5.0 | 7022150 | N | 3546 | 8270D SIM | III |
| 12-Apr-2013 | SL-535-SA7-SB-4.0-5.0 | 7022150 | N | 5035A | 8015M | III |
| 12-Apr-2013 | SL-535-SA7-SB-4.0-5.0 | 7022150 | N | METHOD | 1613B | III |
| 12-Apr-2013 | SL-535-SA7-SB-4.0-5.0 | 7022150 | N | METHOD | 7471B | III |

*III = EPA Level 3 Data Review* *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
*IV = EPA Level 4 Data Validation* *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 12-Apr-2013 | SL-535-SA7-SB-9.0-10.0 | 7022151 | N | 3050B | 6010C | III |
| 12-Apr-2013 | SL-535-SA7-SB-9.0-10.0 | 7022151 | N | 3050B | 6020A | III |
| 12-Apr-2013 | SL-535-SA7-SB-9.0-10.0 | 7022151 | N | 3546 | 8015M | III |
| 12-Apr-2013 | SL-535-SA7-SB-9.0-10.0 | 7022151 | N | 3546 | 8082A | III |
| 12-Apr-2013 | SL-535-SA7-SB-9.0-10.0 | 7022151 | N | 3546 | 8270D SIM | III |
| 12-Apr-2013 | SL-535-SA7-SB-9.0-10.0 | 7022151 | N | 5035A | 8015M | III |
| 12-Apr-2013 | SL-535-SA7-SB-9.0-10.0 | 7022151 | N | METHOD | 1613B | III |
| 12-Apr-2013 | SL-535-SA7-SB-9.0-10.0 | 7022151 | N | METHOD | 7471B | III |
| 12-Apr-2013 | SL-534-SA7-SB-0.0-0.5 | 7022152 | N | 3050B | 6010C | III |
| 12-Apr-2013 | SL-534-SA7-SB-0.0-0.5 | 7022152 | N | 3050B | 6020A | III |
| 12-Apr-2013 | SL-534-SA7-SB-0.0-0.5 | 7022152 | N | 3546 | 8015M | III |
| 12-Apr-2013 | SL-534-SA7-SB-0.0-0.5 | 7022152 | N | 3546 | 8082A | III |
| 12-Apr-2013 | SL-534-SA7-SB-0.0-0.5 | 7022152 | N | 3546 | 8270D SIM | III |
| 12-Apr-2013 | SL-534-SA7-SB-0.0-0.5 | 7022152 | N | METHOD | 1613B | III |
| 12-Apr-2013 | SL-534-SA7-SB-0.0-0.5 | 7022152 | N | METHOD | 7471B | III |

*III = EPA Level 3 Data Review*
*IV = EPA Level 4 Data Validation*
*N = Normal Sample*
*FD = Field Duplicate*
*TB = Trip Blank*
*FB = Field Blank*
*MS = Matrix Spike*
*MSD = Matrix Spike Duplicate*

# Attachment II

# Overall Data Qualification Summary

# Data Qualifier Summary

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

**Sample ID:** SL-534-SA7-SB-0.0-0.5 **Collected:** 4/12/2013 2:30:00 **Analysis Type:** RES/TOT **Dilution:** 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.96 | J | 0.519 | MDL | 4.15 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 2.83 | J | 0.343 | MDL | 4.15 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.592 | J | 0.0696 | MDL | 1.04 | PQL | mg/Kg | J | Z |
| BORON | 4.80 | J | 0.862 | MDL | 10.4 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.533 | J | 0.0343 | MDL | 1.04 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.335 | J | 0.177 | MDL | 2.08 | PQL | mg/Kg | U | F, F |
| PHOSPHORUS | 532 | | 0.530 | MDL | 10.4 | PQL | mg/Kg | J | Q |
| POTASSIUM | 4390 | | 14.0 | MDL | 104 | PQL | mg/Kg | J | Q |
| SODIUM | 60.8 | J | 17.3 | MDL | 104 | PQL | mg/Kg | J | Z |
| TIN | 2.76 | J | 0.228 | MDL | 10.4 | PQL | mg/Kg | U | B |
| Zirconium | 1.13 | J | 0.862 | MDL | 5.19 | PQL | mg/Kg | J | Z |

**Sample ID:** SL-535-SA7-SB-0.0-0.5 **Collected:** 4/12/2013 10:30:00 **Analysis Type:** RES/TOT **Dilution:** 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.78 | J | 0.499 | MDL | 3.99 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 2.11 | J | 0.329 | MDL | 3.99 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.521 | J | 0.0669 | MDL | 0.998 | PQL | mg/Kg | J | Z |
| BORON | 3.82 | J | 0.828 | MDL | 9.98 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.541 | J | 0.0329 | MDL | 0.998 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.281 | J | 0.170 | MDL | 2.00 | PQL | mg/Kg | U | F, F |
| PHOSPHORUS | 484 | | 0.509 | MDL | 9.98 | PQL | mg/Kg | J | Q |
| POTASSIUM | 4110 | | 13.5 | MDL | 99.8 | PQL | mg/Kg | J | Q |
| SODIUM | 61.6 | J | 16.7 | MDL | 99.8 | PQL | mg/Kg | J | Z |
| TIN | 2.69 | J | 0.220 | MDL | 9.98 | PQL | mg/Kg | U | B |

**Sample ID:** SL-535-SA7-SB-4.0-5.0 **Collected:** 4/12/2013 10:57:00 **Analysis Type:** RES/TOT **Dilution:** 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 2.47 | J | 0.506 | MDL | 4.05 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 2.17 | J | 0.334 | MDL | 4.05 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.596 | J | 0.0678 | MDL | 1.01 | PQL | mg/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

*Sample ID:* SL-535-SA7-SB-4.0-5.0 *Collected:* 4/12/2013 10:57:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BORON | 2.92 | J | 0.840 | MDL | 10.1 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.603 | J | 0.0334 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.331 | J | 0.172 | MDL | 2.02 | PQL | mg/Kg | U | F, F |
| PHOSPHORUS | 531 | | 0.516 | MDL | 10.1 | PQL | mg/Kg | J | Q |
| POTASSIUM | 4100 | | 13.7 | MDL | 101 | PQL | mg/Kg | J | Q |
| SODIUM | 70.7 | J | 16.9 | MDL | 101 | PQL | mg/Kg | J | Z |
| TIN | 2.73 | J | 0.223 | MDL | 10.1 | PQL | mg/Kg | U | B |
| Zirconium | 1.05 | J | 0.840 | MDL | 5.06 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-535-SA7-SB-9.0-10.0 *Collected:* 4/12/2013 11:30:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 2.10 | J | 0.508 | MDL | 4.06 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 2.20 | J | 0.335 | MDL | 4.06 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.546 | J | 0.0680 | MDL | 1.02 | PQL | mg/Kg | J | Z |
| BORON | 2.37 | J | 0.843 | MDL | 10.2 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.511 | J | 0.0335 | MDL | 1.02 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.486 | J | 0.173 | MDL | 2.03 | PQL | mg/Kg | U | F, F |
| PHOSPHORUS | 470 | | 0.518 | MDL | 10.2 | PQL | mg/Kg | J | Q |
| POTASSIUM | 3650 | | 13.7 | MDL | 102 | PQL | mg/Kg | J | Q |
| SODIUM | 71.3 | J | 17.0 | MDL | 102 | PQL | mg/Kg | J | Z |
| TIN | 2.86 | J | 0.223 | MDL | 10.2 | PQL | mg/Kg | U | B |

*Sample ID:* SL-536-SA7-SB-3.0-4.0 *Collected:* 4/12/2013 8:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.58 | J | 0.494 | MDL | 3.95 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 2.06 | J | 0.326 | MDL | 3.95 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.482 | J | 0.0661 | MDL | 0.987 | PQL | mg/Kg | J | Z |
| BORON | 3.20 | J | 0.819 | MDL | 9.87 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.420 | J | 0.0326 | MDL | 0.987 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 1.23 | J | 0.168 | MDL | 1.97 | PQL | mg/Kg | UJ | FD, F, F |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

*Sample ID:* SL-536-SA7-SB-3.0-4.0 *Collected:* 4/12/2013 8:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| PHOSPHORUS | 367 | | 0.503 | MDL | 9.87 | PQL | mg/Kg | J | Q |
| POTASSIUM | 2760 | | 13.3 | MDL | 98.7 | PQL | mg/Kg | J | Q |
| SODIUM | 61.3 | J | 16.5 | MDL | 98.7 | PQL | mg/Kg | J | Z |
| TIN | 2.92 | J | 0.217 | MDL | 9.87 | PQL | mg/Kg | U | B |
| Zirconium | 1.11 | J | 0.819 | MDL | 4.94 | PQL | mg/Kg | J | Z, FD |

*Sample ID:* SL-836-SA7-SB-3.0-4.0 *Collected:* 4/12/2013 9:00:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.47 | J | 0.495 | MDL | 3.96 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 2.38 | J | 0.326 | MDL | 3.96 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.501 | J | 0.0663 | MDL | 0.989 | PQL | mg/Kg | J | Z |
| BORON | 2.90 | J | 0.821 | MDL | 9.89 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.453 | J | 0.0326 | MDL | 0.989 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.271 | J | 0.168 | MDL | 1.98 | PQL | mg/Kg | UJ | FD, F, F |
| PHOSPHORUS | 344 | | 0.505 | MDL | 9.89 | PQL | mg/Kg | J | Q |
| POTASSIUM | 2710 | | 13.4 | MDL | 98.9 | PQL | mg/Kg | J | Q |
| SODIUM | 59.4 | J | 16.5 | MDL | 98.9 | PQL | mg/Kg | J | Z |
| TIN | 2.71 | J | 0.218 | MDL | 9.89 | PQL | mg/Kg | U | B |
| Zirconium | 4.95 | U | 0.821 | MDL | 4.95 | PQL | mg/Kg | UJ | FD |

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

*Sample ID:* SL-534-SA7-SB-0.0-0.5 *Collected:* 4/12/2013 2:30:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0407 | J | 0.0208 | MDL | 0.208 | PQL | mg/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

*Sample ID:* SL-535-SA7-SB-4.0-5.0 *Collected:* 4/12/2013 10:57:00 *Analysis Type:* REA/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.166 | J | 0.101 | MDL | 0.405 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-535-SA7-SB-4.0-5.0 *Collected:* 4/12/2013 10:57:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0452 | J | 0.0202 | MDL | 0.202 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-535-SA7-SB-9.0-10.0 *Collected:* 4/12/2013 11:30:00 *Analysis Type:* REA/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.119 | J | 0.102 | MDL | 0.406 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-535-SA7-SB-9.0-10.0 *Collected:* 4/12/2013 11:30:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0260 | J | 0.0203 | MDL | 0.203 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-536-SA7-SB-3.0-4.0 *Collected:* 4/12/2013 8:50:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0307 | J | 0.0197 | MDL | 0.197 | PQL | mg/Kg | J | Z, FD |

*Sample ID:* SL-836-SA7-SB-3.0-4.0 *Collected:* 4/12/2013 9:00:00 *Analysis Type:* RES/TOT *Dilution:* 2

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.198 | U | 0.0198 | MDL | 0.198 | PQL | mg/Kg | UJ | FD |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 7471B** **Matrix: SO**

*Sample ID:* SL-534-SA7-SB-0.0-0.5 *Collected:* 4/12/2013 2:30:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0188 | J | 0.0107 | MDL | 0.0207 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-535-SA7-SB-0.0-0.5 *Collected:* 4/12/2013 10:30:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0151 | J | 0.0104 | MDL | 0.0202 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-535-SA7-SB-4.0-5.0 *Collected:* 4/12/2013 10:57:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0108 | J | 0.0104 | MDL | 0.0201 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-535-SA7-SB-9.0-10.0 *Collected:* 4/12/2013 11:30:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0149 | J | 0.0108 | MDL | 0.0208 | PQL | mg/Kg | J | Z |

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-534-SA7-SB-0.0-0.5 *Collected:* 4/12/2013 2:30:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 2.74 | JB | 0.0189 | MDL | 5.15 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.289 | JB | 0.0248 | MDL | 5.15 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.336 | JB | 0.0407 | MDL | 5.15 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.253 | JB | 0.0291 | MDL | 5.15 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 0.701 | JB | 0.0411 | MDL | 5.15 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.204 | JBQ | 0.0278 | MDL | 5.15 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 0.976 | J | 0.0392 | MDL | 5.15 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.166 | JBQ | 0.0303 | MDL | 5.15 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.344 | J | 0.0346 | MDL | 5.15 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-534-SA7-SB-0.0-0.5 *Collected:* 4/12/2013 2:30:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,7,8-PECDF | 0.118 | JBQ | 0.0188 | MDL | 5.15 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.349 | JBQ | 0.0275 | MDL | 5.15 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.156 | JBQ | 0.0173 | MDL | 5.15 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.0346 | JBQ | 0.0296 | MDL | 1.03 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDF | 0.0508 | JQ | 0.0409 | MDL | 1.03 | PQL | ng/Kg | J | Z |
| OCDF | 5.52 | JB | 0.0250 | MDL | 10.3 | PQL | ng/Kg | J | Z |

*Sample ID:* SL-535-SA7-SB-0.0-0.5 *Collected:* 4/12/2013 10:30:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 3.82 | JB | 0.0221 | MDL | 5.10 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.319 | JB | 0.0258 | MDL | 5.10 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.853 | JB | 0.0383 | MDL | 5.10 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.329 | JB | 0.0294 | MDL | 5.10 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 1.87 | JB | 0.0392 | MDL | 5.10 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.323 | JBQ | 0.0286 | MDL | 5.10 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 1.51 | J | 0.0366 | MDL | 5.10 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.215 | JBQ | 0.0289 | MDL | 5.10 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.576 | JQ | 0.0373 | MDL | 5.10 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.421 | JB | 0.0209 | MDL | 5.10 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.359 | JB | 0.0286 | MDL | 5.10 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.380 | JB | 0.0197 | MDL | 5.10 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.166 | JB | 0.0277 | MDL | 1.02 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDF | 0.197 | JQ | 0.0411 | MDL | 1.02 | PQL | ng/Kg | J | Z |
| OCDF | 7.05 | JB | 0.0215 | MDL | 10.2 | PQL | ng/Kg | J | Z |

*Sample ID:* SL-535-SA7-SB-4.0-5.0 *Collected:* 4/12/2013 10:57:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 1.55 | JB | 0.0229 | MDL | 5.19 | PQL | ng/Kg | J | Z |
| 1,2,3,4,6,7,8-HPCDF | 0.220 | JB | 0.00945 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8,9-HPCDF | 0.0491 | JBQ | 0.0125 | MDL | 5.19 | PQL | ng/Kg | U | B |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-535-SA7-SB-4.0-5.0 *Collected:* 4/12/2013 10:57:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8-HxCDD | 0.0713 | JB | 0.0228 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HXCDF | 0.0686 | JB | 0.0148 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDD | 0.110 | JB | 0.0232 | MDL | 5.19 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.0431 | JB | 0.0142 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDD | 0.108 | J | 0.0214 | MDL | 5.19 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.110 | JBQ | 0.0145 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.0750 | JQ | 0.0227 | MDL | 5.19 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.124 | JBQ | 0.0117 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.0628 | JB | 0.0137 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 2,3,4,7,8-PECDF | 0.124 | JB | 0.0111 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDF | 0.0363 | JQ | 0.0212 | MDL | 1.04 | PQL | ng/Kg | J | Z |
| OCDF | 0.470 | JB | 0.0214 | MDL | 10.4 | PQL | ng/Kg | J | Z |

*Sample ID:* SL-535-SA7-SB-9.0-10.0 *Collected:* 4/12/2013 11:30:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 0.256 | JB | 0.0200 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,4,6,7,8-HPCDF | 0.0660 | JBQ | 0.00688 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8,9-HPCDF | 0.0401 | JBQ | 0.0101 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HxCDD | 0.0280 | JBQ | 0.0171 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HXCDF | 0.0419 | JBQ | 0.00984 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDD | 0.0413 | JBQ | 0.0177 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDF | 0.0241 | JBQ | 0.00914 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDF | 0.0462 | JBQ | 0.0102 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.0562 | JQ | 0.0229 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.0848 | JBQ | 0.0107 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.0231 | JBQ | 0.00947 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 2,3,4,7,8-PECDF | 0.0548 | JB | 0.00993 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDD | 0.0291 | JBQ | 0.0235 | MDL | 1.04 | PQL | ng/Kg | U | B |
| OCDD | 1.74 | JB | 0.0185 | MDL | 10.4 | PQL | ng/Kg | J | Z |
| OCDF | 0.121 | JBQ | 0.0196 | MDL | 10.4 | PQL | ng/Kg | U | B |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-536-SA7-SB-3.0-4.0 *Collected:* 4/12/2013 8:50:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 18.2 | B | 0.0430 | MDL | 5.02 | PQL | ng/Kg | J | Q, FD |
| 1,2,3,4,6,7,8-HPCDF | 2.14 | JB | 0.0220 | MDL | 5.02 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,4,7,8,9-HPCDF | 0.194 | JBQ | 0.0284 | MDL | 5.02 | PQL | ng/Kg | UJ | B, FD |
| 1,2,3,4,7,8-HxCDD | 0.287 | JB | 0.0472 | MDL | 5.02 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,4,7,8-HXCDF | 0.0916 | JB | 0.0374 | MDL | 5.02 | PQL | ng/Kg | UJ | B, FD |
| 1,2,3,6,7,8-HXCDD | 0.778 | JB | 0.0484 | MDL | 5.02 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,6,7,8-HXCDF | 0.157 | JB | 0.0348 | MDL | 5.02 | PQL | ng/Kg | UJ | B, FD |
| 1,2,3,7,8,9-HXCDD | 0.575 | J | 0.0440 | MDL | 5.02 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,7,8,9-HXCDF | 0.0426 | JBQ | 0.0404 | MDL | 5.02 | PQL | ng/Kg | UJ | B, FD |
| 1,2,3,7,8-PECDD | 0.238 | JQ | 0.0493 | MDL | 5.02 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.0801 | JB | 0.0276 | MDL | 5.02 | PQL | ng/Kg | UJ | B, FD |
| 2,3,4,6,7,8-HXCDF | 0.189 | JBQ | 0.0364 | MDL | 5.02 | PQL | ng/Kg | J | Z, FD |
| 2,3,4,7,8-PECDF | 0.0632 | JBQ | 0.0262 | MDL | 5.02 | PQL | ng/Kg | UJ | B, FD |
| 2,3,7,8-TCDD | 1.00 | U | 0.0540 | MDL | 1.00 | PQL | ng/Kg | UJ | FD |
| 2,3,7,8-TCDF | 1.00 | U | 0.0483 | MDL | 1.00 | PQL | ng/Kg | UJ | FD |
| OCDD | 150 | B | 0.0476 | MDL | 10.0 | PQL | ng/Kg | J | Q, Q, FD |
| OCDF | 3.87 | JB | 0.0387 | MDL | 10.0 | PQL | ng/Kg | J | Z, FD |

*Sample ID:* SL-836-SA7-SB-3.0-4.0 *Collected:* 4/12/2013 9:00:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 38.9 | B | 0.0387 | MDL | 5.13 | PQL | ng/Kg | J | FD |
| 1,2,3,4,6,7,8-HPCDF | 5.29 | B | 0.0198 | MDL | 5.13 | PQL | ng/Kg | J | FD |
| 1,2,3,4,7,8,9-HPCDF | 0.529 | JB | 0.0274 | MDL | 5.13 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,4,7,8-HxCDD | 0.724 | JB | 0.0326 | MDL | 5.13 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,4,7,8-HXCDF | 0.302 | JB | 0.0306 | MDL | 5.13 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,6,7,8-HXCDD | 1.87 | JB | 0.0322 | MDL | 5.13 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,6,7,8-HXCDF | 0.396 | JB | 0.0285 | MDL | 5.13 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,7,8,9-HXCDD | 1.41 | J | 0.0302 | MDL | 5.13 | PQL | ng/Kg | J | Z, FD |
| 1,2,3,7,8,9-HXCDF | 0.187 | JB | 0.0297 | MDL | 5.13 | PQL | ng/Kg | UJ | B, FD |
| 1,2,3,7,8-PECDD | 0.380 | J | 0.0346 | MDL | 5.13 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.260 | JBQ | 0.0187 | MDL | 5.13 | PQL | ng/Kg | UJ | B, FD |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-836-SA7-SB-3.0-4.0 *Collected:* 4/12/2013 9:00:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2,3,4,6,7,8-HXCDF | 0.439 | JB | 0.0267 | MDL | 5.13 | PQL | ng/Kg | J | Z, FD |
| 2,3,4,7,8-PECDF | 0.231 | JB | 0.0179 | MDL | 5.13 | PQL | ng/Kg | J | Z, FD |
| 2,3,7,8-TCDD | 0.0709 | JBQ | 0.0244 | MDL | 1.03 | PQL | ng/Kg | UJ | B, FD |
| 2,3,7,8-TCDF | 0.0308 | JQ | 0.0269 | MDL | 1.03 | PQL | ng/Kg | J | Z, FD |
| OCDD | 358 | B | 0.0358 | MDL | 10.3 | PQL | ng/Kg | J | FD |
| OCDF | 9.39 | JB | 0.0276 | MDL | 10.3 | PQL | ng/Kg | J | Z, FD |

**Method Category: SVOA**

**Method: 8015M** **Matrix: SO**

*Sample ID:* SL-534-SA7-SB-0.0-0.5 *Collected:* 4/12/2013 2:30:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 3.6 | J | 2.1 | MDL | 5.2 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-535-SA7-SB-0.0-0.5 *Collected:* 4/12/2013 10:30:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 3.5 | J | 2.1 | MDL | 5.1 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-536-SA7-SB-3.0-4.0 *Collected:* 4/12/2013 8:50:00 *Analysis Type:* REA *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C21-C30) | 6.7 | | 2.1 | MDL | 5.1 | PQL | mg/Kg | J | Q, Q, FD |
| EFH (C30-C40) | 14 | | 4.1 | MDL | 10 | PQL | mg/Kg | J | Q, Q, FD |

*Sample ID:* SL-836-SA7-SB-3.0-4.0 *Collected:* 4/12/2013 9:00:00 *Analysis Type:* REA *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C21-C30) | 5.1 | U | 2.1 | MDL | 5.1 | PQL | mg/Kg | UJ | FD |
| EFH (C30-C40) | 10 | U | 4.1 | MDL | 10 | PQL | mg/Kg | UJ | FD |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 8270D SIM** **Matrix: SO**

*Sample ID:* SL-534-SA7-SB-0.0-0.5 *Collected:* 4/12/2013 2:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(A)PYRENE | 0.91 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(B)FLUORANTHENE | 1.4 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 9.3 | J | 6.2 | MDL | 19 | PQL | ug/Kg | J | Z |
| CHRYSENE | 1.5 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| FLUORENE | 1.4 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| NAPHTHALENE | 0.83 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | U | F |
| PHENANTHRENE | 1.1 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |

*Sample ID:* SL-535-SA7-SB-0.0-0.5 *Collected:* 4/12/2013 10:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(B)FLUORANTHENE | 1.2 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 6.3 | J | 6.1 | MDL | 18 | PQL | ug/Kg | J | Z |
| CHRYSENE | 1.1 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| FLUORANTHENE | 1.1 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| FLUORENE | 0.79 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PHENANTHRENE | 0.76 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PYRENE | 1.2 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

*Sample ID:* SL-536-SA7-SB-3.0-4.0 *Collected:* 4/12/2013 8:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(A)ANTHRACENE | 0.98 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(A)PYRENE | 1.2 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(G,H,I)PERYLENE | 1.1 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(K)FLUORANTHENE | 0.89 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| INDENO(1,2,3-CD)PYRENE | 0.91 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PHENANTHRENE | 1.2 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PYRENE | 2.6 | | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Q |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 8270D SIM** **Matrix: SO**

*Sample ID:* SL-836-SA7-SB-3.0-4.0 *Collected:* 4/12/2013 9:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(A)ANTHRACENE | 0.91 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(A)PYRENE | 1.5 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(K)FLUORANTHENE | 1.0 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| INDENO(1,2,3-CD)PYRENE | 1.3 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

**Method Category: SVOA**

**Method: 8315A** **Matrix: AQ**

*Sample ID:* EB-041213 *Collected:* 4/12/2013 8:05:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| FORMALDEHYDE | 50 | U | 30 | MDL | 50 | PQL | ug/L | UJ | E |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

## Reason Code Legend

| *Reason Code* | *Description* |
|---|---|
| B | Method Blank Contamination |
| E | Laboratory Control Precision |
| E | Laboratory Duplicate Precision |
| E | Matrix Spike Precision |
| F | Equipment Blank Contamination |
| F | Field Blank Contamination |
| FD | Field Duplicate Precision |
| L | Laboratory Control Precision |
| Q | Laboratory Duplicate Precision |
| Q | Matrix Spike Lower Estimation |
| Q | Matrix Spike Precision |
| Q | Matrix Spike Upper Estimation |
| S | Surrogate/Tracer Recovery Upper Estimation |
| Z | Reporting Limit Trace Value |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Enclosure I

# Level III ADR Outliers
# (including Manual Review Outliers)

# Quality Control
# Outlier Reports

# PH030

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **1613B**
***Matrix:*** **SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| BLK1060B371944 | 4/17/2013 7:44:00 PM | 1,2,3,4,6,7,8-HPCDD | 0.0840 ng/Kg | SL-534-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,6,7,8-HPCDF | 0.0530 ng/Kg | SL-535-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8,9-HPCDF | 0.0413 ng/Kg | SL-535-SA7-SB-4.0-5.0 |
| | | 1,2,3,4,7,8-HxCDD | 0.0315 ng/Kg | SL-535-SA7-SB-9.0-10.0 |
| | | 1,2,3,4,7,8-HXCDF | 0.0446 ng/Kg | SL-536-SA7-SB-3.0-4.0 |
| | | 1,2,3,6,7,8-HXCDD | 0.0201 ng/Kg | SL-836-SA7-SB-3.0-4.0 |
| | | 1,2,3,6,7,8-HXCDF | 0.0356 ng/Kg | |
| | | 1,2,3,7,8,9-HXCDF | 0.0566 ng/Kg | |
| | | 1,2,3,7,8-PECDF | 0.0560 ng/Kg | |
| | | 2,3,4,6,7,8-HXCDF | 0.0222 ng/Kg | |
| | | 2,3,4,7,8-PECDF | 0.0310 ng/Kg | |
| | | 2,3,7,8-TCDD | 0.0457 ng/Kg | |
| | | OCDD | 0.121 ng/Kg | |
| | | OCDF | 0.0815 ng/Kg | |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-534-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDF | 0.166 ng/Kg | 0.166U ng/Kg |
| SL-534-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDF | 0.118 ng/Kg | 0.118U ng/Kg |
| SL-534-SA7-SB-0.0-0.5(RES) | 2,3,7,8-TCDD | 0.0346 ng/Kg | 0.0346U ng/Kg |
| SL-535-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDF | 0.215 ng/Kg | 0.215U ng/Kg |
| SL-535-SA7-SB-0.0-0.5(RES) | 2,3,7,8-TCDD | 0.166 ng/Kg | 0.166U ng/Kg |
| SL-535-SA7-SB-4.0-5.0(RES) | 1,2,3,4,6,7,8-HPCDF | 0.220 ng/Kg | 0.220U ng/Kg |
| SL-535-SA7-SB-4.0-5.0(RES) | 1,2,3,4,7,8,9-HPCDF | 0.0491 ng/Kg | 0.0491U ng/Kg |
| SL-535-SA7-SB-4.0-5.0(RES) | 1,2,3,4,7,8-HxCDD | 0.0713 ng/Kg | 0.0713U ng/Kg |
| SL-535-SA7-SB-4.0-5.0(RES) | 1,2,3,4,7,8-HXCDF | 0.0686 ng/Kg | 0.0686U ng/Kg |
| SL-535-SA7-SB-4.0-5.0(RES) | 1,2,3,6,7,8-HXCDF | 0.0431 ng/Kg | 0.0431U ng/Kg |
| SL-535-SA7-SB-4.0-5.0(RES) | 1,2,3,7,8,9-HXCDF | 0.110 ng/Kg | 0.110U ng/Kg |
| SL-535-SA7-SB-4.0-5.0(RES) | 1,2,3,7,8-PECDF | 0.124 ng/Kg | 0.124U ng/Kg |
| SL-535-SA7-SB-4.0-5.0(RES) | 2,3,4,6,7,8-HXCDF | 0.0628 ng/Kg | 0.0628U ng/Kg |
| SL-535-SA7-SB-4.0-5.0(RES) | 2,3,4,7,8-PECDF | 0.124 ng/Kg | 0.124U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | 1,2,3,4,6,7,8-HPCDD | 0.256 ng/Kg | 0.256U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | 1,2,3,4,6,7,8-HPCDF | 0.0660 ng/Kg | 0.0660U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | 1,2,3,4,7,8,9-HPCDF | 0.0401 ng/Kg | 0.0401U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | 1,2,3,4,7,8-HxCDD | 0.0280 ng/Kg | 0.0280U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | 1,2,3,4,7,8-HXCDF | 0.0419 ng/Kg | 0.0419U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | 1,2,3,6,7,8-HXCDD | 0.0413 ng/Kg | 0.0413U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | 1,2,3,6,7,8-HXCDF | 0.0241 ng/Kg | 0.0241U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | 1,2,3,7,8,9-HXCDF | 0.0462 ng/Kg | 0.0462U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | 1,2,3,7,8-PECDF | 0.0848 ng/Kg | 0.0848U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | 2,3,4,6,7,8-HXCDF | 0.0231 ng/Kg | 0.0231U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | 2,3,4,7,8-PECDF | 0.0548 ng/Kg | 0.0548U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | 2,3,7,8-TCDD | 0.0291 ng/Kg | 0.0291U ng/Kg |
| SL-535-SA7-SB-9.0-10.0(RES) | OCDF | 0.121 ng/Kg | 0.121U ng/Kg |
| SL-536-SA7-SB-3.0-4.0(RES) | 1,2,3,4,7,8,9-HPCDF | 0.194 ng/Kg | 0.194U ng/Kg |
| SL-536-SA7-SB-3.0-4.0(RES) | 1,2,3,4,7,8-HXCDF | 0.0916 ng/Kg | 0.0916U ng/Kg |
| SL-536-SA7-SB-3.0-4.0(RES) | 1,2,3,6,7,8-HXCDF | 0.157 ng/Kg | 0.157U ng/Kg |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **1613B**
***Matrix:*** **SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-536-SA7-SB-3.0-4.0(RES) | 1,2,3,7,8,9-HXCDF | 0.0426 ng/Kg | 0.0426U ng/Kg |
| SL-536-SA7-SB-3.0-4.0(RES) | 1,2,3,7,8-PECDF | 0.0801 ng/Kg | 0.0801U ng/Kg |
| SL-536-SA7-SB-3.0-4.0(RES) | 2,3,4,7,8-PECDF | 0.0632 ng/Kg | 0.0632U ng/Kg |
| SL-836-SA7-SB-3.0-4.0(RES) | 1,2,3,7,8,9-HXCDF | 0.187 ng/Kg | 0.187U ng/Kg |
| SL-836-SA7-SB-3.0-4.0(RES) | 1,2,3,7,8-PECDF | 0.260 ng/Kg | 0.260U ng/Kg |
| SL-836-SA7-SB-3.0-4.0(RES) | 2,3,7,8-TCDD | 0.0709 ng/Kg | 0.0709U ng/Kg |

***Method:*** **6010C**
***Matrix:*** **SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| P10737AB221907 | 4/21/2013 7:07:00 PM | MAGNESIUM<br>PHOSPHORUS<br>TIN | 1.82 mg/Kg<br>10.9 mg/Kg<br>1.40 mg/Kg | SL-534-SA7-SB-0.0-0.5<br>SL-535-SA7-SB-0.0-0.5<br>SL-535-SA7-SB-4.0-5.0<br>SL-535-SA7-SB-9.0-10.0<br>SL-536-SA7-SB-3.0-4.0<br>SL-836-SA7-SB-3.0-4.0 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-534-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.76 mg/Kg | 2.76U mg/Kg |
| SL-535-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.69 mg/Kg | 2.69U mg/Kg |
| SL-535-SA7-SB-4.0-5.0(RES/TOT) | TIN | 2.73 mg/Kg | 2.73U mg/Kg |
| SL-535-SA7-SB-9.0-10.0(RES/TOT) | TIN | 2.86 mg/Kg | 2.86U mg/Kg |
| SL-536-SA7-SB-3.0-4.0(RES/TOT) | TIN | 2.92 mg/Kg | 2.92U mg/Kg |
| SL-836-SA7-SB-3.0-4.0(RES/TOT) | TIN | 2.71 mg/Kg | 2.71U mg/Kg |

# Field Blank Outlier Report

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **6010C**
***Matrix:*** **SO**

| Field Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| FB-041113(REA2) | 4/11/2013 3:00:00 PM | COPPER<br>MOLYBDENUM | 0.0036 mg/L<br>0.0036 mg/L | SL-534-SA7-SB-0.0-0.5<br>SL-535-SA7-SB-0.0-0.5<br>SL-535-SA7-SB-4.0-5.0<br>SL-535-SA7-SB-9.0-10.0<br>SL-536-SA7-SB-3.0-4.0<br>SL-836-SA7-SB-3.0-4.0 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-534-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.335 mg/Kg | 0.335U mg/Kg |
| SL-535-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.281 mg/Kg | 0.281U mg/Kg |
| SL-535-SA7-SB-4.0-5.0(RES/TOT) | MOLYBDENUM | 0.331 mg/Kg | 0.331U mg/Kg |
| SL-535-SA7-SB-9.0-10.0(RES/TOT) | MOLYBDENUM | 0.486 mg/Kg | 0.486U mg/Kg |
| SL-536-SA7-SB-3.0-4.0(RES/TOT) | MOLYBDENUM | 1.23 mg/Kg | 1.23U mg/Kg |
| SL-836-SA7-SB-3.0-4.0(RES/TOT) | MOLYBDENUM | 0.271 mg/Kg | 0.271U mg/Kg |

***Method:*** **8270D SIM**
***Matrix:*** **SO**

| Field Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| FB-041113(RES) | 4/11/2013 3:00:00 PM | 1-METHYLNAPHTHALENE<br>2-METHYLNAPHTHALENE<br>BIS(2-ETHYLHEXYL)PHTHALATE<br>Diethylphthalate<br>Di-n-butylphthalate<br>NAPHTHALENE | 0.019 ug/L<br>0.024 ug/L<br>0.082 ug/L<br>0.18 ug/L<br>0.17 ug/L<br>0.17 ug/L | SL-534-SA7-SB-0.0-0.5<br>SL-535-SA7-SB-0.0-0.5<br>SL-535-SA7-SB-4.0-5.0<br>SL-535-SA7-SB-9.0-10.0<br>SL-536-SA7-SB-3.0-4.0<br>SL-836-SA7-SB-3.0-4.0 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-534-SA7-SB-0.0-0.5(RES) | NAPHTHALENE | 0.83 ug/Kg | 1.7U ug/Kg |

# Matrix Spike/Matrix Spike Duplicate Outlier Report

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PH030_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

## Method: 6010C
## Matrix: SO

| QC Sample ID (Associated Samples) | Compound | MS %R | MSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| SL-536-SA7-SB-3.0-4.0MS (TOT)<br>SL-536-SA7-SB-3.0-4.0MSD (TOT)<br>(SL-534-SA7-SB-0.0-0.5<br>SL-535-SA7-SB-0.0-0.5<br>SL-535-SA7-SB-4.0-5.0<br>SL-535-SA7-SB-9.0-10.0<br>SL-536-SA7-SB-3.0-4.0<br>SL-836-SA7-SB-3.0-4.0) | ALUMINUM<br>IRON<br>MAGNESIUM<br>PHOSPHORUS<br>POTASSIUM<br>TITANIUM | 1359<br>1525<br>277<br>-<br>129<br>243 | 1600<br>1576<br>267<br>132<br>-<br>230 | 75.00-125.00<br>75.00-125.00<br>75.00-125.00<br>75.00-125.00<br>75.00-125.00<br>75.00-125.00 | -<br>-<br>-<br>-<br>-<br>- | ALUMINUM<br>IRON<br>MAGNESIUM<br>PHOSPHORUS<br>POTASSIUM<br>TITANIUM | J (all detects)<br>Al, Fe, Mg, Ti, No Qual, >4x |
| SL-536-SA7-SB-3.0-4.0MS (TOT)<br>SL-536-SA7-SB-3.0-4.0MSD (TOT)<br>(SL-534-SA7-SB-0.0-0.5<br>SL-535-SA7-SB-0.0-0.5<br>SL-535-SA7-SB-4.0-5.0<br>SL-535-SA7-SB-9.0-10.0<br>SL-536-SA7-SB-3.0-4.0<br>SL-836-SA7-SB-3.0-4.0) | ANTIMONY<br>CALCIUM | 70<br>67 | 73<br>- | 75.00-125.00<br>75.00-125.00 | -<br>- | ANTIMONY<br>CALCIUM | J(all detects) UJ(all non-detects)<br>Ca, No Qual, >4x |

## Method: 8270D SIM
## Matrix: SO

| QC Sample ID (Associated Samples) | Compound | MS %R | MSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| SL-536-SA7-SB-3.0-4.0MSD (SL-536-SA7-SB-3.0-4.0) | PYRENE | - | - | 26.00-143.00 | 49 (30.00) | PYRENE | J(all detects) |

## Method: 8015M
## Matrix: SO

| QC Sample ID (Associated Samples) | Compound | MS %R | MSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| SL-536-SA7-SB-3.0-4.0MS<br>SL-536-SA7-SB-3.0-4.0MSD<br>(SL-536-SA7-SB-3.0-4.0) | EFH (C15-C20)<br>EFH (C21-C30)<br>EFH (C30-C40) | 152<br>125<br>198 | 217<br>235<br>401 | 49.00-123.00<br>49.00-123.00<br>49.00-123.00 | 35 (20.00)<br>33 (20.00)<br>35 (20.00) | EFH (C15-C20)<br>EFH (C21-C30)<br>EFH (C30-C40) | J(all detects) |

## Method: 1613B
## Matrix: SO

| QC Sample ID (Associated Samples) | Compound | MS %R | MSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| SL-536-SA7-SB-3.0-4.0MS<br>SL-536-SA7-SB-3.0-4.0MSD<br>(SL-536-SA7-SB-3.0-4.0) | 1,2,3,4,6,7,8-HPCDD<br>OCDD | -<br>266 | -<br>- | 40.00-135.00<br>40.00-135.00 | 24 (20.00)<br>58 (20.00) | 1,2,3,4,6,7,8-HPCDD<br>OCDD | J(all detects) |

# *Lab Duplicate Outlier Report*

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PH030_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method: 6010C***
***Matrix: SO***

| *QC Sample ID (Associated Sample ID)* | *Analyte* | *Sample RPD* | *eQAPP RPD* | *Flag* |
|---|---|---|---|---|
| SL-536-SA7-SB-3.0-4.0DUP (TOT) (SL-534-SA7-SB-0.0-0.5 SL -535-SA7-SB-0.0-0.5 SL -535-SA7-SB-4.0-5.0 SL -535-SA7-SB-9.0-10.0 SL -536-SA7-SB-3.0-4.0 SL -836-SA7-SB-3.0-4.0) | ARSENIC | 32 | 20.00 | No Qual, OK by Difference |
| | MOLYBDENUM | 93 | 20.00 | |
| | Zirconium | 57 | 20.00 | |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Lab Control Spike/Lab Control Spike Duplicate Outlier Report

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PH030_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **8315A**
***Matrix:*** **AQ**

| *QC Sample ID (Associated Samples)* | *Compound* | *LCS %R* | *LCSD %R* | *%R Limits* | *RPD (Limits)* | *Affected Compounds* | *Flag* |
|---|---|---|---|---|---|---|---|
| **P31054AY241745A** (EB-041213) | FORMALDEHYDE | - | - | 69.00-130.00 | 21 (20.00) | FORMALDEHYDE | J (all detects) UJ (all non-detects) |

# Field Duplicate RPD Report

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method: 160.3M***
***Matrix: SO***

| Analyte | Concentration (%) | | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| | SL-536-SA7-SB-3.0-4.0 | SL-836-SA7-SB-3.0-4.0 | | | |
| MOISTURE | 2.6 | 2.8 | 7 | | No Qualifiers Applied |

***Method: 1613B***
***Matrix: SO***

| Analyte | Concentration (ng/Kg) | | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| | SL-536-SA7-SB-3.0-4.0 | SL-836-SA7-SB-3.0-4.0 | | | |
| 1,2,3,7,8-PECDD | 0.238 | 0.380 | 46 | 50.00 | No Qualifiers Applied |
| 1,2,3,4,6,7,8-HPCDD | 18.2 | 38.9 | 73 | 50.00 | |
| 1,2,3,4,6,7,8-HPCDF | 2.14 | 5.29 | 85 | 50.00 | |
| 1,2,3,4,7,8,9-HPCDF | 0.194 | 0.529 | 93 | 50.00 | |
| 1,2,3,4,7,8-HxCDD | 0.287 | 0.724 | 86 | 50.00 | |
| 1,2,3,4,7,8-HXCDF | 0.0916 | 0.302 | 107 | 50.00 | |
| 1,2,3,6,7,8-HXCDD | 0.778 | 1.87 | 82 | 50.00 | |
| 1,2,3,6,7,8-HXCDF | 0.157 | 0.396 | 86 | 50.00 | |
| 1,2,3,7,8,9-HXCDD | 0.575 | 1.41 | 84 | 50.00 | J(all detects) |
| 1,2,3,7,8,9-HXCDF | 0.0426 | 0.187 | 126 | 50.00 | UJ(all non-detects) |
| 1,2,3,7,8-PECDF | 0.0801 | 0.260 | 106 | 50.00 | |
| 2,3,4,6,7,8-HXCDF | 0.189 | 0.439 | 80 | 50.00 | |
| 2,3,4,7,8-PECDF | 0.0632 | 0.231 | 114 | 50.00 | |
| 2,3,7,8-TCDD | 1.00 U | 0.0709 | 200 | 50.00 | |
| 2,3,7,8-TCDF | 1.00 U | 0.0308 | 200 | 50.00 | |
| OCDD | 150 | 358 | 82 | 50.00 | |
| OCDF | 3.87 | 9.39 | 83 | 50.00 | |

***Method: 6010C***
***Matrix: SO***

| Analyte | Concentration (mg/Kg) | | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| | SL-536-SA7-SB-3.0-4.0 (TOT) | SL-836-SA7-SB-3.0-4.0 (TOT) | | | |
| ALUMINUM | 10800 | 10800 | 0 | 50.00 | |
| ANTIMONY | 1.58 | 1.47 | 7 | 50.00 | |
| ARSENIC | 2.06 | 2.38 | 14 | 50.00 | |
| BARIUM | 72.1 | 66.7 | 8 | 50.00 | |
| BERYLLIUM | 0.482 | 0.501 | 4 | 50.00 | |
| BORON | 3.20 | 2.90 | 10 | 50.00 | |
| CADMIUM | 0.420 | 0.453 | 8 | 50.00 | |
| CALCIUM | 3140 | 2540 | 21 | 50.00 | |
| CHROMIUM | 18.5 | 14.0 | 28 | 50.00 | |
| COBALT | 5.11 | 4.93 | 4 | 50.00 | |
| COPPER | 5.13 | 4.57 | 12 | 50.00 | |
| IRON | 19000 | 19600 | 3 | 50.00 | |
| LEAD | 5.13 | 5.13 | 0 | 50.00 | No Qualifiers Applied |
| LITHIUM | 23.5 | 23.8 | 1 | 50.00 | |
| MAGNESIUM | 4080 | 3870 | 5 | 50.00 | |
| MANGANESE | 283 | 276 | 3 | 50.00 | |
| NICKEL | 8.67 | 7.16 | 19 | 50.00 | |
| PHOSPHORUS | 367 | 344 | 6 | 50.00 | |
| POTASSIUM | 2760 | 2710 | 2 | 50.00 | |
| SODIUM | 61.3 | 59.4 | 3 | 50.00 | |
| TIN | 2.92 | 2.71 | 7 | 50.00 | |
| TITANIUM | 1060 | 979 | 8 | 50.00 | |
| VANADIUM | 28.8 | 26.8 | 7 | 50.00 | |
| ZINC | 55.1 | 54.9 | 0 | 50.00 | |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Field Duplicate RPD Report

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PrepPH030** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6010C**
**Matrix: SO**

| | | | | | |
|---|---|---|---|---|---|
| MOLYBDENUM | 1.23 | 0.271 | 128 | 50.00 | J(all detects) |
| Zirconium | 1.11 | 4.95 U | 200 | 50.00 | UJ(all non-detects) |

**Method: 6020A**
**Matrix: SO**

| Analyte | Concentration (mg/Kg) SL-536-SA7-SB-3.0-4.0 (TOT) | Concentration (mg/Kg) SL-836-SA7-SB-3.0-4.0 (TOT) | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| STRONTIUM | 12.0 | 10.9 | 10 | 50.00 | No Qualifiers Applied |
| THALLIUM | 0.232 | 0.248 | 7 | 50.00 | |
| SILVER | 0.0307 | 0.198 U | 200 | 50.00 | J(all detects) UJ(all non-detects) |

**Method: 8015M**
**Matrix: SO**

| Analyte | Concentration (mg/Kg) SL-536-SA7-SB-3.0-4.0 | Concentration (mg/Kg) SL-836-SA7-SB-3.0-4.0 | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| EFH (C21-C30) | 6.7 | 5.1 U | 200 | 50.00 | J(all detects) |
| EFH (C30-C40) | 14 | 10 U | 200 | 50.00 | UJ(all non-detects) |

**Method: 8270D SIM**
**Matrix: SO**

| Analyte | Concentration (ug/Kg) SL-536-SA7-SB-3.0-4.0 | Concentration (ug/Kg) SL-836-SA7-SB-3.0-4.0 | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| BENZO(A)ANTHRACENE | 0.98 | 0.91 | 7 | 50.00 | |
| BENZO(A)PYRENE | 1.2 | 1.5 | 22 | 50.00 | |
| BENZO(B)FLUORANTHENE | 2.1 | 3.5 | 50 | 50.00 | |
| BENZO(G,H,I)PERYLENE | 1.1 | 1.7 | 43 | 50.00 | |
| BENZO(K)FLUORANTHENE | 0.89 | 1.0 | 12 | 50.00 | No Qualifiers Applied |
| CHRYSENE | 1.8 | 2.6 | 36 | 50.00 | |
| FLUORANTHENE | 2.4 | 3.5 | 37 | 50.00 | |
| INDENO(1,2,3-CD)PYRENE | 0.91 | 1.3 | 35 | 50.00 | |
| PHENANTHRENE | 1.2 | 2.0 | 50 | 50.00 | |
| PYRENE | 2.6 | 3.8 | 37 | 50.00 | |

**Method: 9045M**
**Matrix: SO**

| Analyte | Concentration (pH unit) SL-536-SA7-SB-3.0-4.0 | Concentration (pH unit) SL-836-SA7-SB-3.0-4.0 | Sample RPD | eQAPP RPD | Flag |
|---|---|---|---|---|---|
| PH | 7.71 | 7.92 | 3 | 50.00 | No Qualifiers Applied |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PH030_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **1613B**

***Matrix:*** **SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-534-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 2.74 | 5.15 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.289 | 5.15 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.336 | 5.15 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.253 | 5.15 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 0.701 | 5.15 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JBQ | 0.204 | 5.15 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | J | 0.976 | 5.15 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.166 | 5.15 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | J | 0.344 | 5.15 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.118 | 5.15 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.349 | 5.15 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.156 | 5.15 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JBQ | 0.0346 | 1.03 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | JQ | 0.0508 | 1.03 | PQL | ng/Kg | |
| | OCDF | JB | 5.52 | 10.3 | PQL | ng/Kg | |
| SL-535-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 3.82 | 5.10 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.319 | 5.10 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.853 | 5.10 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.329 | 5.10 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 1.87 | 5.10 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JBQ | 0.323 | 5.10 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | J | 1.51 | 5.10 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.215 | 5.10 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JQ | 0.576 | 5.10 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.421 | 5.10 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.359 | 5.10 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.380 | 5.10 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JB | 0.166 | 1.02 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | JQ | 0.197 | 1.02 | PQL | ng/Kg | |
| | OCDF | JB | 7.05 | 10.2 | PQL | ng/Kg | |
| SL-535-SA7-SB-4.0-5.0 | 1,2,3,4,6,7,8-HPCDD | JB | 1.55 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,4,6,7,8-HPCDF | JB | 0.220 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JBQ | 0.0491 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.0713 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.0686 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 0.110 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.0431 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | J | 0.108 | 5.19 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.110 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JQ | 0.0750 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.124 | 5.19 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.0628 | 5.19 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.124 | 5.19 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | JQ | 0.0363 | 1.04 | PQL | ng/Kg | |
| | OCDF | JB | 0.470 | 10.4 | PQL | ng/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PH030_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-535-SA7-SB-9.0-10.0 | 1,2,3,4,6,7,8-HPCDD | JB | 0.256 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,4,6,7,8-HPCDF | JBQ | 0.0660 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JBQ | 0.0401 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JBQ | 0.0280 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JBQ | 0.0419 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JBQ | 0.0413 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JBQ | 0.0241 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.0462 | 5.18 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JQ | 0.0562 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.0848 | 5.18 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.0231 | 5.18 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.0548 | 5.18 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JBQ | 0.0291 | 1.04 | PQL | ng/Kg | |
| | OCDD | JB | 1.74 | 10.4 | PQL | ng/Kg | |
| | OCDF | JBQ | 0.121 | 10.4 | PQL | ng/Kg | |
| SL-536-SA7-SB-3.0-4.0 | 1,2,3,4,6,7,8-HPCDF | JB | 2.14 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JBQ | 0.194 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.287 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.0916 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 0.778 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.157 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | J | 0.575 | 5.02 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.0426 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JQ | 0.238 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.0801 | 5.02 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.189 | 5.02 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.0632 | 5.02 | PQL | ng/Kg | |
| | OCDF | JB | 3.87 | 10.0 | PQL | ng/Kg | |
| SL-836-SA7-SB-3.0-4.0 | 1,2,3,4,7,8,9-HPCDF | JB | 0.529 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.724 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.302 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 1.87 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.396 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | J | 1.41 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JB | 0.187 | 5.13 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | J | 0.380 | 5.13 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.260 | 5.13 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.439 | 5.13 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.231 | 5.13 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JBQ | 0.0709 | 1.03 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | JQ | 0.0308 | 1.03 | PQL | ng/Kg | |
| | OCDF | JB | 9.39 | 10.3 | PQL | ng/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PH030_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6010C**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-534-SA7-SB-0.0-0.5 | ANTIMONY | J | 1.96 | 4.15 | PQL | mg/Kg | |
| | ARSENIC | J | 2.83 | 4.15 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.592 | 1.04 | PQL | mg/Kg | |
| | BORON | J | 4.80 | 10.4 | PQL | mg/Kg | |
| | CADMIUM | J | 0.533 | 1.04 | PQL | mg/Kg | J (all detects) |
| | MOLYBDENUM | J | 0.335 | 2.08 | PQL | mg/Kg | |
| | SODIUM | J | 60.8 | 104 | PQL | mg/Kg | |
| | TIN | J | 2.76 | 10.4 | PQL | mg/Kg | |
| | Zirconium | J | 1.13 | 5.19 | PQL | mg/Kg | |
| SL-535-SA7-SB-0.0-0.5 | ANTIMONY | J | 1.78 | 3.99 | PQL | mg/Kg | |
| | ARSENIC | J | 2.11 | 3.99 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.521 | 0.998 | PQL | mg/Kg | |
| | BORON | J | 3.82 | 9.98 | PQL | mg/Kg | J (all detects) |
| | CADMIUM | J | 0.541 | 0.998 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.281 | 2.00 | PQL | mg/Kg | |
| | SODIUM | J | 61.6 | 99.8 | PQL | mg/Kg | |
| | TIN | J | 2.69 | 9.98 | PQL | mg/Kg | |
| SL-535-SA7-SB-4.0-5.0 | ANTIMONY | J | 2.47 | 4.05 | PQL | mg/Kg | |
| | ARSENIC | J | 2.17 | 4.05 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.596 | 1.01 | PQL | mg/Kg | |
| | BORON | J | 2.92 | 10.1 | PQL | mg/Kg | |
| | CADMIUM | J | 0.603 | 1.01 | PQL | mg/Kg | J (all detects) |
| | MOLYBDENUM | J | 0.331 | 2.02 | PQL | mg/Kg | |
| | SODIUM | J | 70.7 | 101 | PQL | mg/Kg | |
| | TIN | J | 2.73 | 10.1 | PQL | mg/Kg | |
| | Zirconium | J | 1.05 | 5.06 | PQL | mg/Kg | |
| SL-535-SA7-SB-9.0-10.0 | ANTIMONY | J | 2.10 | 4.06 | PQL | mg/Kg | |
| | ARSENIC | J | 2.20 | 4.06 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.546 | 1.02 | PQL | mg/Kg | |
| | BORON | J | 2.37 | 10.2 | PQL | mg/Kg | J (all detects) |
| | CADMIUM | J | 0.511 | 1.02 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.486 | 2.03 | PQL | mg/Kg | |
| | SODIUM | J | 71.3 | 102 | PQL | mg/Kg | |
| | TIN | J | 2.86 | 10.2 | PQL | mg/Kg | |
| SL-536-SA7-SB-3.0-4.0 | ANTIMONY | J | 1.58 | 3.95 | PQL | mg/Kg | |
| | ARSENIC | J | 2.06 | 3.95 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.482 | 0.987 | PQL | mg/Kg | |
| | BORON | J | 3.20 | 9.87 | PQL | mg/Kg | |
| | CADMIUM | J | 0.420 | 0.987 | PQL | mg/Kg | J (all detects) |
| | MOLYBDENUM | J | 1.23 | 1.97 | PQL | mg/Kg | |
| | SODIUM | J | 61.3 | 98.7 | PQL | mg/Kg | |
| | TIN | J | 2.92 | 9.87 | PQL | mg/Kg | |
| | Zirconium | J | 1.11 | 4.94 | PQL | mg/Kg | |
| SL-836-SA7-SB-3.0-4.0 | ANTIMONY | J | 1.47 | 3.96 | PQL | mg/Kg | |
| | ARSENIC | J | 2.38 | 3.96 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.501 | 0.989 | PQL | mg/Kg | |
| | BORON | J | 2.90 | 9.89 | PQL | mg/Kg | J (all detects) |
| | CADMIUM | J | 0.453 | 0.989 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.271 | 1.98 | PQL | mg/Kg | |
| | SODIUM | J | 59.4 | 98.9 | PQL | mg/Kg | |
| | TIN | J | 2.71 | 9.89 | PQL | mg/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PH030_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6020A**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-534-SA7-SB-0.0-0.5 | SILVER | J | 0.0407 | 0.208 | PQL | mg/Kg | J (all detects) |
| SL-535-SA7-SB-4.0-5.0 | SELENIUM | J | 0.166 | 0.405 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0452 | 0.202 | PQL | mg/Kg | |
| SL-535-SA7-SB-9.0-10.0 | SELENIUM | J | 0.119 | 0.406 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0260 | 0.203 | PQL | mg/Kg | |
| SL-536-SA7-SB-3.0-4.0 | SILVER | J | 0.0307 | 0.197 | PQL | mg/Kg | J (all detects) |

**Method: 7471B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-534-SA7-SB-0.0-0.5 | MERCURY | J | 0.0188 | 0.0207 | PQL | mg/Kg | J (all detects) |
| SL-535-SA7-SB-0.0-0.5 | MERCURY | J | 0.0151 | 0.0202 | PQL | mg/Kg | J (all detects) |
| SL-535-SA7-SB-4.0-5.0 | MERCURY | J | 0.0108 | 0.0201 | PQL | mg/Kg | J (all detects) |
| SL-535-SA7-SB-9.0-10.0 | MERCURY | J | 0.0149 | 0.0208 | PQL | mg/Kg | J (all detects) |

**Method: 8015M**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-534-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 3.6 | 5.2 | PQL | mg/Kg | J (all detects) |
| SL-535-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 3.5 | 5.1 | PQL | mg/Kg | J (all detects) |

**Method: 8270D SIM**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-534-SA7-SB-0.0-0.5 | BENZO(A)PYRENE | J | 0.91 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BENZO(B)FLUORANTHENE | J | 1.4 | 1.7 | PQL | ug/Kg | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 9.3 | 19 | PQL | ug/Kg | |
| | CHRYSENE | J | 1.5 | 1.7 | PQL | ug/Kg | |
| | FLUORENE | J | 1.4 | 1.7 | PQL | ug/Kg | |
| | NAPHTHALENE | J | 0.83 | 1.7 | PQL | ug/Kg | |
| | PHENANTHRENE | J | 1.1 | 1.7 | PQL | ug/Kg | |
| SL-535-SA7-SB-0.0-0.5 | BENZO(B)FLUORANTHENE | J | 1.2 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 6.3 | 18 | PQL | ug/Kg | |
| | CHRYSENE | J | 1.1 | 1.7 | PQL | ug/Kg | |
| | FLUORANTHENE | J | 1.1 | 1.7 | PQL | ug/Kg | |
| | FLUORENE | J | 0.79 | 1.7 | PQL | ug/Kg | |
| | PHENANTHRENE | J | 0.76 | 1.7 | PQL | ug/Kg | |
| | PYRENE | J | 1.2 | 1.7 | PQL | ug/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH030** **Laboratory: LL**

**EDD Filename: PH030_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **8270D SIM**

***Matrix:*** **SO**

| *SampleID* | *Analyte* | *Lab Qual* | *Result* | *Reporting Limit* | *RL Type* | *Units* | *Flag* |
|---|---|---|---|---|---|---|---|
| SL-536-SA7-SB-3.0-4.0 | BENZO(A)ANTHRACENE | J | 0.98 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BENZO(A)PYRENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| | BENZO(G,H,I)PERYLENE | J | 1.1 | 1.7 | PQL | ug/Kg | |
| | BENZO(K)FLUORANTHENE | J | 0.89 | 1.7 | PQL | ug/Kg | |
| | INDENO(1,2,3-CD)PYRENE | J | 0.91 | 1.7 | PQL | ug/Kg | |
| | PHENANTHRENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| SL-836-SA7-SB-3.0-4.0 | BENZO(A)ANTHRACENE | J | 0.91 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BENZO(A)PYRENE | J | 1.5 | 1.7 | PQL | ug/Kg | |
| | BENZO(K)FLUORANTHENE | J | 1.0 | 1.7 | PQL | ug/Kg | |
| | INDENO(1,2,3-CD)PYRENE | J | 1.3 | 1.7 | PQL | ug/Kg | |

LDC #: 29836D4
SDG #: PH030
Laboratory: Eurofins Lancaster Laboratories

# VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 6/11/13
Page: 1 of 1
Reviewer: 02
2nd Reviewer:

**METHOD:** Metals (EPA SW 846 Method 6010C/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

| | Validation Area | | Comments |
|---|---|---|---|
| I. | Technical holding times | — | Sampling dates: 4/12/13 |
| II. | ICP/MS Tune | — | |
| III. | Calibration | — | |
| IV. | Blanks | A | |
| V. | ICP Interference Check Sample (ICS) Analysis | F | |
| VI. | Matrix Spike Analysis | SW | MS/D |
| VII. | Duplicate Sample Analysis | SW | DUP |
| VIII. | Laboratory Control Samples (LCS) | A | LCS |
| IX. | Internal Standard (ICP-MS) | N | |
| X. | Furnace Atomic Absorption QC | N | |
| XI. | ICP Serial Dilution | A | |
| XII. | Sample Result Verification | N | |
| XIII. | Overall Assessment of Data | N | |
| XIV. | Field Duplicates | — | (1,2) |
| XV | Field Blanks | SW | EB=EB041113 FB=FB041113 |

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate (PH029)
TB = Trip blank
EB = Equipment blank

Validated Samples: Soil

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 (44) | SL-536-SA7-SB-3.0-4.0 | 11 | | 21 | | 31 | |
| 2 (46) | SL-836-SA7-SB-3.0-4.0 | 12 | | 22 | | 32 | |
| 3 (49) | SL-535-SA7-SB-0.0-0.5 | 13 | | 23 | | 33 | |
| 4 (50) | SL-535-SA7-SB-4.0-5.0 | 14 | | 24 | | 34 | |
| 5 (51) | SL-535-SA7-SB-9.0-10.0 | 15 | | 25 | | 35 | |
| 6 (52) | SL-534-SA7-SB-0.0-0.5 | 16 | | 26 | | 36 | |
| 7 | SL-536-SA7-SB-3.0-4.0MS | 17 | | 27 | | 37 | |
| 8 | SL-536-SA7-SB-3.0-4.0MSD | 18 | | 28 | | 38 | |
| 9 | SL-536-SA7-SB-3.0-4.0DUP | 19 | | 29 | | 39 | |
| 10 | | 20 | | 30 | | 40 | |

Notes:

LDC #: 29836D4

# VALIDATION FINDINGS WORKSHEET
## Field Blanks


Reviewer: CA
2nd Reviewer: M

**METHOD:** Trace Metals (EPA SW846 6010B/7000)

**Blank units:** mg/L **Associated sample units:** mg/Kg Reason: F
**Sampling date:** 4/11/13 Soil factor applied 100x
**Field blank type:** (circle one) Field Blank / Rinsate / Other: Associated Samples: All

| Analyte | Blank ID | Blank ID | Sample Identification | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB-041113 | FB-041113 | Action Limit | 1 | 2 | 3 | 4 | 5 | 6 | | | | |
| Ca | 0.131 | | 65.5 | | | | | | | | | | |
| Cu | 0.0035 | 0.0036 | 1.8 | | | | | | | | | | |
| Mn | 0.0012 | | 0.6 | | | | | | | | | | |
| Mo | 0.0143 | 0.0036 | 7.15 | 1.2 | 0.27 | 0.28 | 0.33 | 0.49 | 0.34 | | | | |
| Sn | 0.0024 | | 1.2 | | | | | | | | | | |
| Zn | 0.0041 | | 2.05 | | | | | | | | | | |

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

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QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: PH030
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7022144BKG Matrix Spike Lab Sample ID: 7022145MS Matrix Spike Duplicate Lab Sample ID: 7022146MSD
Batch Id(s): P10737A, P10738A

| Analyte | Mass | BKG Sample Result | C | MS Sample Result | C | MSD Sample Result | C | MS Spike Added | MSD Spike Added | Units | MS %R | Q | MSD %R | Q | RPD | Q | Control Limit %R | Control Limit RPD | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | 10546.2192 | | 13159.1337 | | 13622.6942 | | 192.3077 | 192.3077 | MG/KG | 1859 | | 1600 | | 3 | | | 20 | P |
| Antimony | | 1.5356 | B | 35.2644 | | 36.5663 | | 48.0769 | 48.0769 | MG/KG | 70 | N | 73 | N | 4 | | 75 - 125 | 20 | P |
| Arsenic | | 2.0106 | B | 17.9558 | | 17.6019 | | 14.4231 | 14.4231 | MG/KG | 111 | | 108 | | 2 | | 75 - 125 | 20 | P |
| Barium | | 70.1798 | | 271.3375 | | 262.0337 | | 192.3077 | 192.3077 | MG/KG | 105 | | 100 | | 3 | | 75 - 125 | 20 | P |
| Beryllium | | 0.4692 | B | 5.2500 | | 5.2077 | | 4.8077 | 4.8077 | MG/KG | 99 | | 99 | | 1 | | 75 - 125 | 20 | P |
| Boron | | 3.1202 | B | 184.3971 | | 184.8654 | | 192.3077 | 192.3077 | MG/KG | 94 | | 95 | | 0 | | 75 - 125 | 20 | P |
| Cadmium | | 0.4087 | B | 5.4606 | | 5.4125 | | 4.8077 | 4.8077 | MG/KG | 105 | | 104 | | 1 | | 75 - 125 | 20 | P |
| Calcium | | 3056.5587 | | 3314.8962 | | 3449.5471 | | 384.6154 | 384.6154 | MG/KG | 67 | | 102 | | 4 | | | 20 | P |
| Chromium | | 18.0058 | | 37.8240 | | 40.7750 | | 19.2308 | 19.2308 | MG/KG | 103 | | 118 | | 8 | | 75 - 125 | 20 | P |
| Cobalt | | 4.9817 | | 53.4231 | | 53.0135 | | 48.0769 | 48.0769 | MG/KG | 101 | | 100 | | 1 | | 75 - 125 | 20 | P |
| Copper | | 5.0010 | | 29.2673 | | 29.2240 | | 24.0385 | 24.0385 | MG/KG | 101 | | 101 | | 0 | | 75 - 125 | 20 | P |
| Iron | | 18474.9038 | | 19941.4087 | | 19990.1115 | | 96.1538 | 96.1538 | MG/KG | 1525 | | 1576 | | 0 | | | 20 | P |
| Lead | | 4.9971 | | 20.2760 | | 19.9981 | | 14.4231 | 14.4231 | MG/KG | 106 | | 104 | | 1 | | 75 - 125 | 20 | P |
| Lithium | | 22.9298 | | 122.6385 | | 124.1067 | | 96.1538 | 96.1538 | MG/KG | 104 | | 105 | | 1 | | 75 - 125 | 20 | P |
| Magnesium | | 3973.8683 | | 4506.3923 | | 4487.1394 | | 192.3077 | 192.3077 | MG/KG | 277 | | 267 | | 0 | | | 20 | P |
| Manganese | | 275.4942 | | 327.1442 | | 325.7135 | | 48.0769 | 48.0769 | MG/KG | 107 | | 104 | | 0 | | | 20 | P |
| Mercury | | 0.0098 | U | 0.1821 | | 0.1805 | | 0.1622 | 0.1627 | MG/KG | 112 | | 111 | | 1 | | 65 - 135 | 20 | CV |
| Molybdenum | | 1.1942 | B | 186.7442 | | 186.1288 | | 192.3077 | 192.3077 | MG/KG | 96 | | 96 | | 0 | | 75 - 125 | 20 | P |
| Nickel | | 8.4442 | | 56.6904 | | 55.9971 | | 48.0769 | 48.0769 | MG/KG | 100 | | 99 | | 1 | | 75 - 125 | 20 | P |
| Phosphorus | | 357.4385 | | 451.3115 | | 484.3760 | | 96.1538 | 96.1538 | MG/KG | 98 | | 132 | N | 7 | | 75 - 125 | 20 | P |
| Potassium | | 2684.0654 | | 3924.3365 | | 3875.1462 | | 961.5385 | 961.5385 | MG/KG | 129 | N | 124 | | 1 | | 75 - 125 | 20 | P |
| Selenium | 78 | 0.0962 | U | 2.2212 | | 2.1404 | | 1.9231 | 1.9231 | MG/KG | 116 | | 111 | | 4 | | 75 - 125 | 20 | MS |
| Silver | 107 | 0.0299 | B | 9.6096 | | 9.7115 | | 9.6154 | 9.6154 | MG/KG | 100 | | 101 | | 1 | | 75 - 125 | 20 | MS |
| Sodium | | 59.6654 | B | 978.1212 | | 996.4904 | | 961.5385 | 961.5385 | MG/KG | 96 | | 97 | | 2 | | 75 - 125 | 20 | P |
| Strontium | 88 | 11.6808 | | 18.5269 | | 19.6346 | | 7.6923 | 7.6923 | MG/KG | 89 | | 103 | | 6 | | 75 - 125 | 20 | MS |
| Thallium | 203 | 0.2260 | | 0.6287 | | 0.6010 | | 0.3846 | 0.3846 | MG/KG | 105 | | 98 | | 5 | | 75 - 125 | 20 | MS |
| Tin | | 2.8481 | B | 356.0096 | | 354.2596 | | 384.6154 | 384.6154 | MG/KG | 92 | | 91 | | 0 | | 75 - 125 | 20 | P |
| Titanium | | 1032.2115 | | 1265.7163 | | 1253.0077 | | 96.1538 | 96.1538 | MG/KG | 243 | | 230 | | 1 | | | 20 | P |
| Vanadium | | 28.0740 | | 76.2231 | | 75.4404 | | 48.0769 | 48.0769 | MG/KG | 100 | | 99 | | 1 | | 75 - 125 | 20 | P |
| Zinc | | 53.6769 | | 107.5240 | | 107.2125 | | 48.0769 | 48.0769 | MG/KG | 112 | | 111 | | 0 | | 75 - 125 | 20 | P |
| Zirconium | | 1.0846 | B | 92.2577 | | 91.6760 | | 96.1538 | 96.1538 | MG/KG | 95 | | 94 | | 1 | | 75 - 125 | 20 | P |

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

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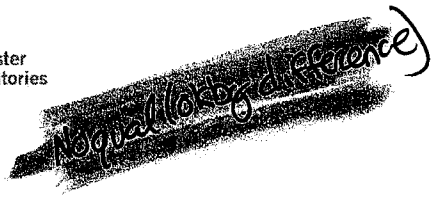


QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: PH030
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7022144BKG Duplicate Lab Sample ID: 7022147DUP
Batch ID(s): P10737A, P10738A
Concentration Units: MG/KG

| Analyte | Mass | Control Limit | Samples (S) | C | Duplicate (D) | C | RPD | Q | M |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | 10546.2192 | | 10768.1529 | | 2 | | P |
| Antimony | | | 1.5356 | B | 1.4817 | B | 4 | | P |
| Arsenic | | | 2.0106 | B | 2.7856 | B | 32 | * | P |
| Barium | | | 70.1798 | | 68.6394 | | 2 | | P |
| Beryllium | | | 0.4692 | B | 0.4721 | B | 1 | | P |
| Boron | | | 3.1202 | B | 2.9962 | B | 4 | | P |
| Cadmium | | | 0.4087 | B | 0.4365 | B | 7 | | P |
| Calcium | | | 3056.5587 | | 2863.0308 | | 7 | | P |
| Chromium | | | 18.0058 | | 17.8625 | | 1 | | P |
| Cobalt | | | 4.9817 | | 4.8577 | | 3 | | P |
| Copper | | 1.9 | 5.0010 | | 5.1192 | | 2 | | P |
| Iron | | | 18474.9038 | | 19017.1135 | | 3 | | P |
| Lead | | 2.9 | 4.9971 | | 5.3692 | | 7 | | P |
| Lithium | | | 22.9298 | | 23.7375 | | 3 | | P |
| Magnesium | | | 3973.8683 | | 3968.4760 | | 0 | | P |
| Manganese | | | 275.4942 | | 269.1933 | | 2 | | P |
| Mercury | | | 0.0098 | U | 0.0099 | U | | | CV |
| Molybdenum | | | 1.1942 | B | 0.4337 | B | 93 | * | P |
| Nickel | | 1.9 | 8.4442 | | 8.4663 | | 0 | | P |
| Phosphorus | | | 357.4385 | | 368.2885 | | 3 | | P |
| Potassium | | | 2684.0654 | | 2749.3837 | | 2 | | P |
| Selenium | 78 | | 0.0962 | U | 0.0962 | U | | | MS |
| Silver | 107 | | 0.0299 | B | 0.0323 | B | 8 | | MS |
| Sodium | | | 59.6654 | B | 60.9327 | B | 2 | | P |
| Strontium | 88 | | 11.6808 | | 11.4212 | | 2 | | MS |
| Thallium | 203 | 0.2 | 0.2260 | | 0.2196 | | 3 | | MS |
| Tin | | | 2.8481 | B | 2.6769 | B | 6 | | P |
| Titanium | | | 1032.2115 | | 1053.9375 | | 2 | | P |
| Vanadium | | | 28.0740 | | 28.1779 | | 0 | | P |
| Zinc | | | 53.6769 | | 54.2404 | | 1 | | P |
| Zirconium | | | 1.0846 | B | 1.9567 | B | 57 | * | P |

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

FLAGS:
* = Duplicate Out of Spec

# Attachment I

# Sample ID Cross Reference and Data Review Level

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 15-Apr-2013 | TB-041513 | 7023135 | TB | 5030B | 8015M | III |
| 15-Apr-2013 | SL-534-SA7-SB-5.5-6.5 | 7023136 | N | 3050B | 6010C | III |
| 15-Apr-2013 | SL-534-SA7-SB-5.5-6.5 | 7023136 | N | 3050B | 6020A | III |
| 15-Apr-2013 | SL-534-SA7-SB-5.5-6.5 | 7023136 | N | 3546 | 8015M | III |
| 15-Apr-2013 | SL-534-SA7-SB-5.5-6.5 | 7023136 | N | 3546 | 8082A | III |
| 15-Apr-2013 | SL-534-SA7-SB-5.5-6.5 | 7023136 | N | 3546 | 8270D SIM | III |
| 15-Apr-2013 | SL-534-SA7-SB-5.5-6.5 | 7023136 | N | 5035A | 8015M | III |
| 15-Apr-2013 | SL-534-SA7-SB-5.5-6.5 | 7023136 | N | METHOD | 1613B | III |
| 15-Apr-2013 | SL-534-SA7-SB-5.5-6.5 | 7023136 | N | METHOD | 7471B | III |
| 15-Apr-2013 | SL-534-SA7-SB-5.5-6.5MSD | P023136M320549A | MSD | 3546 | 8015M | III |
| 15-Apr-2013 | SL-534-SA7-SB-5.5-6.5MS | P023136R320529A | MS | 3546 | 8015M | III |
| 15-Apr-2013 | SL-537-SA7-SB-0.0-0.5 | 7023137 | N | 3050B | 6010C | III |
| 15-Apr-2013 | SL-537-SA7-SB-0.0-0.5 | 7023137 | N | 3050B | 6020A | III |
| 15-Apr-2013 | SL-537-SA7-SB-0.0-0.5 | 7023137 | N | 3546 | 8015M | III |
| 15-Apr-2013 | SL-537-SA7-SB-0.0-0.5 | 7023137 | N | 3546 | 8082A | III |
| 15-Apr-2013 | SL-537-SA7-SB-0.0-0.5 | 7023137 | N | 3546 | 8270D SIM | III |
| 15-Apr-2013 | SL-537-SA7-SB-0.0-0.5 | 7023137 | N | METHOD | 1613B | III |
| 15-Apr-2013 | SL-537-SA7-SB-0.0-0.5 | 7023137 | N | METHOD | 7471B | III |
| 15-Apr-2013 | SL-537-SA7-SB-0.0-0.5MSD | P023137M240345A | MSD | 3546 | 8082A | III |
| 15-Apr-2013 | SL-537-SA7-SB-0.0-0.5MS | P023137R240327A | MS | 3546 | 8082A | III |
| 15-Apr-2013 | SL-538-SA7-SB-0.0-0.5 | 7023138 | N | 3050B | 6010C | III |
| 15-Apr-2013 | SL-538-SA7-SB-0.0-0.5 | 7023138 | N | 3050B | 6020A | III |
| 15-Apr-2013 | SL-538-SA7-SB-0.0-0.5 | 7023138 | N | 3546 | 8015M | III |
| 15-Apr-2013 | SL-538-SA7-SB-0.0-0.5 | 7023138 | N | 3546 | 8082A | III |
| 15-Apr-2013 | SL-538-SA7-SB-0.0-0.5 | 7023138 | N | 3546 | 8270D SIM | III |
| 15-Apr-2013 | SL-538-SA7-SB-0.0-0.5 | 7023138 | N | METHOD | 1613B | III |

*III = EPA Level 3 Data Review* *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
*IV = EPA Level 4 Data Validation* *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 15-Apr-2013 | SL-538-SA7-SB-0.0-0.5 | 7023138 | N | METHOD | 7471B | III |
| 15-Apr-2013 | SL-522-SA7-SB-0.0-0.5 | 7023139 | N | 3050B | 6010C | III |
| 15-Apr-2013 | SL-522-SA7-SB-0.0-0.5 | 7023139 | N | 3050B | 6020A | III |
| 15-Apr-2013 | SL-522-SA7-SB-0.0-0.5 | 7023139 | N | 3546 | 8015M | III |
| 15-Apr-2013 | SL-522-SA7-SB-0.0-0.5 | 7023139 | N | 3546 | 8081B | IV |
| 15-Apr-2013 | SL-522-SA7-SB-0.0-0.5 | 7023139 | N | 3546 | 8082A | III |
| 15-Apr-2013 | SL-522-SA7-SB-0.0-0.5 | 7023139 | N | 3546 | 8270D SIM | III |
| 15-Apr-2013 | SL-522-SA7-SB-0.0-0.5 | 7023139 | N | METHOD | 1613B | III |
| 15-Apr-2013 | SL-522-SA7-SB-0.0-0.5 | 7023139 | N | METHOD | 7471B | III |
| 15-Apr-2013 | SL-522-SA7-SB-0.0-0.5MSD | P023139M240154A | MSD | 3546 | 8081B | IV |
| 15-Apr-2013 | SL-522-SA7-SB-0.0-0.5MS | P023139R240142A | MS | 3546 | 8081B | IV |
| 15-Apr-2013 | SL-521-SA7-SB-0.0-0.5 | 7023140 | N | 3050B | 6010C | III |
| 15-Apr-2013 | SL-521-SA7-SB-0.0-0.5 | 7023140 | N | 3050B | 6020A | III |
| 15-Apr-2013 | SL-521-SA7-SB-0.0-0.5 | 7023140 | N | 3546 | 8015M | III |
| 15-Apr-2013 | SL-521-SA7-SB-0.0-0.5 | 7023140 | N | 3546 | 8081B | IV |
| 15-Apr-2013 | SL-521-SA7-SB-0.0-0.5 | 7023140 | N | 3546 | 8082A | III |
| 15-Apr-2013 | SL-521-SA7-SB-0.0-0.5 | 7023140 | N | 3546 | 8270D SIM | III |
| 15-Apr-2013 | SL-521-SA7-SB-0.0-0.5 | 7023140 | N | METHOD | 1613B | III |
| 15-Apr-2013 | SL-521-SA7-SB-0.0-0.5 | 7023140 | N | METHOD | 7471B | III |

*III = EPA Level 3 Data Review*
*IV = EPA Level 4 Data Validation*
*N = Normal Sample*
*FD = Field Duplicate*
*TB = Trip Blank*
*FB = Field Blank*
*MS = Matrix Spike*
*MSD = Matrix Spike Duplicate*

# Attachment II

# Overall Data Qualification Summary

# Data Qualifier Summary

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

**Sample ID: SL-521-SA7-SB-0.0-0.5** **Collected: 4/15/2013 2:15:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.52 | J | 0.490 | MDL | 3.92 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 3.85 | J | 0.323 | MDL | 3.92 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.618 | J | 0.0656 | MDL | 0.979 | PQL | mg/Kg | J | Z |
| BORON | 2.86 | J | 0.813 | MDL | 9.79 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.379 | J | 0.0323 | MDL | 0.979 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.491 | J | 0.166 | MDL | 1.96 | PQL | mg/Kg | U | B, F, F |
| PHOSPHORUS | 363 | | 0.499 | MDL | 9.79 | PQL | mg/Kg | J | Q |
| POTASSIUM | 2990 | | 13.2 | MDL | 97.9 | PQL | mg/Kg | J | Q |
| SODIUM | 64.5 | J | 16.4 | MDL | 97.9 | PQL | mg/Kg | J | Z |
| TIN | 2.81 | J | 0.215 | MDL | 9.79 | PQL | mg/Kg | U | B |

**Sample ID: SL-522-SA7-SB-0.0-0.5** **Collected: 4/15/2013 1:30:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.89 | J | 0.519 | MDL | 4.15 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 2.40 | J | 0.342 | MDL | 4.15 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.537 | J | 0.0695 | MDL | 1.04 | PQL | mg/Kg | J | Z |
| BORON | 3.26 | J | 0.861 | MDL | 10.4 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.468 | J | 0.0342 | MDL | 1.04 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.349 | J | 0.176 | MDL | 2.07 | PQL | mg/Kg | U | B, F, F |
| PHOSPHORUS | 406 | | 0.529 | MDL | 10.4 | PQL | mg/Kg | J | Q |
| POTASSIUM | 2900 | | 14.0 | MDL | 104 | PQL | mg/Kg | J | Q |
| SODIUM | 70.7 | J | 17.3 | MDL | 104 | PQL | mg/Kg | J | Z |
| TIN | 2.44 | J | 0.228 | MDL | 10.4 | PQL | mg/Kg | U | B |

**Sample ID: SL-534-SA7-SB-5.5-6.5** **Collected: 4/15/2013 8:45:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.87 | J | 0.504 | MDL | 4.03 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 2.46 | J | 0.333 | MDL | 4.03 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.582 | J | 0.0675 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| BORON | 1.47 | J | 0.837 | MDL | 10.1 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.418 | J | 0.0333 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.441 | J | 0.171 | MDL | 2.02 | PQL | mg/Kg | U | B, F, F |
| PHOSPHORUS | 295 | | 0.514 | MDL | 10.1 | PQL | mg/Kg | J | Q |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

**Sample ID: SL-534-SA7-SB-5.5-6.5** **Collected: 4/15/2013 8:45:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| POTASSIUM | 2570 | | 13.6 | MDL | 101 | PQL | mg/Kg | J | Q |
| SODIUM | 67.8 | J | 16.8 | MDL | 101 | PQL | mg/Kg | J | Z |
| TIN | 2.63 | J | 0.222 | MDL | 10.1 | PQL | mg/Kg | U | B |

**Sample ID: SL-537-SA7-SB-0.0-0.5** **Collected: 4/15/2013 9:50:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.73 | J | 0.507 | MDL | 4.05 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 2.50 | J | 0.334 | MDL | 4.05 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.477 | J | 0.0679 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| BORON | 2.96 | J | 0.841 | MDL | 10.1 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.511 | J | 0.0334 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| PHOSPHORUS | 466 | | 0.517 | MDL | 10.1 | PQL | mg/Kg | J | Q |
| POTASSIUM | 3900 | | 13.7 | MDL | 101 | PQL | mg/Kg | J | Q |
| SODIUM | 62.0 | J | 16.9 | MDL | 101 | PQL | mg/Kg | J | Z |
| TIN | 2.78 | J | 0.223 | MDL | 10.1 | PQL | mg/Kg | U | B |
| Zirconium | 0.916 | J | 0.841 | MDL | 5.07 | PQL | mg/Kg | J | Z |

**Sample ID: SL-538-SA7-SB-0.0-0.5** **Collected: 4/15/2013 10:50:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.49 | J | 0.503 | MDL | 4.02 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 1.83 | J | 0.332 | MDL | 4.02 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.492 | J | 0.0673 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| BORON | 3.01 | J | 0.834 | MDL | 10.1 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.445 | J | 0.0332 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.266 | J | 0.171 | MDL | 2.01 | PQL | mg/Kg | U | B, F, F |
| PHOSPHORUS | 409 | | 0.513 | MDL | 10.1 | PQL | mg/Kg | J | Q |
| POTASSIUM | 3600 | | 13.6 | MDL | 101 | PQL | mg/Kg | J | Q |
| SODIUM | 60.1 | J | 16.8 | MDL | 101 | PQL | mg/Kg | J | Z |
| TIN | 2.62 | J | 0.221 | MDL | 10.1 | PQL | mg/Kg | U | B |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

**Sample ID: SL-521-SA7-SB-0.0-0.5** **Collected: 4/15/2013 2:15:00** **Analysis Type: REA/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.173 | J | 0.0979 | MDL | 0.392 | PQL | mg/Kg | J | Z |

**Sample ID: SL-521-SA7-SB-0.0-0.5** **Collected: 4/15/2013 2:15:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0272 | J | 0.0196 | MDL | 0.196 | PQL | mg/Kg | J | Z |

**Sample ID: SL-522-SA7-SB-0.0-0.5** **Collected: 4/15/2013 1:30:00** **Analysis Type: REA/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.145 | J | 0.104 | MDL | 0.415 | PQL | mg/Kg | J | Z |

**Sample ID: SL-522-SA7-SB-0.0-0.5** **Collected: 4/15/2013 1:30:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0296 | J | 0.0207 | MDL | 0.207 | PQL | mg/Kg | J | Z |

**Sample ID: SL-534-SA7-SB-5.5-6.5** **Collected: 4/15/2013 8:45:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0330 | J | 0.0202 | MDL | 0.202 | PQL | mg/Kg | J | Z |

**Sample ID: SL-537-SA7-SB-0.0-0.5** **Collected: 4/15/2013 9:50:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0361 | J | 0.0203 | MDL | 0.203 | PQL | mg/Kg | J | Z |

**Sample ID: SL-538-SA7-SB-0.0-0.5** **Collected: 4/15/2013 10:50:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0394 | J | 0.0201 | MDL | 0.201 | PQL | mg/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 7471B** **Matrix: SO**

**Sample ID: SL-521-SA7-SB-0.0-0.5** **Collected: 4/15/2013 2:15:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0176 | J | 0.0101 | MDL | 0.0195 | PQL | mg/Kg | J | Z |

**Sample ID: SL-534-SA7-SB-5.5-6.5** **Collected: 4/15/2013 8:45:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0125 | J | 0.0106 | MDL | 0.0206 | PQL | mg/Kg | J | Z |

**Sample ID: SL-537-SA7-SB-0.0-0.5** **Collected: 4/15/2013 9:50:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0156 | J | 0.0105 | MDL | 0.0203 | PQL | mg/Kg | J | Z |

**Sample ID: SL-538-SA7-SB-0.0-0.5** **Collected: 4/15/2013 10:50:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0152 | J | 0.0101 | MDL | 0.0195 | PQL | mg/Kg | J | Z |

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

**Sample ID: SL-521-SA7-SB-0.0-0.5** **Collected: 4/15/2013 2:15:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HPCDF | 0.317 | JB | 0.0259 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 1.12 | JB | 0.0368 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.429 | JB | 0.0274 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 2.92 | JB | 0.0362 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.305 | JB | 0.0270 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 1.89 | JB | 0.0346 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.133 | JBQ | 0.0289 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.367 | JBQ | 0.0491 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.588 | JB | 0.0438 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.338 | JB | 0.0269 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.246 | JB | 0.0437 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.0697 | JQ | 0.0330 | MDL | 1.02 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category:** SVOA

**Method:** 1613B **Matrix:** SO

**Sample ID:** SL-521-SA7-SB-0.0-0.5 **Collected:** 4/15/2013 2:15:00 **Analysis Type:** RES **Dilution:** 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDF | 0.142 | J | 0.0506 | MDL | 1.02 | PQL | ng/Kg | J | Z |

**Sample ID:** SL-522-SA7-SB-0.0-0.5 **Collected:** 4/15/2013 1:30:00 **Analysis Type:** RES **Dilution:** 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 2.24 | JB | 0.0165 | MDL | 5.17 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.223 | JBQ | 0.0304 | MDL | 5.17 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HxCDD | 0.474 | JBQ | 0.0370 | MDL | 5.17 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.295 | JB | 0.0312 | MDL | 5.17 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 1.31 | JB | 0.0361 | MDL | 5.17 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.244 | JB | 0.0270 | MDL | 5.17 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 0.961 | JB | 0.0340 | MDL | 5.17 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.148 | JBQ | 0.0325 | MDL | 5.17 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.263 | JBQ | 0.0371 | MDL | 5.17 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.359 | JBQ | 0.0249 | MDL | 5.17 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.259 | JBQ | 0.0282 | MDL | 5.17 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.457 | JB | 0.0245 | MDL | 5.17 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.0534 | J | 0.0269 | MDL | 1.03 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.339 | J | 0.0460 | MDL | 1.03 | PQL | ng/Kg | J | Z |
| OCDF | 4.20 | JB | 0.0367 | MDL | 10.3 | PQL | ng/Kg | J | Z |

**Sample ID:** SL-534-SA7-SB-5.5-6.5 **Collected:** 4/15/2013 8:45:00 **Analysis Type:** RES **Dilution:** 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 0.643 | JBQ | 0.0258 | MDL | 5.19 | PQL | ng/Kg | J | Z |
| 1,2,3,4,6,7,8-HPCDF | 0.154 | JB | 0.00718 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8,9-HPCDF | 0.0444 | JBQ | 0.0137 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HxCDD | 0.0331 | JBQ | 0.0222 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HXCDF | 0.0810 | JBQ | 0.0143 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDD | 0.0745 | JBQ | 0.0226 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDF | 0.0694 | JBQ | 0.0128 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDD | 0.0901 | JBQ | 0.0212 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDF | 0.0773 | JBQ | 0.0169 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.0653 | JBQ | 0.0223 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.134 | JBQ | 0.0125 | MDL | 5.19 | PQL | ng/Kg | U | B |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

**Sample ID: SL-534-SA7-SB-5.5-6.5** **Collected: 4/15/2013 8:45:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2,3,4,6,7,8-HXCDF | 0.0541 | JBQ | 0.0143 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 2,3,4,7,8-PECDF | 0.0780 | JBQ | 0.0126 | MDL | 5.19 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDD | 0.0290 | J | 0.0229 | MDL | 1.04 | PQL | ng/Kg | J | Z |
| OCDD | 7.49 | JB | 0.0224 | MDL | 10.4 | PQL | ng/Kg | J | Z |
| OCDF | 0.327 | JBQ | 0.0373 | MDL | 10.4 | PQL | ng/Kg | U | B |

**Sample ID: SL-537-SA7-SB-0.0-0.5** **Collected: 4/15/2013 9:50:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 2.91 | JB | 0.0149 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.261 | JBQ | 0.0273 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HxCDD | 0.340 | JBQ | 0.0340 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.201 | JB | 0.0282 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDD | 0.969 | JB | 0.0336 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.167 | JB | 0.0243 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 0.814 | JB | 0.0337 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.0382 | JBQ | 0.0326 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.288 | JB | 0.0326 | MDL | 5.09 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.169 | JB | 0.0193 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.173 | JB | 0.0273 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 2,3,4,7,8-PECDF | 0.138 | JBQ | 0.0187 | MDL | 5.09 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDD | 0.0372 | JQ | 0.0242 | MDL | 1.02 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.0992 | J | 0.0323 | MDL | 1.02 | PQL | ng/Kg | J | Z |
| OCDF | 7.37 | JB | 0.0392 | MDL | 10.2 | PQL | ng/Kg | J | Z |

**Sample ID: SL-538-SA7-SB-0.0-0.5** **Collected: 4/15/2013 10:50:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HPCDF | 0.416 | JB | 0.0295 | MDL | 4.85 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.533 | JB | 0.0354 | MDL | 4.85 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.270 | JBQ | 0.0300 | MDL | 4.85 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 1.59 | JB | 0.0355 | MDL | 4.85 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.254 | JB | 0.0273 | MDL | 4.85 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 1.20 | JB | 0.0308 | MDL | 4.85 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.147 | JBQ | 0.0335 | MDL | 4.85 | PQL | ng/Kg | U | B |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

**Sample ID: SL-538-SA7-SB-0.0-0.5** **Collected: 4/15/2013 10:50:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,7,8-PECDD | 0.319 | JBQ | 0.0351 | MDL | 4.85 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.281 | JB | 0.0189 | MDL | 4.85 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.302 | JB | 0.0300 | MDL | 4.85 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.207 | JB | 0.0185 | MDL | 4.85 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDD | 0.0426 | J | 0.0247 | MDL | 0.971 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.116 | J | 0.0336 | MDL | 0.971 | PQL | ng/Kg | J | Z |

**Method Category: SVOA**

**Method: 8015M** **Matrix: SO**

**Sample ID: SL-522-SA7-SB-0.0-0.5** **Collected: 4/15/2013 1:30:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 2.2 | J | 2.1 | MDL | 5.2 | PQL | mg/Kg | J | Z |

**Sample ID: SL-534-SA7-SB-5.5-6.5** **Collected: 4/15/2013 8:45:00** **Analysis Type: REA** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 2.8 | J | 2.1 | MDL | 5.2 | PQL | mg/Kg | J | Z |
| EFH (C21-C30) | 8.1 | | 2.1 | MDL | 5.2 | PQL | mg/Kg | J | Q, Q |
| EFH (C30-C40) | 12 | | 4.2 | MDL | 10 | PQL | mg/Kg | J | Q |

**Method Category: SVOA**

**Method: 8081B** **Matrix: SO**

**Sample ID: SL-521-SA7-SB-0.0-0.5** **Collected: 4/15/2013 2:15:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDE | 0.80 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| 4,4'-DDT | 0.62 | J | 0.36 | MDL | 1.7 | PQL | ug/Kg | J | Z, *XIII |

**Sample ID: SL-522-SA7-SB-0.0-0.5** **Collected: 4/15/2013 1:30:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDE | 1.5 | J | 0.34 | MDL | 1.8 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 8081B** **Matrix: SO**

**Sample ID: SL-522-SA7-SB-0.0-0.5** **Collected: 4/15/2013 1:30:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 1.7 | J | 0.36 | MDL | 1.8 | PQL | ug/Kg | J | Z |
| ENDOSULFAN I | 0.86 | U | 0.23 | MDL | 0.86 | PQL | ug/Kg | R | Q |

**Method Category: SVOA**

**Method: 8082A** **Matrix: SO**

**Sample ID: SL-521-SA7-SB-0.0-0.5** **Collected: 4/15/2013 2:15:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| AROCLOR 1254 | 6.7 | J | 4.4 | MDL | 17 | PQL | ug/Kg | J | Z |
| Aroclor 5460 | 17 | J | 10 | MDL | 33 | PQL | ug/Kg | J | Z |

**Sample ID: SL-537-SA7-SB-0.0-0.5** **Collected: 4/15/2013 9:50:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| AROCLOR 1260 | 11 | J | 3.9 | MDL | 17 | PQL | ug/Kg | J | Z, S |

**Method Category: SVOA**

**Method: 8270D SIM** **Matrix: SO**

**Sample ID: SL-521-SA7-SB-0.0-0.5** **Collected: 4/15/2013 2:15:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTHRACENE | 1.0 | J | 0.33 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(A)ANTHRACENE | 1.5 | J | 0.67 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(A)PYRENE | 1.1 | J | 0.67 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(G,H,I)PERYLENE | 1.3 | J | 0.67 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 8.4 | J | 6.0 | MDL | 18 | PQL | ug/Kg | J | Z |
| INDENO(1,2,3-CD)PYRENE | 1.1 | J | 0.67 | MDL | 1.7 | PQL | ug/Kg | J | Z |

**Sample ID: SL-522-SA7-SB-0.0-0.5** **Collected: 4/15/2013 1:30:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1-METHYLNAPHTHALENE | 0.94 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| 2-METHYLNAPHTHALENE | 1.5 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 8270D SIM** **Matrix: SO**

**Sample ID: SL-522-SA7-SB-0.0-0.5** **Collected: 4/15/2013 1:30:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ACENAPHTHYLENE | 0.40 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| ANTHRACENE | 1.6 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(E)PYRENE | 3.5 | J | 3.4 | MDL | 18 | PQL | ug/Kg | J | Z |
| FLUORENE | 1.2 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| INDENO(1,2,3-CD)PYRENE | 1.4 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |

**Sample ID: SL-534-SA7-SB-5.5-6.5** **Collected: 4/15/2013 8:45:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BIS(2-ETHYLHEXYL)PHTHALATE | 8.0 | J | 6.2 | MDL | 19 | PQL | ug/Kg | J | Z |

**Sample ID: SL-537-SA7-SB-0.0-0.5** **Collected: 4/15/2013 9:50:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2-METHYLNAPHTHALENE | 0.72 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(A)ANTHRACENE | 1.1 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(A)PYRENE | 1.5 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(G,H,I)PERYLENE | 1.6 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(K)FLUORANTHENE | 1.4 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| INDENO(1,2,3-CD)PYRENE | 0.97 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| NAPHTHALENE | 0.84 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | U | F |

**Sample ID: SL-538-SA7-SB-0.0-0.5** **Collected: 4/15/2013 10:50:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2-METHYLNAPHTHALENE | 0.93 | J | 0.67 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| ANTHRACENE | 0.50 | J | 0.33 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(E)PYRENE | 3.9 | J | 3.3 | MDL | 17 | PQL | ug/Kg | J | Z |
| DIBENZO(A,H)ANTHRACENE | 0.89 | J | 0.67 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| FLUORENE | 0.79 | J | 0.67 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| NAPHTHALENE | 0.88 | J | 0.67 | MDL | 1.7 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

## Reason Code Legend

| *Reason Code* | *Description* |
|---|---|
| *XIII | RPD Between Two Columns |
| A | Professional Judgment |
| B | Calibration Blank Contamination |
| B | Method Blank Contamination |
| E | Matrix Spike Precision |
| F | Equipment Blank Contamination |
| F | Field Blank Contamination |
| Q | Matrix Spike Lower Estimation |
| Q | Matrix Spike Lower Rejection |
| Q | Matrix Spike Precision |
| Q | Matrix Spike Upper Estimation |
| S | Surrogate/Tracer Recovery Upper Estimation |
| Z | Reporting Limit Trace Value |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Enclosure I

# Level III ADR Outliers
# (including Manual Review Outliers)

# Quality Control
# Outlier Reports

# PH031

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **1613B**
***Matrix:*** **SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| BLK1070B371837 | 4/18/2013 6:37:00 PM | 1,2,3,4,6,7,8-HPCDD | 0.0818 ng/Kg | SL-521-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,6,7,8-HPCDF | 0.0623 ng/Kg | SL-522-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8,9-HPCDF | 0.0596 ng/Kg | SL-534-SA7-SB-5.5-6.5 |
| | | 1,2,3,4,7,8-HxCDD | 0.0185 ng/Kg | SL-537-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8-HXCDF | 0.0425 ng/Kg | SL-538-SA7-SB-0.0-0.5 |
| | | 1,2,3,6,7,8-HXCDD | 0.0275 ng/Kg | |
| | | 1,2,3,6,7,8-HXCDF | 0.0316 ng/Kg | |
| | | 1,2,3,7,8,9-HXCDD | 0.0437 ng/Kg | |
| | | 1,2,3,7,8,9-HXCDF | 0.0663 ng/Kg | |
| | | 1,2,3,7,8-PECDD | 0.0350 ng/Kg | |
| | | 1,2,3,7,8-PECDF | 0.0538 ng/Kg | |
| | | 2,3,4,6,7,8-HXCDF | 0.0359 ng/Kg | |
| | | 2,3,4,7,8-PECDF | 0.0482 ng/Kg | |
| | | OCDD | 0.151 ng/Kg | |
| | | OCDF | 0.164 ng/Kg | |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-521-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDF | 0.133 ng/Kg | 0.133U ng/Kg |
| SL-522-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8,9-HPCDF | 0.223 ng/Kg | 0.223U ng/Kg |
| SL-522-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDF | 0.148 ng/Kg | 0.148U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | 1,2,3,4,6,7,8-HPCDF | 0.154 ng/Kg | 0.154U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | 1,2,3,4,7,8,9-HPCDF | 0.0444 ng/Kg | 0.0444U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | 1,2,3,4,7,8-HxCDD | 0.0331 ng/Kg | 0.0331U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | 1,2,3,4,7,8-HXCDF | 0.0810 ng/Kg | 0.0810U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | 1,2,3,6,7,8-HXCDD | 0.0745 ng/Kg | 0.0745U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | 1,2,3,6,7,8-HXCDF | 0.0694 ng/Kg | 0.0694U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | 1,2,3,7,8,9-HXCDD | 0.0901 ng/Kg | 0.0901U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | 1,2,3,7,8,9-HXCDF | 0.0773 ng/Kg | 0.0773U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | 1,2,3,7,8-PECDD | 0.0653 ng/Kg | 0.0653U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | 1,2,3,7,8-PECDF | 0.134 ng/Kg | 0.134U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | 2,3,4,6,7,8-HXCDF | 0.0541 ng/Kg | 0.0541U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | 2,3,4,7,8-PECDF | 0.0780 ng/Kg | 0.0780U ng/Kg |
| SL-534-SA7-SB-5.5-6.5(RES) | OCDF | 0.327 ng/Kg | 0.327U ng/Kg |
| SL-537-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8,9-HPCDF | 0.261 ng/Kg | 0.261U ng/Kg |
| SL-537-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8-HXCDF | 0.201 ng/Kg | 0.201U ng/Kg |
| SL-537-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDF | 0.0382 ng/Kg | 0.0382U ng/Kg |
| SL-537-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDF | 0.169 ng/Kg | 0.169U ng/Kg |
| SL-537-SA7-SB-0.0-0.5(RES) | 2,3,4,6,7,8-HXCDF | 0.173 ng/Kg | 0.173U ng/Kg |
| SL-537-SA7-SB-0.0-0.5(RES) | 2,3,4,7,8-PECDF | 0.138 ng/Kg | 0.138U ng/Kg |
| SL-538-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDF | 0.147 ng/Kg | 0.147U ng/Kg |
| SL-538-SA7-SB-0.0-0.5(RES) | 2,3,4,7,8-PECDF | 0.207 ng/Kg | 0.207U ng/Kg |

# *Method Blank Outlier Report*

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **6010C**
***Matrix:*** **SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| P10737AB221907 | 4/21/2013 7:07:00 PM | MAGNESIUM<br>PHOSPHORUS<br>TIN | 1.82 mg/Kg<br>10.9 mg/Kg<br>1.40 mg/Kg | SL-521-SA7-SB-0.0-0.5<br>SL-522-SA7-SB-0.0-0.5<br>SL-534-SA7-SB-5.5-6.5<br>SL-537-SA7-SB-0.0-0.5<br>SL-538-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-521-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.81 mg/Kg | 2.81U mg/Kg |
| SL-522-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.44 mg/Kg | 2.44U mg/Kg |
| SL-534-SA7-SB-5.5-6.5(RES/TOT) | TIN | 2.63 mg/Kg | 2.63U mg/Kg |
| SL-537-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.78 mg/Kg | 2.78U mg/Kg |
| SL-538-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.62 mg/Kg | 2.62U mg/Kg |

# *Equipment Rinsate Blank Outlier Report*

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **6010C**
***Matrix:*** **SO**

| Equipment Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| EB-041813(RES) | 4/18/2013 3:00:00 PM | MOLYBDENUM | 0.0036 mg/L | SL-521-SA7-SB-0.0-0.5<br>SL-522-SA7-SB-0.0-0.5<br>SL-534-SA7-SB-5.5-6.5<br>SL-537-SA7-SB-0.0-0.5<br>SL-538-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-521-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.491 mg/Kg | 0.491U mg/Kg |
| SL-522-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.349 mg/Kg | 0.349U mg/Kg |
| SL-534-SA7-SB-5.5-6.5(RES/TOT) | MOLYBDENUM | 0.441 mg/Kg | 0.441U mg/Kg |
| SL-538-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.266 mg/Kg | 0.266U mg/Kg |

# Field Blank Outlier Report

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PrepPH031** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **6010C**
***Matrix:*** **SO**

| Field Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| FB-041113(REA2) | 4/11/2013 3:00:00 PM | COPPER<br>MOLYBDENUM | 0.0036 mg/L<br>0.0036 mg/L | SL-521-SA7-SB-0.0-0.5<br>SL-522-SA7-SB-0.0-0.5<br>SL-534-SA7-SB-5.5-6.5<br>SL-537-SA7-SB-0.0-0.5<br>SL-538-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-521-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.491 mg/Kg | 0.491U mg/Kg |
| SL-522-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.349 mg/Kg | 0.349U mg/Kg |
| SL-534-SA7-SB-5.5-6.5(RES/TOT) | MOLYBDENUM | 0.441 mg/Kg | 0.441U mg/Kg |
| SL-538-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.266 mg/Kg | 0.266U mg/Kg |

***Method:*** **8270D SIM**
***Matrix:*** **SO**

| Field Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| FB-041113(RES) | 4/11/2013 3:00:00 PM | 1-METHYLNAPHTHALENE<br>2-METHYLNAPHTHALENE<br>BIS(2-ETHYLHEXYL)PHTHALATE<br>Diethylphthalate<br>Di-n-butylphthalate<br>NAPHTHALENE | 0.019 ug/L<br>0.024 ug/L<br>0.082 ug/L<br>0.18 ug/L<br>0.17 ug/L<br>0.17 ug/L | SL-521-SA7-SB-0.0-0.5<br>SL-522-SA7-SB-0.0-0.5<br>SL-534-SA7-SB-5.5-6.5<br>SL-537-SA7-SB-0.0-0.5<br>SL-538-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-537-SA7-SB-0.0-0.5(RES) | NAPHTHALENE | 0.84 ug/Kg | 1.7U ug/Kg |

# *Surrogate Outlier Report*

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PH031_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **8082A**
***Matrix:*** **SO**

| *Sample ID (Analysis Type)* | *Surrogate* | *Sample % Recovery* | *% Recovery Limits* | *Affected Compounds* | *Flag* |
|---|---|---|---|---|---|
| **SL-522-SA7-SB-0.0 -0.5** | TETRACHLORO-M-XYLENE | 122 | 45.00-120.00 | All Target Analytes | J (all detects) |
| **SL-537-SA7-SB-0.0 -0.5** | TETRACHLORO-M-XYLENE | 122 | 45.00-120.00 | All Target Analytes | J(all detects) |

# Matrix Spike/Matrix Spike Duplicate Outlier Report

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PH031_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 8081B**
**Matrix: SO**

| QC Sample ID (Associated Samples) | Compound | MS %R | MSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| SL-522-SA7-SB-0.0-0.5MS<br>SL-522-SA7-SB-0.0-0.5MSD<br>(SL-522-SA7-SB-0.0-0.5) | ENDOSULFAN I | 0 | - | 16.00-137.00 | 200 (50.00) | ENDOSULFAN I | J (all detects)<br>R (all non-detects) |

**Method: 8015M**
**Matrix: SO**

| QC Sample ID (Associated Samples) | Compound | MS %R | MSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| SL-534-SA7-SB-5.5-6.5MS<br>SL-534-SA7-SB-5.5-6.5MSD<br>(SL-534-SA7-SB-5.5-6.5) | EFH (C21-C30)<br>EFH (C30-C40) | 130<br>163 | -<br>- | 49.00-123.00<br>49.00-123.00 | 28 (20.00)<br>- | EFH (C21-C30)<br>EFH (C30-C40) | J(all detects) |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PH031_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-521-SA7-SB-0.0-0.5 | 1,2,3,4,7,8,9-HPCDF | JB | 0.317 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 1.12 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.429 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 2.92 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.305 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 1.89 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.133 | 5.09 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JBQ | 0.367 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.588 | 5.09 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.338 | 5.09 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.246 | 5.09 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JQ | 0.0697 | 1.02 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.142 | 1.02 | PQL | ng/Kg | |
| SL-522-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 2.24 | 5.17 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JBQ | 0.223 | 5.17 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JBQ | 0.474 | 5.17 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.295 | 5.17 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 1.31 | 5.17 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.244 | 5.17 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.961 | 5.17 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.148 | 5.17 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JBQ | 0.263 | 5.17 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.359 | 5.17 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.259 | 5.17 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.457 | 5.17 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | J | 0.0534 | 1.03 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.339 | 1.03 | PQL | ng/Kg | |
| | OCDF | JB | 4.20 | 10.3 | PQL | ng/Kg | |
| SL-534-SA7-SB-5.5-6.5 | 1,2,3,4,6,7,8-HPCDD | JBQ | 0.643 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,4,6,7,8-HPCDF | JB | 0.154 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JBQ | 0.0444 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JBQ | 0.0331 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JBQ | 0.0810 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JBQ | 0.0745 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JBQ | 0.0694 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JBQ | 0.0901 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.0773 | 5.19 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JBQ | 0.0653 | 5.19 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.134 | 5.19 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.0541 | 5.19 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.0780 | 5.19 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | J | 0.0290 | 1.04 | PQL | ng/Kg | |
| | OCDD | JB | 7.49 | 10.4 | PQL | ng/Kg | |
| | OCDF | JBQ | 0.327 | 10.4 | PQL | ng/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PH031_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-537-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 2.91 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JBQ | 0.261 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JBQ | 0.340 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.201 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 0.969 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.167 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.814 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.0382 | 5.09 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JB | 0.288 | 5.09 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.169 | 5.09 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.173 | 5.09 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.138 | 5.09 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JQ | 0.0372 | 1.02 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.0992 | 1.02 | PQL | ng/Kg | |
| | OCDF | JB | 7.37 | 10.2 | PQL | ng/Kg | |
| SL-538-SA7-SB-0.0-0.5 | 1,2,3,4,7,8,9-HPCDF | JB | 0.416 | 4.85 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.533 | 4.85 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JBQ | 0.270 | 4.85 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 1.59 | 4.85 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.254 | 4.85 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 1.20 | 4.85 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.147 | 4.85 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JBQ | 0.319 | 4.85 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.281 | 4.85 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.302 | 4.85 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.207 | 4.85 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | J | 0.0426 | 0.971 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.116 | 0.971 | PQL | ng/Kg | |

**Method: 6010C**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-521-SA7-SB-0.0-0.5 | ANTIMONY | J | 1.52 | 3.92 | PQL | mg/Kg | |
| | ARSENIC | J | 3.85 | 3.92 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.618 | 0.979 | PQL | mg/Kg | |
| | BORON | J | 2.86 | 9.79 | PQL | mg/Kg | J (all detects) |
| | CADMIUM | J | 0.379 | 0.979 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.491 | 1.96 | PQL | mg/Kg | |
| | SODIUM | J | 64.5 | 97.9 | PQL | mg/Kg | |
| | TIN | J | 2.81 | 9.79 | PQL | mg/Kg | |
| SL-522-SA7-SB-0.0-0.5 | ANTIMONY | J | 1.89 | 4.15 | PQL | mg/Kg | |
| | ARSENIC | J | 2.40 | 4.15 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.537 | 1.04 | PQL | mg/Kg | |
| | BORON | J | 3.26 | 10.4 | PQL | mg/Kg | J (all detects) |
| | CADMIUM | J | 0.468 | 1.04 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.349 | 2.07 | PQL | mg/Kg | |
| | SODIUM | J | 70.7 | 104 | PQL | mg/Kg | |
| | TIN | J | 2.44 | 10.4 | PQL | mg/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PH031_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6010C**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-534-SA7-SB-5.5-6.5 | ANTIMONY | J | 1.87 | 4.03 | PQL | mg/Kg | J (all detects) |
| | ARSENIC | J | 2.46 | 4.03 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.582 | 1.01 | PQL | mg/Kg | |
| | BORON | J | 1.47 | 10.1 | PQL | mg/Kg | |
| | CADMIUM | J | 0.418 | 1.01 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.441 | 2.02 | PQL | mg/Kg | |
| | SODIUM | J | 67.8 | 101 | PQL | mg/Kg | |
| | TIN | J | 2.63 | 10.1 | PQL | mg/Kg | |
| SL-537-SA7-SB-0.0-0.5 | ANTIMONY | J | 1.73 | 4.05 | PQL | mg/Kg | J (all detects) |
| | ARSENIC | J | 2.50 | 4.05 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.477 | 1.01 | PQL | mg/Kg | |
| | BORON | J | 2.96 | 10.1 | PQL | mg/Kg | |
| | CADMIUM | J | 0.511 | 1.01 | PQL | mg/Kg | |
| | SODIUM | J | 62.0 | 101 | PQL | mg/Kg | |
| | TIN | J | 2.78 | 10.1 | PQL | mg/Kg | |
| | Zirconium | J | 0.916 | 5.07 | PQL | mg/Kg | |
| SL-538-SA7-SB-0.0-0.5 | ANTIMONY | J | 1.49 | 4.02 | PQL | mg/Kg | J (all detects) |
| | ARSENIC | J | 1.83 | 4.02 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.492 | 1.01 | PQL | mg/Kg | |
| | BORON | J | 3.01 | 10.1 | PQL | mg/Kg | |
| | CADMIUM | J | 0.445 | 1.01 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.266 | 2.01 | PQL | mg/Kg | |
| | SODIUM | J | 60.1 | 101 | PQL | mg/Kg | |
| | TIN | J | 2.62 | 10.1 | PQL | mg/Kg | |

**Method: 6020A**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-521-SA7-SB-0.0-0.5 | SELENIUM | J | 0.173 | 0.392 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0272 | 0.196 | PQL | mg/Kg | |
| SL-522-SA7-SB-0.0-0.5 | SELENIUM | J | 0.145 | 0.415 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0296 | 0.207 | PQL | mg/Kg | |
| SL-534-SA7-SB-5.5-6.5 | SILVER | J | 0.0330 | 0.202 | PQL | mg/Kg | J (all detects) |
| SL-537-SA7-SB-0.0-0.5 | SILVER | J | 0.0361 | 0.203 | PQL | mg/Kg | J (all detects) |
| SL-538-SA7-SB-0.0-0.5 | SILVER | J | 0.0394 | 0.201 | PQL | mg/Kg | J (all detects) |

**Method: 7471B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-521-SA7-SB-0.0-0.5 | MERCURY | J | 0.0176 | 0.0195 | PQL | mg/Kg | J (all detects) |
| SL-534-SA7-SB-5.5-6.5 | MERCURY | J | 0.0125 | 0.0206 | PQL | mg/Kg | J (all detects) |
| SL-537-SA7-SB-0.0-0.5 | MERCURY | J | 0.0156 | 0.0203 | PQL | mg/Kg | J (all detects) |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PH031_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 7471B**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-538-SA7-SB-0.0-0.5 | MERCURY | J | 0.0152 | 0.0195 | PQL | mg/Kg | J (all detects) |

**Method: 8015M**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-522-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 2.2 | 5.2 | PQL | mg/Kg | J (all detects) |
| SL-534-SA7-SB-5.5-6.5 | EFH (C15-C20) | J | 2.8 | 5.2 | PQL | mg/Kg | J (all detects) |

**Method: 8081B**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-521-SA7-SB-0.0-0.5 | 4,4'-DDE | J | 0.80 | 1.7 | PQL | ug/Kg | J (all detects) |
| | 4,4'-DDT | J | 0.62 | 1.7 | PQL | ug/Kg | |
| SL-522-SA7-SB-0.0-0.5 | 4,4'-DDE | J | 1.5 | 1.8 | PQL | ug/Kg | J (all detects) |
| | 4,4'-DDT | J | 1.7 | 1.8 | PQL | ug/Kg | |

**Method: 8082A**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-521-SA7-SB-0.0-0.5 | AROCLOR 1254 | J | 6.7 | 17 | PQL | ug/Kg | J (all detects) |
| | Aroclor 5460 | J | 17 | 33 | PQL | ug/Kg | |
| SL-537-SA7-SB-0.0-0.5 | AROCLOR 1260 | J | 11 | 17 | PQL | ug/Kg | J (all detects) |

**Method: 8270D SIM**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-521-SA7-SB-0.0-0.5 | ANTHRACENE | J | 1.0 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BENZO(A)ANTHRACENE | J | 1.5 | 1.7 | PQL | ug/Kg | |
| | BENZO(A)PYRENE | J | 1.1 | 1.7 | PQL | ug/Kg | |
| | BENZO(G,H,I)PERYLENE | J | 1.3 | 1.7 | PQL | ug/Kg | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 8.4 | 18 | PQL | ug/Kg | |
| | INDENO(1,2,3-CD)PYRENE | J | 1.1 | 1.7 | PQL | ug/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH031** **Laboratory: LL**

**EDD Filename: PH031_v1.** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **8270D SIM**

***Matrix:*** **SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-522-SA7-SB-0.0-0.5 | 1-METHYLNAPHTHALENE | J | 0.94 | 1.7 | PQL | ug/Kg | |
| | 2-METHYLNAPHTHALENE | J | 1.5 | 1.7 | PQL | ug/Kg | |
| | ACENAPHTHYLENE | J | 0.40 | 1.7 | PQL | ug/Kg | |
| | ANTHRACENE | J | 1.6 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BENZO(E)PYRENE | J | 3.5 | 18 | PQL | ug/Kg | |
| | FLUORENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| | INDENO(1,2,3-CD)PYRENE | J | 1.4 | 1.7 | PQL | ug/Kg | |
| SL-534-SA7-SB-5.5-6.5 | BIS(2-ETHYLHEXYL)PHTHALATE | J | 8.0 | 19 | PQL | ug/Kg | J (all detects) |
| SL-537-SA7-SB-0.0-0.5 | 2-METHYLNAPHTHALENE | J | 0.72 | 1.7 | PQL | ug/Kg | |
| | BENZO(A)ANTHRACENE | J | 1.1 | 1.7 | PQL | ug/Kg | |
| | BENZO(A)PYRENE | J | 1.5 | 1.7 | PQL | ug/Kg | |
| | BENZO(G,H,I)PERYLENE | J | 1.6 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BENZO(K)FLUORANTHENE | J | 1.4 | 1.7 | PQL | ug/Kg | |
| | INDENO(1,2,3-CD)PYRENE | J | 0.97 | 1.7 | PQL | ug/Kg | |
| | NAPHTHALENE | J | 0.84 | 1.7 | PQL | ug/Kg | |
| SL-538-SA7-SB-0.0-0.5 | 2-METHYLNAPHTHALENE | J | 0.93 | 1.7 | PQL | ug/Kg | |
| | ANTHRACENE | J | 0.50 | 1.7 | PQL | ug/Kg | |
| | BENZO(E)PYRENE | J | 3.9 | 17 | PQL | ug/Kg | J (all detects) |
| | DIBENZO(A,H)ANTHRACENE | J | 0.89 | 1.7 | PQL | ug/Kg | |
| | FLUORENE | J | 0.79 | 1.7 | PQL | ug/Kg | |
| | NAPHTHALENE | J | 0.88 | 1.7 | PQL | ug/Kg | |

LDC #: 29836E4 **VALIDATION COMPLETENESS WORKSHEET** Date: 6/11/13

SDG #: PH031 ADR Page: 1 of 1

Laboratory: Eurofins Lancaster Laboratories Reviewer: [illegible]

2nd Reviewer: [illegible]

**METHOD:** Metals (EPA SW 846 Method 6010C/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

| | Validation Area | | Comments |
|---|---|---|---|
| I. | Technical holding times | — | Sampling dates: 4/15/13 |
| II. | ICP/MS Tune | — | |
| III. | Calibration | — | |
| IV. | Blanks | SW | |
| V. | ICP Interference Check Sample (ICS) Analysis | A — | |
| VI. | Matrix Spike Analysis | N | MS/D (from PH030) |
| VII. | Duplicate Sample Analysis | N | Dup ↓ |
| VIII. | Laboratory Control Samples (LCS) | A | LCS |
| IX. | Internal Standard (ICP-MS) | N | |
| X. | Furnace Atomic Absorption QC | N | |
| XI. | ICP Serial Dilution | A | |
| XII. | Sample Result Verification | N | |
| XIII. | Overall Assessment of Data | N | |
| XIV. | Field Duplicates | — | |
| XV | Field Blanks | SW | FB= FB-041113(PH029) EB= EB041813 (PH034) |

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 36 | SL-534-SA7-SB-5.5-6.5 | 11 | | 21 | | 31 | |
| 2 37 | SL-537-SA7-SB-0.0-0.5 | 12 | | 22 | | 32 | |
| 3 38 | SL-538-SA7-SB-0.0-0.5 | 13 | | 23 | | 33 | |
| 4 39 | SL-522-SA7-SB-0.0-0.5 | 14 | | 24 | | 34 | |
| 5 40 | SL-521-SA7-SB-0.0-0.5 | 15 | | 25 | | 35 | |
| 6 | | 16 | | 26 | | 36 | |
| 7 | | 17 | | 27 | | 37 | |
| 8 | | 18 | | 28 | | 38 | |
| 9 | | 19 | | 29 | | 39 | |
| 10 | | 20 | | 30 | | 40 | |

Notes: _____

LDC #: 29836E4

**VALIDATION FINDINGS WORKSHEET**
**PB/ICB/CCB QUALIFIED SAMPLES**

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

**METHOD:** Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x Reason: B

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: All

| Analyte | Maximum PB[a] (mg/Kg) | Maximum PB[a] (ug/L) | Maximum ICB/CCB[a] (ug/L) | Action Level | 1 | 3 | 4 | 5 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mo | | | 2.8 | 1.4 | 0.44 | 0.27 | 0.35 | 0.49 | | | | | |

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 29836E4

# VALIDATION FINDINGS WORKSHEET
## Field Blanks


Reviewer: CA
2nd Reviewer: LA

**METHOD:** Trace Metals (EPA SW846 6010B/7000)

**Blank units:** mg/L **Associated sample units:** mg/Kg Reason: F
**Sampling date:** EB=4/18/13 FB=4/11/13 Soil factor applied 100x
**Field blank type:** (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

| Analyte | Blank ID | Blank ID | Sample Identification | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB-041813 | FB-041113 | Action Limit | 1 | 3 | 4 | 5 | | | | | | | |
| Cu | | 0.0036 | 1.8 | | | | | | | | | | | |
| Mo | 0.0036 | 0.0036 | 1.8 | 0.44 | 0.27 | 0.35 | 0.49 | | | | | | | |
| Sr | 0.000028 | | 0.014 | | | | | | | | | | | |
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CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

# Enclosure II

# Level IV Validation Reports

# Laboratory Data Consultants, Inc.
# Data Validation Report

| | |
|---|---|
| **Project/Site Name:** | Santa Susana Field Laboratory |
| **Collection Date:** | April 15, 2013 |
| **LDC Report Date:** | June 24, 2013 |
| **Matrix:** | Soil |
| **Parameters:** | Chlorinated Pesticides |
| **Validation Level:** | Level IV |
| **Laboratory:** | Eurofins |
| **Sample Delivery Group (SDG):** | PH031 |

**Sample Identification**

SL-522-SA7-SB-0.0-0.5
SL-521-SA7-SB-0.0-0.5
SL-522-SA7-SB-0.0-0.5MS
SL-522-SA7-SB-0.0-0.5MSD

## Introduction

This data review covers 4 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081A for Chlorinated Pesticides.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

## I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

## II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

## III. Initial Calibration

Initial calibration of single compounds was performed for the primary (quantitation) column and confirmation column as required by this method.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

## IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

The individual 4,4'-DDT and Endrin breakdowns (%BD) were less than or equal to 15.0%.

## V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide contaminants were found in the method blanks.

Sample EB-041813 (from SDG PH034) was identified as an equipment blank. No chlorinated pesticide contaminants were found.

Sample FB-041113 (from SDG PH029) was identified as a field blank. No chlorinated pesticide contaminants were found.

## VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

## VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

| Spike ID (Associated Samples) | Compound | MS (%R) (Limits) | MSD (%R) (Limits) | RPD (Limits) | Flag | A or P |
|---|---|---|---|---|---|---|
| SL-522-SA7-SB-0.0-0.5MS/MSD (SL-522-SA7-SB-0.0-0.5) | Endosulfan I | 0 (16-137) | - | 200 (≤50) | J (all detects) R (all non-detects) | A |

## VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

## IX. Regional Quality Assurance and Quality Control

Not applicable.

## X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

## XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

## XII. Target Compound Identification

All target compound identifications were within validation criteria.

## XIII. Compound Quantitation

All compound quantitations were within validation criteria.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

| Sample | Compound | RPD | Flag | A or P |
|---|---|---|---|---|
| SL-521-SA7-SB-0.0-0.5 | 4,4'-DDT | 45 | J (all detects) | A |

All compounds reported below the RL were qualified as follows:

| Sample | Finding | Flag | A or P |
|---|---|---|---|
| All samples in SDG PH031 | All compounds reported below the RL. | J (all detects) | A |

## XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

## XV. Field Duplicates

No field duplicates were identified in this SDG.

**Santa Susana Field Laboratory**
**Chlorinated Pesticides - Data Qualification Summary - SDG PH031**

| SDG | Sample | Compound | Flag | A or P | Reason (Code) |
|---|---|---|---|---|---|
| PH031 | SL-522-SA7-SB-0.0-0.5 | Endosulfan I | J (all detects)<br>R (all non-detects) | A | Matrix spike/Matrix spike duplicate (%R)(RPD) (Q) |
| PH031 | SL-521-SA7-SB-0.0-0.5 | 4,4'-DDT | J (all detects) | A | Compound quantitation (RPD) (*XIII) |
| PH031 | SL-522-SA7-SB-0.0-0.5<br>SL-521-SA7-SB-0.0-0.5 | All compounds reported below the RL. | J (all detects) | A | Compound quantitation (Z) |

**Santa Susana Field Laboratory**
**Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG PH031**

No Sample Data Qualified in this SDG

**Santa Susana Field Laboratory**
**Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG PH031**

No Sample Data Qualified in this SDG

LDC #: 29836E3a **VALIDATION COMPLETENESS WORKSHEET** Date: 6/5/13
SDG #: PH031 Level IV Page: 1 of 1
Laboratory: Eurofins Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

**METHOD:** GC Chlorinated Pesticides (EPA SW846 Method 8081A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

| | Validation Area | | Comments |
|---|---|---|---|
| I. | Technical holding times | A | Sampling dates: 4/15/13 |
| II. | GC/ECD Instrument Performance Check | A | |
| III. | Initial calibration | A | %RSD ≤ 20 |
| IV. | Continuing calibration/ICV | A | ICV/CCV ≤ 20 |
| V. | Blanks | A | |
| VI. | Surrogate spikes | A | |
| VII. | Matrix spike/Matrix spike duplicates | SW | |
| VIII. | Laboratory control samples | A | LCS |
| IX. | Regional quality assurance and quality control | N | |
| X. | Florisil cartridge check | N | |
| XI. | GPC Calibration | N | |
| XII. | Target compound identification | A | |
| XIII. | Compound quantitation/RL/LOQ/LODs | SW | |
| XIV. | Overall assessment of data | A | |
| XV. | Field duplicates | N | |
| XVI. | Field blanks | ND | EB= EB-041813 (SDG # PH034) FB= FB-041113 (SDG # PH029) |

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | SL-522-SA7-SB-0.0-0.5 | 11 | PBLK12108 | 21 | | 31 | |
| 2 | SL-521-SA7-SB-0.0-0.5 | 12 | | 22 | | 32 | |
| 3 | #/MS | 13 | | 23 | | 33 | |
| 4 | #/MSD | 14 | | 24 | | 34 | |
| 5 | | 15 | | 25 | | 35 | |
| 6 | | 16 | | 26 | | 36 | |
| 7 | | 17 | | 27 | | 37 | |
| 8 | | 18 | | 28 | | 38 | |
| 9 | | 19 | | 29 | | 39 | |
| 10 | | 20 | | 30 | | 40 | |

39
40

Notes: _____

LDC #: 29836E3a

**VALIDATION FINDINGS CHECKLIST**

Page: 1 of 2
Reviewer: FM
2nd Reviewer: A

**Method:** Pesticides/PCBs (EPA SW 846 Method 8081A/8082)

| Validation Area | Yes | No | NA | Findings/Comments |
|---|---|---|---|---|
| I. Technical holding times | | | | |
| All technical holding times were met. | ✓ | | | |
| Cooler temperature criteria was met. | ✓ | | | |
| II. GC/ECD Instrument performance check | | | | |
| Was the instrument performance found to be acceptable? | ✓ | | | |
| III. Initial calibration | | | | |
| Did the laboratory perform a 5 point calibration prior to sample analysis? | ✓ | | | |
| Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%? | ✓ | | | |
| Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used? | | ✓ | | |
| Did the initial calibration meet the curve fit acceptance criteria? | | | ✓ | |
| Were the RT windows properly established? | ✓ | | | |
| Were the required standard concentrations analyzed in the initial calibration? | ✓ | | | |
| IV. Continuing calibration | | | | |
| What type of continuing calibration calculation was performed? ____%D or ____%R | ✓ | | | |
| Were Evaluation mix standards analyzed prior to the initial calibration and sample analysis? | ✓ | | | |
| Were endrin and 4,4'-DDT breakdowns ≤ 15% for individual breakdown in the Evaluation mix standards? | ✓ | | | |
| Was a continuing calibration analyzed daily? | ✓ | | | |
| Were all percent differences (%D) ≤ 20%? | ✓ | | | |
| Were all the retention times within the acceptance windows? | ✓ | | | |
| V. Blanks | | | | |
| Was a method blank associated with every sample in this SDG? | ✓ | | | |
| Was a method blank analyzed for each matrix and concentration? | ✓ | | | |
| Were extract cleanup blanks analyzed with every batch requiring clean-up? | | | ✓ | |
| Was there contamination in the method blanks or clean-up blanks? If yes, please see the Blanks validation completeness worksheet. | | ✓ | | |
| VI. Surrogate spikes | | | | |
| Were all surrogate %R within the QC limits? | ✓ | | | |
| If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R? | | | ✓ | |
| If any %R was less than 10 percent, was a reanalysis performed to confirm %R? | | | ✓ | |

LDC #: 29836E3a

# VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: FT
2nd Reviewer: A

| Validation Area | Yes | No | NA | Findings/Comments |
|---|---|---|---|---|
| VII. Matrix spike/Matrix spike duplicates | | | | |
| Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water. | ✓ | | | |
| Was a MS/MSD analyzed every 20 samples of each matrix? | ✓ | | | |
| Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits? | | ✓ | | |
| VIII. Laboratory control samples | | | | |
| Was an LCS analyzed for this SDG? | ✓ | | | |
| Was an LCS analyzed per extraction batch? | ✓ | | | |
| Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits? | ✓ | | | |
| IX. Regional Quality Assurance and Quality Control | | | | |
| Were performance evaluation (PE) samples performed? | | | ✓ | |
| Were the performance evaluation (PE) samples within the acceptance limits? | | | ✓ | |
| X. Target compound identification | | | | |
| Were the retention times of reported detects within the RT windows? | ✓ | | | |
| XI. Compound quantitation/CRQLs | | | | |
| Were compound quantitation and CRQLs adjusted to reflect all sample dilutions, dry weight factors, and clean-up activities applicable to level IV validation? | ✓ | | | |
| XII. System performance | | | | |
| System performance was found to be acceptable. | ✓ | | | |
| XIII. Overall assessment of data | | | | |
| Overall assessment of data was found to be acceptable. | ✓ | | | |
| XIV. Field duplicates | | | | |
| Field duplicate pairs were identified in this SDG. | | ✓ | | |
| Target compounds were detected in the field duplicates. | | | ✓ | |
| XV. Field blanks | | | | |
| Field blanks were identified in this SDG. | | ✓ | | |
| Target compounds were detected in the field blanks. | | | ✓ | |

# VALIDATION FINDINGS WORKSHEET

**METHOD:** Pesticide/PCBs (EPASW 846 Method 8081/8082)

| | | | | |
|---|---|---|---|---|
| A. alpha-BHC | I. Dieldrin | Q. Endrin ketone | Y. Aroclor-1242 | GG. |
| B. beta-BHC | J. 4,4'-DDE | R. Endrin aldehyde | Z. Aroclor-1248 | HH. |
| C. delta-BHC | K. Endrin | S. alpha-Chlordane | AA. Aroclor-1254 | II. |
| D. gamma-BHC | L. Endosulfan II | T. gamma-Chlordane | BB. Aroclor-1260 | JJ. |
| E. Heptachlor | M. 4,4'-DDD | U. Toxaphene | CC. DB 608 | KK. |
| F. Aldrin | N. Endosulfan sulfate | V. Aroclor-1016 | DD. DB 1701 | LL. |
| G. Heptachlor epoxide | O. 4,4'-DDT | W. Aroclor-1221 | EE. | MM. |
| H. Endosulfan I | P. Methoxychlor | X. Aroclor-1232 | FF. | NN. |

Notes:_____

LDC #: 29836E3a

# VALIDATION FINDINGS WORKSHEET
## Matrix Spike/Matrix Spike Duplicates


Reviewer: FT
2nd Reviewer: [illegible]

**METHOD:** ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?

Y N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

Y N N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

| # | MS/MSD ID | Compound | MS %R (Limits) | MSD %R (Limits) | RPD (Limits) | Associated Samples | Qualifications |
|---|---|---|---|---|---|---|---|
| | 3 + 4 | H | 0 (16-137) | ( ) | 200 ( 50 ) | 1 | J/R/A (9) |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
| | | | ( ) | ( ) | ( ) | | |
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LDC #: 29836E3a

# VALIDATION FINDINGS WORKSHEET
## Compound Quantitation and Reported CRQLs


Reviewer: FT
2nd Reviewer:

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

**Level IV/D Only**

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

| # | Compound Name | Finding (% RPD Bet 2 col ≤ 40) | Associated Samples | Qualifications |
|---|---|---|---|---|
| | Θ | 45 | 2 | J/A det * XIII |
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Comments: See sample calculation verification worksheet for recalculations

LDC #: 29836 E39

# VALIDATION FINDINGS WORKSHEET
## Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

**METHOD:** GC ✓ HPLC _____

The calibration factors (CF) and relative standard deviation (%RSD) were recalculated using the following calculations:

CF = A/C
Average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

Where: A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

| # | Standard ID | Calibration Date | Compound | Reported CF (10/100 std) | Recalculated CF (10/10 std) | Reported CF (initial) | Recalculated CF (intial) | Reported %RSD | Recalculated %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ICAL | 4/22/13 | endosulfan I RTX clp1 | $3.60 \times 10^5$ | $3.6 \times 10^5$ | $3.67 \times 10^5$ | $3.67 \times 10^5$ | 6 | 6 |
| | | | methoxychlor | $8.57 \times 10^4$ | $8.57 \times 10^4$ | $8.59 \times 10^4$ | $8.59 \times 10^4$ | 2 | 2 |
| | | | | | | | | | |
| | | | | | | | | | |
| 2 | | | RTX clp2 | $7.74 \times 10^4$ | $7.74 \times 10^4$ | $7.95 \times 10^5$ | $7.95 \times 10^5$ | 4 | 4 |
| | | | | $1.82 \times 10^4$ | $1.82 \times 10^4$ | $1.85 \times 10^4$ | $1.85 \times 10^4$ | 2 | 2 |
| | | | | | | | | | |
| | | | | | | | | | |
| 3 | ICAL | 4/23/13 | RTX clp1 | $3.81 \times 10^5$ | $3.81 \times 10^5$ | $3.83 \times 10^5$ | $3.83 \times 10^5$ | 7 | 7 |
| | | | | $1.04 \times 10^5$ | $1.04 \times 10^5$ | $1.06 \times 10^5$ | $1.06 \times 10^5$ | 5 | 5 |
| | | | RTX clp2 | $8.02 \times 10^4$ | $8.02 \times 10^4$ | $8.18 \times 10^4$ | $8.18 \times 10^4$ | 6 | 6 |
| | | | | $2.27 \times 10^4$ | $2.27 \times 10^4$ | $2.30 \times 10^4$ | $2.30 \times 10^4$ | 4 | 4 |
| 4 | | | | | | | | | |
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Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 29836 E3a

# VALIDATION FINDINGS WORKSHEET
## Continuing Calibration Results Verification


Reviewer: FZ
2nd Reviewer:

**METHOD:** GC V HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF -CF)/ave.CF

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

| # | Standard ID | Calibration Date | Compound | Average CF(Ical)/ CCV Conc. | Reported CF/ Conc. CCV | Recalculated CF/ Conc. CCV | Reported %D | Recalculated %D |
|---|---|---|---|---|---|---|---|---|
| 1 | | | Analyzed | after ICAL | | | | |
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Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 29836E3s

# VALIDATION FINDINGS WORKSHEET
## Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

**METHOD: GC Pesticides (EPA SW 846 Method 8081)**

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

**Sample ID:** 1

| Surrogate | Column/Detector | Surrogate Spiked | Surrogate Found | Percent Recovery | Percent Recovery | Percent Difference |
|---|---|---|---|---|---|---|
| | | | | Reported | Recalculated | |
| TCMX | RTX CLP 2 | 10.09 | 9.184918 | 91 | 91 | 0 |
| DCB | ↓ | ↓ | 11.085118 | 109 | 109 | 0 |
| | | | | | | |
| | | | | | | |

**Sample ID:**

| Surrogate | Column/Detector | Surrogate Spiked | Surrogate Found | Percent Recovery | Percent Recovery | Percent Difference |
|---|---|---|---|---|---|---|
| | | | | Reported | Recalculated | |
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**Sample ID:**

| Surrogate | Column/Detector | Surrogate Spiked | Surrogate Found | Percent Recovery | Percent Recovery | Percent Difference |
|---|---|---|---|---|---|---|
| | | | | Reported | Recalculated | |
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LDC #: 29836E3a

# VALIDATION FINDINGS WORKSHEET
## Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

**METHOD: GC Pesticides (EPA SW 846 Method 8081)**

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

Where SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration; MS = Matrix spike; MSD = Matrix spike duplicate

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

**MS/MSD** samples: 3 + 4

| Compound | Spike Added (ug/kg) | | Sample Conc. (ug/kg) | Spike Sample Concentration (ug/kg) | | Matrix spike Percent Recovery | | Matrix Spike Duplicate Percent Recovery | | MS/MSD RPD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | MSD | --- | MS | MSD | Reported | Recalc. | Reported | Recalc. | Reported | Recalc. |
| Gamma - BHC | 3.41 | | ND | 3.05 | 3.03 | 89 | 89 | 89 | 89 | 1 | 1 |
| 4,4'- DDT | 7.14 | | 1.62 | 8.1 | 8.12 | 91 | 91 | 91 | 91 | 0 | 0 |
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Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 29836E35

# VALIDATION FINDINGS WORKSHEET

## Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification


Reviewer: FT
2nd Reviewer: [illegible]

**METHOD: GC Pesticides (EPA SW 846 method 8081)**

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

Where SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

**LCS/LCSD** samples: LCS 12108

| Compound | Spike Added (ug/kg) | | Sample Conc. (ug/kg) | Spike Sample Concentration (ug/kg) | | LCS Percent Recovery | | LCSD Percent Recovery | | LCS/LCSD RPD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | LCS | LCSD | --- | LCS | LCSD | Reported | Recalc. | Reported | Recalc. | Reported | Recalc. |
| Gamma-BHC | 3.41 | NA | | 2.95 | NA | 87 | 87 | | | | |
| 4,4'-DDT | 7.14 | NA | | 6.2 | NA | 87 | 87 | NA | | | |
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Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 29836E3S

# VALIDATION FINDINGS WORKSHEET
## Sample Calculation Verification


Reviewer: F7
2nd Reviewer: [illegible]

**METHOD:** **GC** Pesticides (EPA SW 846 Method 8081)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name 4,4-DDE

Concentration = $\frac{16685.72 \quad (10)}{(3.8 \times 10^5)(30)(0.96)}$

$= 1.518$ ug/kg

| # | Sample ID | Compound | Reported Concentrations ( ) | Recalculated Results Concentrations ( ) | Qualifications |
|---|---|---|---|---|---|
| | | | | | |
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Comments: _____

# Attachment I

# Sample ID Cross Reference and Data Review Level

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 16-Apr-2013 | TB-041613 | 7024689 | TB | 5030B | 8015M | III |
| 16-Apr-2013 | SL-559-SA7-SB-0.0-0.5 | 7024684 | N | 3050B | 6010C | III |
| 16-Apr-2013 | SL-559-SA7-SB-0.0-0.5 | 7024684 | N | 3050B | 6020A | III |
| 16-Apr-2013 | SL-559-SA7-SB-0.0-0.5 | 7024684 | N | 3546 | 8015M | III |
| 16-Apr-2013 | SL-559-SA7-SB-0.0-0.5 | 7024684 | N | 3546 | 8082A | III |
| 16-Apr-2013 | SL-559-SA7-SB-0.0-0.5 | 7024684 | N | 3546 | 8270D SIM | III |
| 16-Apr-2013 | SL-559-SA7-SB-0.0-0.5 | 7024684 | N | METHOD | 1613B | III |
| 16-Apr-2013 | SL-559-SA7-SB-0.0-0.5 | 7024684 | N | METHOD | 7471B | III |
| 16-Apr-2013 | SL-559-SA7-SB-2.0-3.0 | 7024685 | N | 3050B | 6010C | III |
| 16-Apr-2013 | SL-559-SA7-SB-2.0-3.0 | 7024685 | N | 3050B | 6020A | III |
| 16-Apr-2013 | SL-559-SA7-SB-2.0-3.0 | 7024685 | N | 3546 | 8015M | III |
| 16-Apr-2013 | SL-559-SA7-SB-2.0-3.0 | 7024685 | N | 3546 | 8082A | III |
| 16-Apr-2013 | SL-559-SA7-SB-2.0-3.0 | 7024685 | N | 3546 | 8270D SIM | III |
| 16-Apr-2013 | SL-559-SA7-SB-2.0-3.0 | 7024685 | N | 5035A | 8015M | III |
| 16-Apr-2013 | SL-559-SA7-SB-2.0-3.0 | 7024685 | N | METHOD | 1613B | III |
| 16-Apr-2013 | SL-559-SA7-SB-2.0-3.0 | 7024685 | N | METHOD | 7471B | III |
| 16-Apr-2013 | SL-560-SA7-SB-0.0-0.5 | 7024686 | N | 3050B | 6010C | III |
| 16-Apr-2013 | SL-560-SA7-SB-0.0-0.5 | 7024686 | N | 3050B | 6020A | III |
| 16-Apr-2013 | SL-560-SA7-SB-0.0-0.5 | 7024686 | N | 3546 | 8015M | III |
| 16-Apr-2013 | SL-560-SA7-SB-0.0-0.5 | 7024686 | N | 3546 | 8082A | III |
| 16-Apr-2013 | SL-560-SA7-SB-0.0-0.5 | 7024686 | N | 3546 | 8270D SIM | III |
| 16-Apr-2013 | SL-560-SA7-SB-0.0-0.5 | 7024686 | N | METHOD | 1613B | III |
| 16-Apr-2013 | SL-560-SA7-SB-0.0-0.5 | 7024686 | N | METHOD | 7471B | III |
| 16-Apr-2013 | SL-560-SA7-SB-3.0-4.0 | 7024687 | N | 3050B | 6010C | III |
| 16-Apr-2013 | SL-560-SA7-SB-3.0-4.0 | 7024687 | N | 3050B | 6020A | III |
| 16-Apr-2013 | SL-560-SA7-SB-3.0-4.0 | 7024687 | N | 3546 | 8015M | III |

*III = EPA Level 3 Data Review* *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
*IV = EPA Level 4 Data Validation* *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 16-Apr-2013 | SL-560-SA7-SB-3.0-4.0 | 7024687 | N | 3546 | 8082A | III |
| 16-Apr-2013 | SL-560-SA7-SB-3.0-4.0 | 7024687 | N | 3546 | 8270D SIM | III |
| 16-Apr-2013 | SL-560-SA7-SB-3.0-4.0 | 7024687 | N | 5035A | 8015M | III |
| 16-Apr-2013 | SL-560-SA7-SB-3.0-4.0 | 7024687 | N | METHOD | 1613B | III |
| 16-Apr-2013 | SL-560-SA7-SB-3.0-4.0 | 7024687 | N | METHOD | 7471B | III |
| 16-Apr-2013 | SL-561-SA7-SB-0.0-0.5 | 7024688 | N | 3050B | 6010C | III |
| 16-Apr-2013 | SL-561-SA7-SB-0.0-0.5 | 7024688 | N | 3050B | 6020A | III |
| 16-Apr-2013 | SL-561-SA7-SB-0.0-0.5 | 7024688 | N | 3546 | 8015M | III |
| 16-Apr-2013 | SL-561-SA7-SB-0.0-0.5 | 7024688 | N | 3546 | 8082A | III |
| 16-Apr-2013 | SL-561-SA7-SB-0.0-0.5 | 7024688 | N | 3546 | 8270D SIM | III |
| 16-Apr-2013 | SL-561-SA7-SB-0.0-0.5 | 7024688 | N | METHOD | 1613B | III |
| 16-Apr-2013 | SL-561-SA7-SB-0.0-0.5 | 7024688 | N | METHOD | 7471B | III |
| 16-Apr-2013 | SL-558-SA7-SB-0.0-0.5 | 7024690 | N | 3050B | 6010C | III |
| 16-Apr-2013 | SL-558-SA7-SB-0.0-0.5 | 7024690 | N | 3050B | 6020A | III |
| 16-Apr-2013 | SL-558-SA7-SB-0.0-0.5 | 7024690 | N | 3546 | 8015M | III |
| 16-Apr-2013 | SL-558-SA7-SB-0.0-0.5 | 7024690 | N | 3546 | 8082A | III |
| 16-Apr-2013 | SL-558-SA7-SB-0.0-0.5 | 7024690 | N | 3546 | 8270D SIM | III |
| 16-Apr-2013 | SL-558-SA7-SB-0.0-0.5 | 7024690 | N | METHOD | 1613B | III |
| 16-Apr-2013 | SL-558-SA7-SB-0.0-0.5 | 7024690 | N | METHOD | 7471B | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | 3005A | 6010C | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | 3510C | 8015B | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | 3510C | 8015M | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | 3510C | 8081B | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | 3510C | 8082A | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | 3510C | 8270D | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | 3510C | 8270D SIM | III |

*III = EPA Level 3 Data Review*
*IV = EPA Level 4 Data Validation*
*N = Normal Sample*
*FD = Field Duplicate*
*TB = Trip Blank*
*FB = Field Blank*
*MS = Matrix Spike*
*MSD = Matrix Spike Duplicate*

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 16-Apr-2013 | FB-041613 | 7024683 | FB | 5030B | 8015M | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | 5030B | 8260B | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | 5030B | 8260B SIM | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | 8330 | 8330A | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | Gen Prep | 300.0 | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | Gen Prep | 350.3 | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | Gen Prep | 6850 | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | Gen Prep | 7199 | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | Gen Prep | 8015C | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | M3010A | 6020A | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | METHOD | 1613B | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | METHOD | 7470A | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | METHOD | 8151A | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | METHOD | 8315A | III |
| 16-Apr-2013 | FB-041613 | 7024683 | FB | METHOD | 9012B | III |
| 16-Apr-2013 | FB-041613MSD | P024683M321833A | MSD | Gen Prep | 8015C | III |
| 16-Apr-2013 | FB-041613MS | P024683R321815A | MS | Gen Prep | 8015C | III |

*III = EPA Level 3 Data Review*
*IV = EPA Level 4 Data Validation*
*N = Normal Sample*
*FD = Field Duplicate*
*TB = Trip Blank*
*FB = Field Blank*
*MS = Matrix Spike*
*MSD = Matrix Spike Duplicate*

# Attachment II

# Overall Data Qualification Summary

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: AQ**

**Sample ID: FB-041613** **Collected: 4/16/2013 3:15:00** **Analysis Type: REA2/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MOLYBDENUM | 0.0132 | J | 0.0029 | MDL | 0.0200 | PQL | mg/L | U | B |
| TIN | 0.0029 | J | 0.0022 | MDL | 0.0400 | PQL | mg/L | J | Z |

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

**Sample ID: SL-558-SA7-SB-0.0-0.5** **Collected: 4/16/2013 2:35:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.18 | J | 0.503 | MDL | 4.02 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 1.55 | J | 0.332 | MDL | 4.02 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.378 | J | 0.0674 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| BORON | 3.37 | J | 0.835 | MDL | 10.1 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.651 | J | 0.0332 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.229 | J | 0.171 | MDL | 2.01 | PQL | mg/Kg | U | B, F, F |
| PHOSPHORUS | 308 | | 0.513 | MDL | 10.1 | PQL | mg/Kg | J | Q |
| POTASSIUM | 2190 | | 13.6 | MDL | 101 | PQL | mg/Kg | J | Q |
| SODIUM | 77.4 | J | 16.8 | MDL | 101 | PQL | mg/Kg | J | Z |
| TIN | 2.26 | J | 0.221 | MDL | 10.1 | PQL | mg/Kg | U | B |
| Zirconium | 1.32 | J | 0.835 | MDL | 5.03 | PQL | mg/Kg | J | Z |

**Sample ID: SL-559-SA7-SB-0.0-0.5** **Collected: 4/16/2013 8:45:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 2.12 | J | 0.501 | MDL | 4.01 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 2.48 | J | 0.331 | MDL | 4.01 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.650 | J | 0.0672 | MDL | 1.00 | PQL | mg/Kg | J | Z |
| BORON | 3.07 | J | 0.832 | MDL | 10.0 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.469 | J | 0.0331 | MDL | 1.00 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.327 | J | 0.171 | MDL | 2.01 | PQL | mg/Kg | U | B, F, F |
| PHOSPHORUS | 412 | | 0.512 | MDL | 10.0 | PQL | mg/Kg | J | Q |
| POTASSIUM | 3800 | | 13.5 | MDL | 100 | PQL | mg/Kg | J | Q |
| SODIUM | 82.6 | J | 16.7 | MDL | 100 | PQL | mg/Kg | J | Z |
| TIN | 2.89 | J | 0.221 | MDL | 10.0 | PQL | mg/Kg | U | B |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

**Sample ID: SL-559-SA7-SB-0.0-0.5** **Collected: 4/16/2013 8:45:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| Zirconium | 1.39 | J | 0.832 | MDL | 5.01 | PQL | mg/Kg | J | Z |

**Sample ID: SL-559-SA7-SB-2.0-3.0** **Collected: 4/16/2013 9:25:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 2.08 | J | 0.516 | MDL | 4.13 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 3.18 | J | 0.341 | MDL | 4.13 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.673 | J | 0.0691 | MDL | 1.03 | PQL | mg/Kg | J | Z |
| BORON | 3.55 | J | 0.857 | MDL | 10.3 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.467 | J | 0.0341 | MDL | 1.03 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.397 | J | 0.175 | MDL | 2.06 | PQL | mg/Kg | U | B, F, F |
| PHOSPHORUS | 363 | | 0.526 | MDL | 10.3 | PQL | mg/Kg | J | Q |
| POTASSIUM | 2920 | | 13.9 | MDL | 103 | PQL | mg/Kg | J | Q |
| SODIUM | 82.0 | J | 17.2 | MDL | 103 | PQL | mg/Kg | J | Z |
| TIN | 2.50 | J | 0.227 | MDL | 10.3 | PQL | mg/Kg | U | B |
| Zirconium | 1.37 | J | 0.857 | MDL | 5.16 | PQL | mg/Kg | J | Z |

**Sample ID: SL-560-SA7-SB-0.0-0.5** **Collected: 4/16/2013 10:20:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.91 | J | 0.516 | MDL | 4.13 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 2.31 | J | 0.341 | MDL | 4.13 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.579 | J | 0.0691 | MDL | 1.03 | PQL | mg/Kg | J | Z |
| BORON | 4.59 | J | 0.857 | MDL | 10.3 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.445 | J | 0.0341 | MDL | 1.03 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.216 | J | 0.175 | MDL | 2.06 | PQL | mg/Kg | U | B, F, F |
| PHOSPHORUS | 419 | | 0.526 | MDL | 10.3 | PQL | mg/Kg | J | Q |
| POTASSIUM | 3210 | | 13.9 | MDL | 103 | PQL | mg/Kg | J | Q |
| SODIUM | 99.7 | J | 17.2 | MDL | 103 | PQL | mg/Kg | J | Z |
| TIN | 2.60 | J | 0.227 | MDL | 10.3 | PQL | mg/Kg | U | B |
| Zirconium | 0.971 | J | 0.857 | MDL | 5.16 | PQL | mg/Kg | J | Z |

* denotes a non-reportable result

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

**Sample ID: SL-560-SA7-SB-3.0-4.0** **Collected: 4/16/2013 11:05:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 2.55 | J | 0.550 | MDL | 4.40 | PQL | mg/Kg | J | Z, Q |
| BERYLLIUM | 1.01 | J | 0.0737 | MDL | 1.10 | PQL | mg/Kg | J | Z |
| BORON | 5.41 | J | 0.913 | MDL | 11.0 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.736 | J | 0.0363 | MDL | 1.10 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.360 | J | 0.187 | MDL | 2.20 | PQL | mg/Kg | U | B, F, F |
| PHOSPHORUS | 386 | | 0.561 | MDL | 11.0 | PQL | mg/Kg | J | Q |
| POTASSIUM | 4110 | | 14.9 | MDL | 110 | PQL | mg/Kg | J | Q |
| TIN | 2.88 | J | 0.242 | MDL | 11.0 | PQL | mg/Kg | U | B |
| Zirconium | 4.08 | J | 0.913 | MDL | 5.50 | PQL | mg/Kg | J | Z |

**Sample ID: SL-561-SA7-SB-0.0-0.5** **Collected: 4/16/2013 1:30:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 1.73 | J | 0.505 | MDL | 4.04 | PQL | mg/Kg | J | Z, Q |
| ARSENIC | 2.59 | J | 0.333 | MDL | 4.04 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.562 | J | 0.0677 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| BORON | 4.91 | J | 0.839 | MDL | 10.1 | PQL | mg/Kg | J | Z |
| CADMIUM | 0.581 | J | 0.0333 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| MOLYBDENUM | 0.501 | J | 0.172 | MDL | 2.02 | PQL | mg/Kg | U | B, F, F |
| PHOSPHORUS | 601 | | 0.515 | MDL | 10.1 | PQL | mg/Kg | J | Q |
| POTASSIUM | 3510 | | 13.6 | MDL | 101 | PQL | mg/Kg | J | Q |
| SODIUM | 93.3 | J | 16.9 | MDL | 101 | PQL | mg/Kg | J | Z |
| TIN | 2.88 | J | 0.222 | MDL | 10.1 | PQL | mg/Kg | U | B |

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

**Sample ID: SL-558-SA7-SB-0.0-0.5** **Collected: 4/16/2013 2:35:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0267 | J | 0.0201 | MDL | 0.201 | PQL | mg/Kg | J | Z |
| THALLIUM | 0.138 | J | 0.0302 | MDL | 0.201 | PQL | mg/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

**Sample ID: SL-559-SA7-SB-0.0-0.5** **Collected: 4/16/2013 8:45:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0648 | J | 0.0201 | MDL | 0.201 | PQL | mg/Kg | J | Z |

**Sample ID: SL-559-SA7-SB-2.0-3.0** **Collected: 4/16/2013 9:25:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0625 | J | 0.0206 | MDL | 0.206 | PQL | mg/Kg | J | Z |

**Sample ID: SL-560-SA7-SB-0.0-0.5** **Collected: 4/16/2013 10:20:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0303 | J | 0.0206 | MDL | 0.206 | PQL | mg/Kg | J | Z |

**Sample ID: SL-560-SA7-SB-3.0-4.0** **Collected: 4/16/2013 11:05:00** **Analysis Type: REA/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.161 | J | 0.110 | MDL | 0.440 | PQL | mg/Kg | J | Z |

**Sample ID: SL-560-SA7-SB-3.0-4.0** **Collected: 4/16/2013 11:05:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0406 | J | 0.0220 | MDL | 0.220 | PQL | mg/Kg | J | Z |

**Sample ID: SL-561-SA7-SB-0.0-0.5** **Collected: 4/16/2013 1:30:00** **Analysis Type: REA/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.140 | J | 0.101 | MDL | 0.404 | PQL | mg/Kg | J | Z |

**Sample ID: SL-561-SA7-SB-0.0-0.5** **Collected: 4/16/2013 1:30:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0434 | J | 0.0202 | MDL | 0.202 | PQL | mg/Kg | J | Z |

* denotes a non-reportable result

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 7471B** **Matrix: SO**

**Sample ID: SL-558-SA7-SB-0.0-0.5** **Collected: 4/16/2013 2:35:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0181 | J | 0.0102 | MDL | 0.0198 | PQL | mg/Kg | J | Z |

**Sample ID: SL-559-SA7-SB-2.0-3.0** **Collected: 4/16/2013 9:25:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0172 | J | 0.0107 | MDL | 0.0208 | PQL | mg/Kg | J | Z |

**Sample ID: SL-560-SA7-SB-3.0-4.0** **Collected: 4/16/2013 11:05:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0183 | J | 0.0111 | MDL | 0.0214 | PQL | mg/Kg | J | Z |

**Method Category: SVOA**

**Method: 1613B** **Matrix: AQ**

**Sample ID: FB-041613** **Collected: 4/16/2013 3:15:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 0.309 | JBQ | 0.184 | MDL | 9.71 | PQL | pg/L | U | B |
| 1,2,3,4,6,7,8-HPCDF | 0.314 | JBQ | 0.0861 | MDL | 9.71 | PQL | pg/L | U | B |
| 1,2,3,4,7,8-HXCDF | 0.257 | J | 0.103 | MDL | 9.71 | PQL | pg/L | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.241 | JBQ | 0.111 | MDL | 9.71 | PQL | pg/L | U | B |
| 1,2,3,7,8-PECDD | 0.434 | JBQ | 0.301 | MDL | 9.71 | PQL | pg/L | U | B |
| 1,2,3,7,8-PECDF | 0.324 | JB | 0.160 | MDL | 9.71 | PQL | pg/L | U | B |
| 2,3,4,6,7,8-HXCDF | 0.284 | JBQ | 0.101 | MDL | 9.71 | PQL | pg/L | U | B |
| 2,3,4,7,8-PECDF | 0.429 | JBQ | 0.144 | MDL | 9.71 | PQL | pg/L | U | B |
| OCDD | 0.838 | JBQ | 0.311 | MDL | 19.4 | PQL | pg/L | U | B |
| OCDF | 0.357 | JBQ | 0.257 | MDL | 19.4 | PQL | pg/L | U | B |

* denotes a non-reportable result

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

**Sample ID: SL-558-SA7-SB-0.0-0.5** **Collected: 4/16/2013 2:35:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8-HXCDF | 2.04 | JB | 0.0685 | MDL | 5.02 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 1.93 | JB | 0.0575 | MDL | 5.02 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 1.96 | JB | 0.0885 | MDL | 5.02 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.320 | JB | 0.0318 | MDL | 5.02 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 3.03 | JB | 0.0623 | MDL | 5.02 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.317 | JBQ | 0.0325 | MDL | 5.02 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.148 | J | 0.0509 | MDL | 1.00 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.138 | J | 0.0467 | MDL | 1.00 | PQL | ng/Kg | J | Z |
| OCDD | 5670 | BE | 0.103 | MDL | 10.0 | PQL | ng/Kg | J | *XIII |

**Sample ID: SL-559-SA7-SB-0.0-0.5** **Collected: 4/16/2013 8:45:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HPCDF | 1.13 | JBQ | 0.0458 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 1.34 | JB | 0.0352 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.794 | JB | 0.0351 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 3.90 | JB | 0.0353 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.689 | JB | 0.0343 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 2.68 | JB | 0.0338 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.351 | JB | 0.0367 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.713 | JB | 0.0589 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 1.09 | JBQ | 0.0350 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.818 | JB | 0.0325 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.869 | JB | 0.0325 | MDL | 5.12 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.318 | J | 0.0687 | MDL | 1.02 | PQL | ng/Kg | J | Z |

**Sample ID: SL-559-SA7-SB-2.0-3.0** **Collected: 4/16/2013 9:25:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HPCDF | 0.479 | JB | 0.0305 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.462 | JB | 0.0381 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.399 | JB | 0.0313 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 1.49 | JB | 0.0375 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.368 | JBQ | 0.0306 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 1.07 | JBQ | 0.0364 | MDL | 5.18 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

***Sample ID:*** **SL-559-SA7-SB-2.0-3.0** ***Collected:*** **4/16/2013 9:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,7,8,9-HXCDF | 0.235 | JB | 0.0330 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.255 | JBQ | 0.0333 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 1.08 | JB | 0.0280 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.361 | JB | 0.0291 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.452 | JB | 0.0270 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.0699 | JQ | 0.0525 | MDL | 1.04 | PQL | ng/Kg | J | Z |

***Sample ID:*** **SL-560-SA7-SB-0.0-0.5** ***Collected:*** **4/16/2013 10:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HPCDF | 2.05 | JBQ | 0.0579 | MDL | 5.04 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 1.65 | JB | 0.0530 | MDL | 5.04 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.856 | JB | 0.0527 | MDL | 5.04 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.830 | JB | 0.0475 | MDL | 5.04 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 4.01 | JB | 0.0497 | MDL | 5.04 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.355 | JB | 0.0668 | MDL | 5.04 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.937 | JB | 0.0599 | MDL | 5.04 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.495 | JB | 0.0253 | MDL | 5.04 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 1.20 | JB | 0.0490 | MDL | 5.04 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.450 | JB | 0.0247 | MDL | 5.04 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.105 | J | 0.0293 | MDL | 1.01 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.191 | JQ | 0.0378 | MDL | 1.01 | PQL | ng/Kg | J | Z |

***Sample ID:*** **SL-560-SA7-SB-3.0-4.0** ***Collected:*** **4/16/2013 11:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 1.26 | JBQ | 0.0242 | MDL | 5.58 | PQL | ng/Kg | J | Z |
| 1,2,3,4,6,7,8-HPCDF | 0.129 | JB | 0.00828 | MDL | 5.58 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8,9-HPCDF | 0.125 | JB | 0.0169 | MDL | 5.58 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HxCDD | 0.0961 | JB | 0.0221 | MDL | 5.58 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.157 | JB | 0.0194 | MDL | 5.58 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDD | 0.205 | JBQ | 0.0224 | MDL | 5.58 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.0911 | JB | 0.0163 | MDL | 5.58 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDD | 0.262 | JBQ | 0.0210 | MDL | 5.58 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.439 | JBQ | 0.0226 | MDL | 5.58 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

**Sample ID: SL-560-SA7-SB-3.0-4.0** **Collected: 4/16/2013 11:05:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,7,8-PECDD | 0.235 | JBQ | 0.0226 | MDL | 5.58 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.309 | JB | 0.0124 | MDL | 5.58 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.0801 | JB | 0.0183 | MDL | 5.58 | PQL | ng/Kg | U | B |
| 2,3,4,7,8-PECDF | 0.179 | JBQ | 0.0131 | MDL | 5.58 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDD | 0.0801 | JQ | 0.0234 | MDL | 1.12 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.0392 | JQ | 0.0182 | MDL | 1.12 | PQL | ng/Kg | J | Z |
| OCDD | 10.7 | JB | 0.0227 | MDL | 11.2 | PQL | ng/Kg | J | Z |
| OCDF | 0.373 | JBQ | 0.0339 | MDL | 11.2 | PQL | ng/Kg | U | B |

**Sample ID: SL-561-SA7-SB-0.0-0.5** **Collected: 4/16/2013 1:30:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8,9-HPCDF | 2.07 | JB | 0.0433 | MDL | 5.20 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.897 | JB | 0.0325 | MDL | 5.20 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 1.83 | JB | 0.0308 | MDL | 5.20 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 4.00 | JB | 0.0331 | MDL | 5.20 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 1.49 | JB | 0.0267 | MDL | 5.20 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 1.82 | JB | 0.0306 | MDL | 5.20 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 1.07 | JB | 0.0330 | MDL | 5.20 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.448 | JB | 0.0432 | MDL | 5.20 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 0.860 | JB | 0.0225 | MDL | 5.20 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 1.59 | JB | 0.0277 | MDL | 5.20 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 1.08 | JB | 0.0235 | MDL | 5.20 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.507 | J | 0.0553 | MDL | 1.04 | PQL | ng/Kg | J | Z |

**Method Category: SVOA**

**Method: 8015C** **Matrix: AQ**

**Sample ID: FB-041613** **Collected: 4/16/2013 3:15:00** **Analysis Type: REA** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ETHANOL | 1000 | U | 200 | MDL | 1000 | PQL | ug/L | UJ | H |
| Isopropanol | 1000 | U | 200 | MDL | 1000 | PQL | ug/L | UJ | H |
| METHANOL | 1000 | U | 200 | MDL | 1000 | PQL | ug/L | UJ | H |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 8015M** **Matrix: AQ**

**Sample ID: FB-041613** **Collected: 4/16/2013 3:15:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C30-C40) | 0.59 | U | 0.098 | MDL | 0.59 | PQL | mg/L | UJ | L |

**Method Category: SVOA**

**Method: 8015M** **Matrix: SO**

**Sample ID: SL-559-SA7-SB-2.0-3.0** **Collected: 4/16/2013 9:25:00** **Analysis Type: REA** **Dilution: 20**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C21-C30) | 84 | J | 42 | MDL | 110 | PQL | mg/Kg | J | Z |

**Sample ID: SL-560-SA7-SB-0.0-0.5** **Collected: 4/16/2013 10:20:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 3.0 | J | 2.1 | MDL | 5.3 | PQL | mg/Kg | J | Z |

**Sample ID: SL-561-SA7-SB-0.0-0.5** **Collected: 4/16/2013 1:30:00** **Analysis Type: RES** **Dilution: 5**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 11 | J | 10 | MDL | 26 | PQL | mg/Kg | J | Z |

**Method Category: SVOA**

**Method: 8082A** **Matrix: SO**

**Sample ID: SL-559-SA7-SB-0.0-0.5** **Collected: 4/16/2013 8:45:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| AROCLOR 1254 | 13 | J | 4.5 | MDL | 17 | PQL | ug/Kg | J | Z |
| Aroclor 5460 | 17 | J | 10 | MDL | 34 | PQL | ug/Kg | J | Z |

**Sample ID: SL-559-SA7-SB-2.0-3.0** **Collected: 4/16/2013 9:25:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| AROCLOR 1254 | 12 | J | 4.6 | MDL | 18 | PQL | ug/Kg | J | Z |
| Aroclor 5460 | 15 | J | 10 | MDL | 34 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**
**Method: 8151A** **Matrix: AQ**

**Sample ID: FB-041613** **Collected: 4/16/2013 3:15:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | 0.049 | U | 0.015 | MDL | 0.049 | PQL | ug/L | UJ | E |
| DALAPON | 1.2 | U | 0.25 | MDL | 1.2 | PQL | ug/L | UJ | E |
| DICAMBA | 0.29 | U | 0.079 | MDL | 0.29 | PQL | ug/L | UJ | E |
| DICHLOROPROP | 0.49 | U | 0.16 | MDL | 0.49 | PQL | ug/L | UJ | L |
| DINOSEB | 0.49 | U | 0.12 | MDL | 0.49 | PQL | ug/L | UJ | E |
| MCPP | 200 | U | 49 | MDL | 200 | PQL | ug/L | UJ | E |

**Method Category: SVOA**
**Method: 8270D** **Matrix: AQ**

**Sample ID: FB-041613** **Collected: 4/16/2013 3:15:00** **Analysis Type: RES-ACID** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZOIC ACID | 16 | U | 6 | MDL | 16 | PQL | ug/L | UJ | E |

**Method Category: SVOA**
**Method: 8270D SIM** **Matrix: AQ**

**Sample ID: FB-041613** **Collected: 4/16/2013 3:15:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2-METHYLNAPHTHALENE | 0.012 | J | 0.010 | MDL | 0.052 | PQL | ug/L | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 0.25 | J | 0.052 | MDL | 1.0 | PQL | ug/L | U | B |
| Di-n-butylphthalate | 0.11 | J | 0.052 | MDL | 1.0 | PQL | ug/L | J | Z |
| Di-n-octylphthalate | 1.0 | U | 0.052 | MDL | 1.0 | PQL | ug/L | UJ | L |

**Method Category: SVOA**
**Method: 8270D SIM** **Matrix: SO**

**Sample ID: SL-558-SA7-SB-0.0-0.5** **Collected: 4/16/2013 2:35:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2-METHYLNAPHTHALENE | 1.2 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| ANTHRACENE | 0.36 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category:** SVOA

**Method:** 8270D SIM **Matrix:** SO

**Sample ID:** SL-558-SA7-SB-0.0-0.5 **Collected:** 4/16/2013 2:35:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(A)ANTHRACENE | 1.4 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(G,H,I)PERYLENE | 1.2 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(K)FLUORANTHENE | 1.1 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 14 | J | 6.1 | MDL | 18 | PQL | ug/Kg | J | Z |
| INDENO(1,2,3-CD)PYRENE | 0.90 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| NAPHTHALENE | 1.6 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

**Sample ID:** SL-559-SA7-SB-0.0-0.5 **Collected:** 4/16/2013 8:45:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 10

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(A)PYRENE | 7.8 | J | 6.8 | MDL | 17 | PQL | ug/Kg | J | Z |
| BENZO(G,H,I)PERYLENE | 9.5 | J | 6.8 | MDL | 17 | PQL | ug/Kg | J | Z |
| FLUORANTHENE | 9.1 | J | 6.8 | MDL | 17 | PQL | ug/Kg | J | Z |
| PHENANTHRENE | 8.2 | J | 6.8 | MDL | 17 | PQL | ug/Kg | J | Z |
| PYRENE | 11 | J | 6.8 | MDL | 17 | PQL | ug/Kg | J | Z |

**Sample ID:** SL-559-SA7-SB-2.0-3.0 **Collected:** 4/16/2013 9:25:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 10

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ACENAPHTHENE | 7.8 | J | 7.0 | MDL | 17 | PQL | ug/Kg | J | Z |
| ACENAPHTHYLENE | 9.2 | J | 3.5 | MDL | 17 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 78 | J | 63 | MDL | 190 | PQL | ug/Kg | J | Z |
| CHRYSENE | 14 | J | 3.5 | MDL | 17 | PQL | ug/Kg | J | Z |
| PHENANTHRENE | 16 | J | 7.0 | MDL | 17 | PQL | ug/Kg | J | Z |

**Sample ID:** SL-560-SA7-SB-0.0-0.5 **Collected:** 4/16/2013 10:20:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2-METHYLNAPHTHALENE | 0.94 | J | 0.70 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 6.6 | J | 6.3 | MDL | 19 | PQL | ug/Kg | J | Z |
| Di-n-butylphthalate | 7.4 | J | 6.3 | MDL | 19 | PQL | ug/Kg | J | Z |
| NAPHTHALENE | 0.93 | J | 0.70 | MDL | 1.7 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 8270D SIM** **Matrix: SO**

*Sample ID:* **SL-560-SA7-SB-3.0-4.0** *Collected:* **4/16/2013 11:05:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(B)FLUORANTHENE | 1.3 | J | 0.75 | MDL | 1.9 | PQL | ug/Kg | J | Z |
| PYRENE | 1.2 | J | 0.75 | MDL | 1.9 | PQL | ug/Kg | J | Z |

*Sample ID:* **SL-561-SA7-SB-0.0-0.5** *Collected:* **4/16/2013 1:30:00** *Analysis Type:* **RES** *Dilution:* **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1-METHYLNAPHTHALENE | 1.2 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| ACENAPHTHYLENE | 0.94 | J | 0.35 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(G,H,I)PERYLENE | 1.6 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 8.8 | J | 6.2 | MDL | 19 | PQL | ug/Kg | J | Z |
| FLUORENE | 1.0 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| INDENO(1,2,3-CD)PYRENE | 1.1 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |

**Method Category: VOA**

**Method: 8260B** **Matrix: AQ**

*Sample ID:* **FB-041613** *Collected:* **4/16/2013 3:15:00** *Analysis Type:* **RES** *Dilution:* **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| CHLOROFORM | 3 | J | 0.8 | MDL | 5 | PQL | ug/L | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

## Reason Code Legend

| *Reason Code* | *Description* |
|---|---|
| *XIII | Exceeded Calibration Range |
| A | Professional Judgment |
| B | Calibration Blank Contamination |
| B | Method Blank Contamination |
| E | Laboratory Control Precision |
| F | Equipment Blank Contamination |
| F | Field Blank Contamination |
| H | Sampling to Analysis Estimation |
| L | Laboratory Control Precision |
| L | Laboratory Control Spike Lower Estimation |
| L | Laboratory Control Spike Upper Estimation |
| Q | Matrix Spike Lower Estimation |
| Q | Matrix Spike Upper Estimation |
| S | Surrogate/Tracer Recovery Upper Estimation |
| Z | Reporting Limit Trace Value |

* denotes a non-reportable result

# Enclosure I

# Level III ADR Outliers
# (including Manual Review Outliers)

# Quality Control
# Outlier Reports

# PH032

# QC Outlier Report: HoldingTimes

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 8015C** **Preparation Method: Gen Prep**

**Matrix: AQ**

| *Sample ID* | *Type* | *Actual* | *Criteria* | *Units* | *Flag* |
|---|---|---|---|---|---|
| FB-041613 (REA) | Sampling To Analysis | 8.00 | 7.00 | DAYS | J (all detects) |
| FB-041613 (REA) | | 8.00 | 7.00 | DAYS | UJ (all non-detects) |
| FB-041613MS (RES) | | 8.00 | 7.00 | DAYS | |
| FB-041613MS (RES) | | 8.00 | 7.00 | DAYS | |
| FB-041613MSD (RES) | | 8.00 | 7.00 | DAYS | |
| FB-041613MSD (RES) | | 8.00 | 7.00 | DAYS | |

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **1613B**
***Matrix:*** **AQ**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| BLK1120B372247 | 4/23/2013 10:47:00 PM | 1,2,3,4,6,7,8-HPCDD | 0.304 pg/L | FB-041613 |
| | | 1,2,3,4,6,7,8-HPCDF | 0.268 pg/L | |
| | | 1,2,3,4,7,8,9-HPCDF | 0.249 pg/L | |
| | | 1,2,3,6,7,8-HXCDD | 0.209 pg/L | |
| | | 1,2,3,6,7,8-HXCDF | 0.192 pg/L | |
| | | 1,2,3,7,8,9-HXCDD | 0.143 pg/L | |
| | | 1,2,3,7,8,9-HXCDF | 0.213 pg/L | |
| | | 1,2,3,7,8-PECDD | 0.478 pg/L | |
| | | 1,2,3,7,8-PECDF | 0.459 pg/L | |
| | | 2,3,4,6,7,8-HXCDF | 0.148 pg/L | |
| | | 2,3,4,7,8-PECDF | 0.221 pg/L | |
| | | OCDD | 0.400 pg/L | |
| | | OCDF | 0.832 pg/L | |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| FB-041613(RES) | 1,2,3,4,6,7,8-HPCDD | 0.309 pg/L | 0.309U pg/L |
| FB-041613(RES) | 1,2,3,4,6,7,8-HPCDF | 0.314 pg/L | 0.314U pg/L |
| FB-041613(RES) | 1,2,3,7,8,9-HXCDF | 0.241 pg/L | 0.241U pg/L |
| FB-041613(RES) | 1,2,3,7,8-PECDD | 0.434 pg/L | 0.434U pg/L |
| FB-041613(RES) | 1,2,3,7,8-PECDF | 0.324 pg/L | 0.324U pg/L |
| FB-041613(RES) | 2,3,4,6,7,8-HXCDF | 0.284 pg/L | 0.284U pg/L |
| FB-041613(RES) | 2,3,4,7,8-PECDF | 0.429 pg/L | 0.429U pg/L |
| FB-041613(RES) | OCDD | 0.838 pg/L | 0.838U pg/L |
| FB-041613(RES) | OCDF | 0.357 pg/L | 0.357U pg/L |

***Method:*** **1613B**
***Matrix:*** **SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| BLK1070B371837 | 4/18/2013 6:37:00 PM | 1,2,3,4,6,7,8-HPCDD | 0.0818 ng/Kg | SL-558-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,6,7,8-HPCDF | 0.0623 ng/Kg | SL-559-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8,9-HPCDF | 0.0596 ng/Kg | SL-559-SA7-SB-2.0-3.0 |
| | | 1,2,3,4,7,8-HxCDD | 0.0185 ng/Kg | SL-560-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8-HXCDF | 0.0425 ng/Kg | SL-560-SA7-SB-3.0-4.0 |
| | | 1,2,3,6,7,8-HXCDD | 0.0275 ng/Kg | SL-561-SA7-SB-0.0-0.5 |
| | | 1,2,3,6,7,8-HXCDF | 0.0316 ng/Kg | |
| | | 1,2,3,7,8,9-HXCDD | 0.0437 ng/Kg | |
| | | 1,2,3,7,8,9-HXCDF | 0.0663 ng/Kg | |
| | | 1,2,3,7,8-PECDD | 0.0350 ng/Kg | |
| | | 1,2,3,7,8-PECDF | 0.0538 ng/Kg | |
| | | 2,3,4,6,7,8-HXCDF | 0.0359 ng/Kg | |
| | | 2,3,4,7,8-PECDF | 0.0482 ng/Kg | |
| | | OCDD | 0.151 ng/Kg | |
| | | OCDF | 0.164 ng/Kg | |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-559-SA7-SB-2.0-3.0(RES) | 1,2,3,7,8,9-HXCDF | 0.235 ng/Kg | 0.235U ng/Kg |
| SL-560-SA7-SB-3.0-4.0(RES) | 1,2,3,4,6,7,8-HPCDF | 0.129 ng/Kg | 0.129U ng/Kg |
| SL-560-SA7-SB-3.0-4.0(RES) | 1,2,3,4,7,8,9-HPCDF | 0.125 ng/Kg | 0.125U ng/Kg |

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**
**Matrix: SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-560-SA7-SB-3.0-4.0(RES) | 1,2,3,4,7,8-HXCDF | 0.157 ng/Kg | 0.157U ng/Kg |
| SL-560-SA7-SB-3.0-4.0(RES) | 1,2,3,6,7,8-HXCDF | 0.0911 ng/Kg | 0.0911U ng/Kg |
| SL-560-SA7-SB-3.0-4.0(RES) | 2,3,4,6,7,8-HXCDF | 0.0801 ng/Kg | 0.0801U ng/Kg |
| SL-560-SA7-SB-3.0-4.0(RES) | 2,3,4,7,8-PECDF | 0.179 ng/Kg | 0.179U ng/Kg |
| SL-560-SA7-SB-3.0-4.0(RES) | OCDF | 0.373 ng/Kg | 0.373U ng/Kg |

**Method: 6010C**
**Matrix: AQ**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| P11435AB221838 | 4/26/2013 6:38:00 PM | COPPER | 0.0024 mg/L | FB-041613 |

**Method: 6010C**
**Matrix: SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| P10737AB221907 | 4/21/2013 7:07:00 PM | MAGNESIUM<br>PHOSPHORUS<br>TIN | 1.82 mg/Kg<br>10.9 mg/Kg<br>1.40 mg/Kg | SL-558-SA7-SB-0.0-0.5<br>SL-559-SA7-SB-0.0-0.5<br>SL-559-SA7-SB-2.0-3.0<br>SL-560-SA7-SB-0.0-0.5<br>SL-560-SA7-SB-3.0-4.0<br>SL-561-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-558-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.26 mg/Kg | 2.26U mg/Kg |
| SL-559-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.89 mg/Kg | 2.89U mg/Kg |
| SL-559-SA7-SB-2.0-3.0(RES/TOT) | TIN | 2.50 mg/Kg | 2.50U mg/Kg |
| SL-560-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.60 mg/Kg | 2.60U mg/Kg |
| SL-560-SA7-SB-3.0-4.0(RES/TOT) | TIN | 2.88 mg/Kg | 2.88U mg/Kg |
| SL-561-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.88 mg/Kg | 2.88U mg/Kg |

**Method: 8270D SIM**
**Matrix: AQ**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| PLKWH10B262132 | 4/28/2013 9:32:00 PM | BIS(2-ETHYLHEXYL)PHTHALATE | 0.059 ug/L | FB-041613 |

# *Method Blank Outlier Report*

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **8270D SIM**
***Matrix:*** **AQ**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| FB-041613(RES) | BIS(2-ETHYLHEXYL)PHTHALATE | 0.25 ug/L | 1.0U ug/L |

# *Equipment Rinsate Blank Outlier Report*

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **6010C**
***Matrix:*** **SO**

| Equipment Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| EB-041813(RES) | 4/18/2013 3:00:00 PM | MOLYBDENUM | 0.0036 mg/L | SL-558-SA7-SB-0.0-0.5<br>SL-559-SA7-SB-0.0-0.5<br>SL-559-SA7-SB-2.0-3.0<br>SL-560-SA7-SB-0.0-0.5<br>SL-560-SA7-SB-3.0-4.0<br>SL-561-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-558-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.229 mg/Kg | 0.229U mg/Kg |
| SL-559-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.327 mg/Kg | 0.327U mg/Kg |
| SL-559-SA7-SB-2.0-3.0(RES/TOT) | MOLYBDENUM | 0.397 mg/Kg | 0.397U mg/Kg |
| SL-560-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.216 mg/Kg | 0.216U mg/Kg |
| SL-560-SA7-SB-3.0-4.0(RES/TOT) | MOLYBDENUM | 0.360 mg/Kg | 0.360U mg/Kg |
| SL-561-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.501 mg/Kg | 0.501U mg/Kg |

# *Field Blank Outlier Report*

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PrepPH032** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **6010C**
***Matrix:*** **SO**

| Field Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| FB-041113(REA2) | 4/11/2013 3:00:00 PM | COPPER<br>MOLYBDENUM | 0.0036 mg/L<br>0.0036 mg/L | SL-558-SA7-SB-0.0-0.5<br>SL-559-SA7-SB-0.0-0.5<br>SL-559-SA7-SB-2.0-3.0<br>SL-560-SA7-SB-0.0-0.5<br>SL-560-SA7-SB-3.0-4.0<br>SL-561-SA7-SB-0.0-0.5 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-558-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.229 mg/Kg | 0.229U mg/Kg |
| SL-559-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.327 mg/Kg | 0.327U mg/Kg |
| SL-559-SA7-SB-2.0-3.0(RES/TOT) | MOLYBDENUM | 0.397 mg/Kg | 0.397U mg/Kg |
| SL-560-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.216 mg/Kg | 0.216U mg/Kg |
| SL-560-SA7-SB-3.0-4.0(RES/TOT) | MOLYBDENUM | 0.360 mg/Kg | 0.360U mg/Kg |
| SL-561-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.501 mg/Kg | 0.501U mg/Kg |

# Surrogate Outlier Report

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PH032_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 8082A**
**Matrix: AQ**

| Sample ID (Analysis Type) | Surrogate | Sample % Recovery | % Recovery Limits | Affected Compounds | Flag |
|---|---|---|---|---|---|
| FB-041613 | TETRACHLORO-M-XYLENE | 126 | 45.00-120.00 | All Target Analytes | J (all detects) |

**Method: 8082A**
**Matrix: SO**

| Sample ID (Analysis Type) | Surrogate | Sample % Recovery | % Recovery Limits | Affected Compounds | Flag |
|---|---|---|---|---|---|
| SL-560-SA7-SB-3.0 -4.0 | TETRACHLORO-M-XYLENE | 124 | 45.00-120.00 | All Target Analytes | J(all detects) |

# Lab Control Spike/Lab Control Spike Duplicate Outlier Report

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PH032_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

## Method: 8270D SIM
## Matrix: AQ

| QC Sample ID (Associated Samples) | Compound | LCS %R | LCSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| P7WHLCSQ262159<br>P7WHLCSY262226<br>(FB-041613) | Di-n-octylphthalate | 53 | 56 | 57.00-145.00 | - | Di-n-octylphthalate | J (all detects)<br>UJ (all non-detects) |

## Method: 8270D
## Matrix: AQ

| QC Sample ID (Associated Samples) | Compound | LCS %R | LCSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| P7WILCSQ261540<br>P7WILCSY261607<br>(FB-041613) | 4-NITROPHENOL | 78 | 82 | 13.00-71.00 | - | 4-NITROPHENOL | J(all detects) |
| P7WILCSY261607<br>(FB-041613) | BENZOIC ACID | - | - | 10.00-69.00 | 37 (30.00) | BENZOIC ACID | J(all detects)<br>UJ(all non-detects) |

## Method: 8015M
## Matrix: AQ

| QC Sample ID (Associated Samples) | Compound | LCS %R | LCSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| P31075AY321420A<br>(FB-041613) | EFH (C30-C40) | - | 69 | 70.00-130.00 | - | EFH (C30-C40) | J(all detects)<br>UJ(all non-detects) |

## Method: 8151A
## Matrix: AQ

| QC Sample ID (Associated Samples) | Compound | LCS %R | LCSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| P31123AY241828A<br>(FB-041613) | 2,4,5-T | - | - | 55.00-169.00 | 31 (30.00) | 2,4,5-T | J(all detects)<br>UJ(all non-detects) |
| | DALAPON | - | - | 39.00-115.00 | 40 (30.00) | DALAPON | |
| | DICAMBA | - | - | 55.00-163.00 | 31 (30.00) | DICAMBA | |
| | DICHLOROPROP | - | 77 | 89.00-162.00 | - | DICHLOROPROP | |
| | DINOSEB | - | - | 16.00-163.00 | 34 (30.00) | DINOSEB | |
| | MCPP | - | - | 46.00-173.00 | 36 (30.00) | MCPP | |

## Method: 8330A
## Matrix: AQ

| QC Sample ID (Associated Samples) | Compound | LCS %R | LCSD %R | %R Limits | RPD (Limits) | Affected Compounds | Flag |
|---|---|---|---|---|---|---|---|
| P31127AQ240811A<br>P31127AY240854A<br>(FB-041613) | 2,6-DINITROTOLUENE | 119 | 119 | 79.00-114.00 | - | 2,6-DINITROTOLUENE | J(all detects) |
| | 4-AMINO-2,6-DINITROTOLUENE | 128 | 128 | 80.00-120.00 | - | 4-AMINO-2,6-DINITROTOLUEN | |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PH032_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**

**Matrix: AQ**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| FB-041613 | 1,2,3,4,6,7,8-HPCDD | JBQ | 0.309 | 9.71 | PQL | pg/L | J (all detects) |
| | 1,2,3,4,6,7,8-HPCDF | JBQ | 0.314 | 9.71 | PQL | pg/L | |
| | 1,2,3,4,7,8-HXCDF | J | 0.257 | 9.71 | PQL | pg/L | |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.241 | 9.71 | PQL | pg/L | |
| | 1,2,3,7,8-PECDD | JBQ | 0.434 | 9.71 | PQL | pg/L | |
| | 1,2,3,7,8-PECDF | JB | 0.324 | 9.71 | PQL | pg/L | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.284 | 9.71 | PQL | pg/L | |
| | 2,3,4,7,8-PECDF | JBQ | 0.429 | 9.71 | PQL | pg/L | |
| | OCDD | JBQ | 0.838 | 19.4 | PQL | pg/L | |
| | OCDF | JBQ | 0.357 | 19.4 | PQL | pg/L | |

**Method: 6010C**

**Matrix: AQ**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| FB-041613 | MOLYBDENUM | J | 0.0132 | 0.0200 | PQL | mg/L | J (all detects) |
| | TIN | J | 0.0029 | 0.0400 | PQL | mg/L | |

**Method: 8260B**

**Matrix: AQ**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| FB-041613 | CHLOROFORM | J | 3 | 5 | PQL | ug/L | J (all detects) |

**Method: 8270D SIM**

**Matrix: AQ**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| FB-041613 | 2-METHYLNAPHTHALENE | J | 0.012 | 0.052 | PQL | ug/L | J (all detects) |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 0.25 | 1.0 | PQL | ug/L | |
| | Di-n-butylphthalate | J | 0.11 | 1.0 | PQL | ug/L | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PH032_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-558-SA7-SB-0.0-0.5 | 1,2,3,4,7,8-HXCDF | JB | 2.04 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 1.93 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JB | 1.96 | 5.02 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.320 | 5.02 | PQL | ng/Kg | J (all detects) |
| | 2,3,4,6,7,8-HXCDF | JB | 3.03 | 5.02 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.317 | 5.02 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | J | 0.148 | 1.00 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.138 | 1.00 | PQL | ng/Kg | |
| SL-559-SA7-SB-0.0-0.5 | 1,2,3,4,7,8,9-HPCDF | JBQ | 1.13 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 1.34 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.794 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 3.90 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.689 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 2.68 | 5.12 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | JB | 0.351 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JB | 0.713 | 5.12 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 1.09 | 5.12 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.818 | 5.12 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.869 | 5.12 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.318 | 1.02 | PQL | ng/Kg | |
| SL-559-SA7-SB-2.0-3.0 | 1,2,3,4,7,8,9-HPCDF | JB | 0.479 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.462 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.399 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 1.49 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JBQ | 0.368 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JBQ | 1.07 | 5.18 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | JB | 0.235 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JBQ | 0.255 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 1.08 | 5.18 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.361 | 5.18 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.452 | 5.18 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | JQ | 0.0699 | 1.04 | PQL | ng/Kg | |
| SL-560-SA7-SB-0.0-0.5 | 1,2,3,4,7,8,9-HPCDF | JBQ | 2.05 | 5.04 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 1.65 | 5.04 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.856 | 5.04 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.830 | 5.04 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 4.01 | 5.04 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JB | 0.355 | 5.04 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JB | 0.937 | 5.04 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.495 | 5.04 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 1.20 | 5.04 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.450 | 5.04 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | J | 0.105 | 1.01 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | JQ | 0.191 | 1.01 | PQL | ng/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PH032_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-560-SA7-SB-3.0-4.0 | 1,2,3,4,6,7,8-HPCDD | JBQ | 1.26 | 5.58 | PQL | ng/Kg | |
| | 1,2,3,4,6,7,8-HPCDF | JB | 0.129 | 5.58 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.125 | 5.58 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.0961 | 5.58 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.157 | 5.58 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JBQ | 0.205 | 5.58 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.0911 | 5.58 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JBQ | 0.262 | 5.58 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JBQ | 0.439 | 5.58 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JBQ | 0.235 | 5.58 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.309 | 5.58 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.0801 | 5.58 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.179 | 5.58 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JQ | 0.0801 | 1.12 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | JQ | 0.0392 | 1.12 | PQL | ng/Kg | |
| | OCDD | JB | 10.7 | 11.2 | PQL | ng/Kg | |
| | OCDF | JBQ | 0.373 | 11.2 | PQL | ng/Kg | |
| SL-561-SA7-SB-0.0-0.5 | 1,2,3,4,7,8,9-HPCDF | JB | 2.07 | 5.20 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.897 | 5.20 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 1.83 | 5.20 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 4.00 | 5.20 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 1.49 | 5.20 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 1.82 | 5.20 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | JB | 1.07 | 5.20 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JB | 0.448 | 5.20 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.860 | 5.20 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 1.59 | 5.20 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 1.08 | 5.20 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.507 | 1.04 | PQL | ng/Kg | |

**Method: 6010C**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-558-SA7-SB-0.0-0.5 | ANTIMONY | J | 1.18 | 4.02 | PQL | mg/Kg | |
| | ARSENIC | J | 1.55 | 4.02 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.378 | 1.01 | PQL | mg/Kg | |
| | BORON | J | 3.37 | 10.1 | PQL | mg/Kg | |
| | CADMIUM | J | 0.651 | 1.01 | PQL | mg/Kg | J (all detects) |
| | MOLYBDENUM | J | 0.229 | 2.01 | PQL | mg/Kg | |
| | SODIUM | J | 77.4 | 101 | PQL | mg/Kg | |
| | TIN | J | 2.26 | 10.1 | PQL | mg/Kg | |
| | Zirconium | J | 1.32 | 5.03 | PQL | mg/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PH032_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6010C**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-559-SA7-SB-0.0-0.5 | ANTIMONY | J | 2.12 | 4.01 | PQL | mg/Kg | J (all detects) |
| | ARSENIC | J | 2.48 | 4.01 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.650 | 1.00 | PQL | mg/Kg | |
| | BORON | J | 3.07 | 10.0 | PQL | mg/Kg | |
| | CADMIUM | J | 0.469 | 1.00 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.327 | 2.01 | PQL | mg/Kg | |
| | SODIUM | J | 82.6 | 100 | PQL | mg/Kg | |
| | TIN | J | 2.89 | 10.0 | PQL | mg/Kg | |
| | Zirconium | J | 1.39 | 5.01 | PQL | mg/Kg | |
| SL-559-SA7-SB-2.0-3.0 | ANTIMONY | J | 2.08 | 4.13 | PQL | mg/Kg | J (all detects) |
| | ARSENIC | J | 3.18 | 4.13 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.673 | 1.03 | PQL | mg/Kg | |
| | BORON | J | 3.55 | 10.3 | PQL | mg/Kg | |
| | CADMIUM | J | 0.467 | 1.03 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.397 | 2.06 | PQL | mg/Kg | |
| | SODIUM | J | 82.0 | 103 | PQL | mg/Kg | |
| | TIN | J | 2.50 | 10.3 | PQL | mg/Kg | |
| | Zirconium | J | 1.37 | 5.16 | PQL | mg/Kg | |
| SL-560-SA7-SB-0.0-0.5 | ANTIMONY | J | 1.91 | 4.13 | PQL | mg/Kg | J (all detects) |
| | ARSENIC | J | 2.31 | 4.13 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.579 | 1.03 | PQL | mg/Kg | |
| | BORON | J | 4.59 | 10.3 | PQL | mg/Kg | |
| | CADMIUM | J | 0.445 | 1.03 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.216 | 2.06 | PQL | mg/Kg | |
| | SODIUM | J | 99.7 | 103 | PQL | mg/Kg | |
| | TIN | J | 2.60 | 10.3 | PQL | mg/Kg | |
| | Zirconium | J | 0.971 | 5.16 | PQL | mg/Kg | |
| SL-560-SA7-SB-3.0-4.0 | ANTIMONY | J | 2.55 | 4.40 | PQL | mg/Kg | J (all detects) |
| | BERYLLIUM | J | 1.01 | 1.10 | PQL | mg/Kg | |
| | BORON | J | 5.41 | 11.0 | PQL | mg/Kg | |
| | CADMIUM | J | 0.736 | 1.10 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.360 | 2.20 | PQL | mg/Kg | |
| | TIN | J | 2.88 | 11.0 | PQL | mg/Kg | |
| | Zirconium | J | 4.08 | 5.50 | PQL | mg/Kg | |
| SL-561-SA7-SB-0.0-0.5 | ANTIMONY | J | 1.73 | 4.04 | PQL | mg/Kg | J (all detects) |
| | ARSENIC | J | 2.59 | 4.04 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.562 | 1.01 | PQL | mg/Kg | |
| | BORON | J | 4.91 | 10.1 | PQL | mg/Kg | |
| | CADMIUM | J | 0.581 | 1.01 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.501 | 2.02 | PQL | mg/Kg | |
| | SODIUM | J | 93.3 | 101 | PQL | mg/Kg | |
| | TIN | J | 2.88 | 10.1 | PQL | mg/Kg | |

**Method: 6020A**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-558-SA7-SB-0.0-0.5 | SILVER | J | 0.0267 | 0.201 | PQL | mg/Kg | J (all detects) |
| | THALLIUM | J | 0.138 | 0.201 | PQL | mg/Kg | |
| SL-559-SA7-SB-0.0-0.5 | SILVER | J | 0.0648 | 0.201 | PQL | mg/Kg | J (all detects) |

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PH032_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6020A**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-559-SA7-SB-2.0-3.0 | SILVER | J | 0.0625 | 0.206 | PQL | mg/Kg | J (all detects) |
| SL-560-SA7-SB-0.0-0.5 | SILVER | J | 0.0303 | 0.206 | PQL | mg/Kg | J (all detects) |
| SL-560-SA7-SB-3.0-4.0 | SELENIUM<br>SILVER | J<br>J | 0.161<br>0.0406 | 0.440<br>0.220 | PQL<br>PQL | mg/Kg<br>mg/Kg | J (all detects) |
| SL-561-SA7-SB-0.0-0.5 | SELENIUM<br>SILVER | J<br>J | 0.140<br>0.0434 | 0.404<br>0.202 | PQL<br>PQL | mg/Kg<br>mg/Kg | J (all detects) |

**Method: 7471B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-558-SA7-SB-0.0-0.5 | MERCURY | J | 0.0181 | 0.0198 | PQL | mg/Kg | J (all detects) |
| SL-559-SA7-SB-2.0-3.0 | MERCURY | J | 0.0172 | 0.0208 | PQL | mg/Kg | J (all detects) |
| SL-560-SA7-SB-3.0-4.0 | MERCURY | J | 0.0183 | 0.0214 | PQL | mg/Kg | J (all detects) |

**Method: 8015M**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-559-SA7-SB-2.0-3.0 | EFH (C21-C30) | J | 84 | 110 | PQL | mg/Kg | J (all detects) |
| SL-560-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 3.0 | 5.3 | PQL | mg/Kg | J (all detects) |
| SL-561-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 11 | 26 | PQL | mg/Kg | J (all detects) |

**Method: 8082A**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-559-SA7-SB-0.0-0.5 | AROCLOR 1254<br>Aroclor 5460 | J<br>J | 13<br>17 | 17<br>34 | PQL<br>PQL | ug/Kg<br>ug/Kg | J (all detects) |
| SL-559-SA7-SB-2.0-3.0 | AROCLOR 1254<br>Aroclor 5460 | J<br>J | 12<br>15 | 18<br>34 | PQL<br>PQL | ug/Kg<br>ug/Kg | J (all detects) |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH032** **Laboratory: LL**

**EDD Filename: PH032_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 8270D SIM**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-558-SA7-SB-0.0-0.5 | 2-METHYLNAPHTHALENE | J | 1.2 | 1.7 | PQL | ug/Kg | J (all detects) |
| | ANTHRACENE | J | 0.36 | 1.7 | PQL | ug/Kg | |
| | BENZO(A)ANTHRACENE | J | 1.4 | 1.7 | PQL | ug/Kg | |
| | BENZO(G,H,I)PERYLENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| | BENZO(K)FLUORANTHENE | J | 1.1 | 1.7 | PQL | ug/Kg | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 14 | 18 | PQL | ug/Kg | |
| | INDENO(1,2,3-CD)PYRENE | J | 0.90 | 1.7 | PQL | ug/Kg | |
| | NAPHTHALENE | J | 1.6 | 1.7 | PQL | ug/Kg | |
| SL-559-SA7-SB-0.0-0.5 | BENZO(A)PYRENE | J | 7.8 | 17 | PQL | ug/Kg | J (all detects) |
| | BENZO(G,H,I)PERYLENE | J | 9.5 | 17 | PQL | ug/Kg | |
| | FLUORANTHENE | J | 9.1 | 17 | PQL | ug/Kg | |
| | PHENANTHRENE | J | 8.2 | 17 | PQL | ug/Kg | |
| | PYRENE | J | 11 | 17 | PQL | ug/Kg | |
| SL-559-SA7-SB-2.0-3.0 | ACENAPHTHENE | J | 7.8 | 17 | PQL | ug/Kg | J (all detects) |
| | ACENAPHTHYLENE | J | 9.2 | 17 | PQL | ug/Kg | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 78 | 190 | PQL | ug/Kg | |
| | CHRYSENE | J | 14 | 17 | PQL | ug/Kg | |
| | PHENANTHRENE | J | 16 | 17 | PQL | ug/Kg | |
| SL-560-SA7-SB-0.0-0.5 | 2-METHYLNAPHTHALENE | J | 0.94 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 6.6 | 19 | PQL | ug/Kg | |
| | Di-n-butylphthalate | J | 7.4 | 19 | PQL | ug/Kg | |
| | NAPHTHALENE | J | 0.93 | 1.7 | PQL | ug/Kg | |
| SL-560-SA7-SB-3.0-4.0 | BENZO(B)FLUORANTHENE | J | 1.3 | 1.9 | PQL | ug/Kg | J (all detects) |
| | PYRENE | J | 1.2 | 1.9 | PQL | ug/Kg | |
| SL-561-SA7-SB-0.0-0.5 | 1-METHYLNAPHTHALENE | J | 1.2 | 1.7 | PQL | ug/Kg | J (all detects) |
| | ACENAPHTHYLENE | J | 0.94 | 1.7 | PQL | ug/Kg | |
| | BENZO(G,H,I)PERYLENE | J | 1.6 | 1.7 | PQL | ug/Kg | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 8.8 | 19 | PQL | ug/Kg | |
| | FLUORENE | J | 1.0 | 1.7 | PQL | ug/Kg | |
| | INDENO(1,2,3-CD)PYRENE | J | 1.1 | 1.7 | PQL | ug/Kg | |

LDC #: 29836F4
SDG #: PH032
Laboratory: Eurofins Lancaster Laboratories

# VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 6/11/13
Page: 1 of 1
Reviewer: CA
2nd Reviewer: LF

**METHOD:** Metals (EPA SW 846 Method 6010C/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

| | Validation Area | | Comments |
|---|---|---|---|
| I. | Technical holding times | ~~A~~ | Sampling dates: 4/16/13 |
| II. | ICP/MS Tune | – | |
| III. | Calibration | – | |
| IV. | Blanks | SW | |
| V. | ICP Interference Check Sample (ICS) Analysis | – | |
| VI. | Matrix Spike Analysis | N | MS/D (from PH030) |
| VII. | Duplicate Sample Analysis | N | DUP ↓ |
| VIII. | Laboratory Control Samples (LCS) | ~~A~~ | LCS |
| IX. | Internal Standard (ICP-MS) | N | |
| X. | Furnace Atomic Absorption QC | N | |
| XI. | ICP Serial Dilution | A | |
| XII. | Sample Result Verification | N | |
| XIII. | Overall Assessment of Data | N | |
| XIV. | Field Duplicates | – | |
| XV | Field Blanks | SW | FB= FB-041113(PH029) EB= EB-041813 (PH034) FB= 1 |

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | FB-041613 | 11 | | 21 | | 31 | |
| 2 MS | SL-559-SA7-SB-0.0-0.5 | 12 | | 22 | | 32 | |
| 3 DUP | SL-559-SA7-SB-2.0-3.0 | 13 | | 23 | | 33 | |
| 4 MS | SL-560-SA7-SB-0.0-0.5 | 14 | | 24 | | 34 | |
| 5 DUP | SL-560-SA7-SB-3.0-4.0 | 15 | | 25 | | 35 | |
| 6 LCS | SL-561-SA7-SB-0.0-0.5 | 16 | | 26 | | 36 | |
| 7 MS | SL-558-SA7-SB-0.0-0.5 | 17 | | 27 | | 37 | |
| 8 | | 18 | | 28 | | 38 | |
| 9 | | 19 | | 29 | | 39 | |
| 10 | | 20 | | 30 | | 40 | |

Notes: _____

LDC #: 29836F4

**VALIDATION FINDINGS WORKSHEET**
**PB/ICB/CCB QUALIFIED SAMPLES**


Reviewer: CA
2nd Reviewer:

**METHOD:** Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x Reason: B

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: All

| Analyte | Maximum PB[a] (mg/Kg) | Maximum PB[a] (ug/L) | Maximum ICB/CCB[a] (ug/L) | Action Level | 2 | 3 | 4 | 5 | 6 | 7 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mo | | | 2.8 | 1.4 | 0.33 | 0.40 | 0.22 | 0.36 | 0.50 | 0.23 | | | |

Sample Concentration units, unless otherwise noted: ug/L Associated Samples: All Water

| Analyte | Maximum PB[a] (mg/Kg) | Maximum PB[a] (ug/L) | Maximum ICB/CCB[a] (ug/L) | Action Level | 1 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mo | | | 4.6 | 0.023 | 0.0132 | | | | | | | | |

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 29836F4

# VALIDATION FINDINGS WORKSHEET
## Field Blanks


Reviewer: CA
2nd Reviewer: IV

**METHOD:** Trace Metals (EPA SW846 6010B/7000)

**Blank units:** mg/L **Associated sample units:** mg/Kg Reason: F
**Sampling date:** EB=4/18/13 FB=4/11/13 Soil factor applied 100x
**Field blank type:** (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

| Analyte | Blank ID | Blank ID | Sample Identification | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB-041813 | FB-041113 | Action Limit | 2 | 3 | 4 | 5 | 6 | 7 | | | | |
| Cu | | 0.0036 | 1.8 | | | | | | | | | | |
| Mo | 0.0036 | 0.0036 | 1.8 | 0.33 | 0.40 | 0.22 | 0.36 | 0.50 | 0.23 | | | | |
| Sr | 0.000028 | | 0.014 | | | | | | | | | | |
| | | | | | | | | | | | | | |

**Sampling date:** 4/16/13 Soil factor applied 100x
**Field blank type:** (circle one) Field Blank / Rinsate / Other: Associated Samples: None

| Analyte | Blank ID | Sample Identification | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FB-041613 | Action Limit | | | | | | | | | | | |
| Mo | 0.0132 | 6.6 | | | | | | | | | | | |
| Sn | 0.0029 | 1.45 | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

# Attachment I

# Sample ID Cross Reference and Data Review Level

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 17-Apr-2013 | TB-041713 | 7026475 | TB | 5030B | 8015M | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0 | 7026476 | N | 3050B | 6010C | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0 | 7026476 | N | 3050B | 6020A | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0 | 7026476 | N | 3546 | 8015M | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0 | 7026476 | N | 3546 | 8082A | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0 | 7026476 | N | 3546 | 8270D SIM | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0 | 7026476 | N | 5035A | 8015M | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0 | 7026476 | N | METHOD | 1613B | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0 | 7026476 | N | METHOD | 7471B | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0DUP | P026476D220710 | DUP | METHOD | 7471B | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0MSD | P026476M220714 | MSD | METHOD | 7471B | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0MSD | P026476M262344 | MSD | 3546 | 8270D SIM | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0MS | P026476R220712 | MS | METHOD | 7471B | III |
| 17-Apr-2013 | SL-558-SA7-SB-3.0-4.0MS | P026476R262313 | MS | 3546 | 8270D SIM | III |
| 17-Apr-2013 | SL-557-SA7-SB-0.0-0.5 | 7026477 | N | 3050B | 6010C | III |
| 17-Apr-2013 | SL-557-SA7-SB-0.0-0.5 | 7026477 | N | 3050B | 6020A | III |
| 17-Apr-2013 | SL-557-SA7-SB-0.0-0.5 | 7026477 | N | 3546 | 8015M | III |
| 17-Apr-2013 | SL-557-SA7-SB-0.0-0.5 | 7026477 | N | 3546 | 8082A | III |
| 17-Apr-2013 | SL-557-SA7-SB-0.0-0.5 | 7026477 | N | 3546 | 8270D SIM | III |
| 17-Apr-2013 | SL-557-SA7-SB-0.0-0.5 | 7026477 | N | METHOD | 1613B | III |
| 17-Apr-2013 | SL-557-SA7-SB-0.0-0.5 | 7026477 | N | METHOD | 7471B | III |
| 17-Apr-2013 | SL-505-SA7-SB-0.0-0.5 | 7026478 | N | 3050B | 6010C | III |
| 17-Apr-2013 | SL-505-SA7-SB-0.0-0.5 | 7026478 | N | 3050B | 6020A | III |
| 17-Apr-2013 | SL-505-SA7-SB-0.0-0.5 | 7026478 | N | 3546 | 8015M | III |
| 17-Apr-2013 | SL-505-SA7-SB-0.0-0.5 | 7026478 | N | 3546 | 8082A | III |
| 17-Apr-2013 | SL-505-SA7-SB-0.0-0.5 | 7026478 | N | 3546 | 8270D SIM | III |

*III = EPA Level 3 Data Review*
*IV = EPA Level 4 Data Validation*
*N = Normal Sample*
*FD = Field Duplicate*
*TB = Trip Blank*
*FB = Field Blank*
*MS = Matrix Spike*
*MSD = Matrix Spike Duplicate*

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 17-Apr-2013 | SL-505-SA7-SB-0.0-0.5 | 7026478 | N | METHOD | 1613B | III |
| 17-Apr-2013 | SL-505-SA7-SB-0.0-0.5 | 7026478 | N | METHOD | 7471B | III |
| 17-Apr-2013 | SL-502-SA7-SB-0.0-0.5 | 7026479 | N | 3050B | 6010C | III |
| 17-Apr-2013 | SL-502-SA7-SB-0.0-0.5 | 7026479 | N | 3050B | 6020A | III |
| 17-Apr-2013 | SL-502-SA7-SB-0.0-0.5 | 7026479 | N | 3546 | 8015M | III |
| 17-Apr-2013 | SL-502-SA7-SB-0.0-0.5 | 7026479 | N | 3546 | 8082A | III |
| 17-Apr-2013 | SL-502-SA7-SB-0.0-0.5 | 7026479 | N | 3546 | 8270D SIM | III |
| 17-Apr-2013 | SL-502-SA7-SB-0.0-0.5 | 7026479 | N | METHOD | 1613B | III |
| 17-Apr-2013 | SL-502-SA7-SB-0.0-0.5 | 7026479 | N | METHOD | 7471B | III |
| 17-Apr-2013 | SL-501-SA7-SB-0.0-0.5 | 7026480 | N | 3050B | 6010C | III |
| 17-Apr-2013 | SL-501-SA7-SB-0.0-0.5 | 7026480 | N | 3050B | 6020A | III |
| 17-Apr-2013 | SL-501-SA7-SB-0.0-0.5 | 7026480 | N | 3546 | 8015M | III |
| 17-Apr-2013 | SL-501-SA7-SB-0.0-0.5 | 7026480 | N | 3546 | 8082A | III |
| 17-Apr-2013 | SL-501-SA7-SB-0.0-0.5 | 7026480 | N | 3546 | 8270D SIM | III |
| 17-Apr-2013 | SL-501-SA7-SB-0.0-0.5 | 7026480 | N | METHOD | 1613B | III |
| 17-Apr-2013 | SL-501-SA7-SB-0.0-0.5 | 7026480 | N | METHOD | 7471B | III |
| 17-Apr-2013 | SL-500-SA7-SB-0.0-0.5 | 7026481 | N | 3050B | 6010C | III |
| 17-Apr-2013 | SL-500-SA7-SB-0.0-0.5 | 7026481 | N | 3050B | 6020A | III |
| 17-Apr-2013 | SL-500-SA7-SB-0.0-0.5 | 7026481 | N | 3546 | 8015M | III |
| 17-Apr-2013 | SL-500-SA7-SB-0.0-0.5 | 7026481 | N | 3546 | 8082A | III |
| 17-Apr-2013 | SL-500-SA7-SB-0.0-0.5 | 7026481 | N | 3546 | 8270D SIM | III |
| 17-Apr-2013 | SL-500-SA7-SB-0.0-0.5 | 7026481 | N | METHOD | 1613B | III |
| 17-Apr-2013 | SL-500-SA7-SB-0.0-0.5 | 7026481 | N | METHOD | 7471B | III |

*III = EPA Level 3 Data Review*
*IV = EPA Level 4 Data Validation*
*N = Normal Sample*
*FD = Field Duplicate*
*TB = Trip Blank*
*FB = Field Blank*
*MS = Matrix Spike*
*MSD = Matrix Spike Duplicate*

# Attachment II

# Overall Data Qualification Summary

# Data Qualifier Summary

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

**Sample ID: SL-500-SA7-SB-0.0-0.5** **Collected: 4/17/2013 2:45:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 3.97 | U | 0.496 | MDL | 3.97 | PQL | mg/Kg | UJ | Q |
| BERYLLIUM | 0.466 | J | 0.0665 | MDL | 0.993 | PQL | mg/Kg | J | Z |
| BORON | 4.56 | J | 0.824 | MDL | 9.93 | PQL | mg/Kg | U | B |
| CADMIUM | 0.165 | J | 0.0328 | MDL | 0.993 | PQL | mg/Kg | J | Z |
| LEAD | 11.0 | | 0.467 | MDL | 2.98 | PQL | mg/Kg | J | Q, E, E |
| MOLYBDENUM | 0.257 | J | 0.169 | MDL | 1.99 | PQL | mg/Kg | U | F, F |
| POTASSIUM | 2330 | | 13.4 | MDL | 99.3 | PQL | mg/Kg | J | Q |
| TIN | 3.07 | J | 0.218 | MDL | 9.93 | PQL | mg/Kg | U | B |
| Zirconium | 2.35 | J | 0.824 | MDL | 4.96 | PQL | mg/Kg | J | Z |

**Sample ID: SL-501-SA7-SB-0.0-0.5** **Collected: 4/17/2013 2:00:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 3.99 | U | 0.498 | MDL | 3.99 | PQL | mg/Kg | UJ | Q |
| BERYLLIUM | 0.551 | J | 0.0668 | MDL | 0.996 | PQL | mg/Kg | J | Z |
| BORON | 4.03 | J | 0.827 | MDL | 9.96 | PQL | mg/Kg | U | B |
| CADMIUM | 0.239 | J | 0.0329 | MDL | 0.996 | PQL | mg/Kg | J | Z |
| LEAD | 10.1 | | 0.468 | MDL | 2.99 | PQL | mg/Kg | J | Q, E, E |
| MOLYBDENUM | 0.336 | J | 0.169 | MDL | 1.99 | PQL | mg/Kg | U | F, F |
| POTASSIUM | 3490 | | 13.5 | MDL | 99.6 | PQL | mg/Kg | J | Q |
| SODIUM | 84.1 | J | 16.6 | MDL | 99.6 | PQL | mg/Kg | J | Z |
| TIN | 2.94 | J | 0.219 | MDL | 9.96 | PQL | mg/Kg | U | B |
| Zirconium | 3.15 | J | 0.827 | MDL | 4.98 | PQL | mg/Kg | J | Z |

**Sample ID: SL-502-SA7-SB-0.0-0.5** **Collected: 4/17/2013 1:25:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 0.580 | J | 0.512 | MDL | 4.10 | PQL | mg/Kg | J | Z, Q |
| BERYLLIUM | 0.695 | J | 0.0686 | MDL | 1.02 | PQL | mg/Kg | J | Z |
| BORON | 3.38 | J | 0.850 | MDL | 10.2 | PQL | mg/Kg | U | B |
| CADMIUM | 0.204 | J | 0.0338 | MDL | 1.02 | PQL | mg/Kg | J | Z |
| LEAD | 21.7 | | 0.481 | MDL | 3.07 | PQL | mg/Kg | J | Q, E, E |
| MOLYBDENUM | 0.404 | J | 0.174 | MDL | 2.05 | PQL | mg/Kg | U | F, F |
| POTASSIUM | 4190 | | 13.8 | MDL | 102 | PQL | mg/Kg | J | Q |
| SODIUM | 87.1 | J | 17.1 | MDL | 102 | PQL | mg/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

**Sample ID: SL-502-SA7-SB-0.0-0.5** **Collected: 4/17/2013 1:25:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| TIN | 3.62 | J | 0.225 | MDL | 10.2 | PQL | mg/Kg | U | B |
| Zirconium | 3.53 | J | 0.850 | MDL | 5.12 | PQL | mg/Kg | J | Z |

**Sample ID: SL-505-SA7-SB-0.0-0.5** **Collected: 4/17/2013 11:10:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.12 | U | 0.515 | MDL | 4.12 | PQL | mg/Kg | UJ | Q |
| BERYLLIUM | 0.514 | J | 0.0690 | MDL | 1.03 | PQL | mg/Kg | J | Z |
| BORON | 4.25 | J | 0.855 | MDL | 10.3 | PQL | mg/Kg | U | B |
| CADMIUM | 0.174 | J | 0.0340 | MDL | 1.03 | PQL | mg/Kg | J | Z |
| LEAD | 11.3 | | 0.484 | MDL | 3.09 | PQL | mg/Kg | J | Q, E, E |
| MOLYBDENUM | 0.309 | J | 0.175 | MDL | 2.06 | PQL | mg/Kg | U | F, F |
| POTASSIUM | 3990 | | 13.9 | MDL | 103 | PQL | mg/Kg | J | Q |
| SODIUM | 79.4 | J | 17.2 | MDL | 103 | PQL | mg/Kg | J | Z |
| TIN | 3.15 | J | 0.227 | MDL | 10.3 | PQL | mg/Kg | U | B |
| Zirconium | 2.44 | J | 0.855 | MDL | 5.15 | PQL | mg/Kg | J | Z |

**Sample ID: SL-557-SA7-SB-0.0-0.5** **Collected: 4/17/2013 9:40:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 0.592 | J | 0.523 | MDL | 4.18 | PQL | mg/Kg | J | Z, Q |
| BERYLLIUM | 0.740 | J | 0.0701 | MDL | 1.05 | PQL | mg/Kg | J | Z |
| BORON | 3.19 | J | 0.868 | MDL | 10.5 | PQL | mg/Kg | U | B |
| CADMIUM | 0.0858 | J | 0.0345 | MDL | 1.05 | PQL | mg/Kg | J | Z |
| LEAD | 7.50 | | 0.492 | MDL | 3.14 | PQL | mg/Kg | J | Q, E, E |
| MOLYBDENUM | 0.240 | J | 0.178 | MDL | 2.09 | PQL | mg/Kg | U | F, F |
| POTASSIUM | 2300 | | 14.1 | MDL | 105 | PQL | mg/Kg | J | Q |
| SODIUM | 80.6 | J | 17.5 | MDL | 105 | PQL | mg/Kg | J | Z |
| TIN | 3.34 | J | 0.230 | MDL | 10.5 | PQL | mg/Kg | U | B |
| Zirconium | 2.47 | J | 0.868 | MDL | 5.23 | PQL | mg/Kg | J | Z |

**Sample ID: SL-558-SA7-SB-3.0-4.0** **Collected: 4/17/2013 9:00:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.15 | U | 0.518 | MDL | 4.15 | PQL | mg/Kg | UJ | Q |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

**Sample ID: SL-558-SA7-SB-3.0-4.0** **Collected: 4/17/2013 9:00:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BERYLLIUM | 0.573 | J | 0.0694 | MDL | 1.04 | PQL | mg/Kg | J | Z |
| BORON | 5.62 | J | 0.860 | MDL | 10.4 | PQL | mg/Kg | U | B |
| CADMIUM | 0.102 | J | 0.0342 | MDL | 1.04 | PQL | mg/Kg | J | Z |
| LEAD | 5.53 | | 0.487 | MDL | 3.11 | PQL | mg/Kg | J | Q, E, E |
| MOLYBDENUM | 0.377 | J | 0.176 | MDL | 2.07 | PQL | mg/Kg | U | F, F |
| POTASSIUM | 3090 | | 14.0 | MDL | 104 | PQL | mg/Kg | J | Q |
| TIN | 3.17 | J | 0.228 | MDL | 10.4 | PQL | mg/Kg | U | B |
| Zirconium | 2.38 | J | 0.860 | MDL | 5.18 | PQL | mg/Kg | J | Z |

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

**Sample ID: SL-500-SA7-SB-0.0-0.5** **Collected: 4/17/2013 2:45:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0356 | J | 0.0199 | MDL | 0.199 | PQL | mg/Kg | J | Z |
| STRONTIUM | 17.2 | | 0.0338 | MDL | 0.397 | PQL | mg/Kg | J | Q |
| THALLIUM | 0.189 | J | 0.0298 | MDL | 0.199 | PQL | mg/Kg | J | Z |

**Sample ID: SL-501-SA7-SB-0.0-0.5** **Collected: 4/17/2013 2:00:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0465 | J | 0.0199 | MDL | 0.199 | PQL | mg/Kg | J | Z |
| STRONTIUM | 20.7 | | 0.0339 | MDL | 0.399 | PQL | mg/Kg | J | Q |

**Sample ID: SL-502-SA7-SB-0.0-0.5** **Collected: 4/17/2013 1:25:00** **Analysis Type: REA/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.162 | J | 0.102 | MDL | 0.410 | PQL | mg/Kg | J | Z |

**Sample ID: SL-502-SA7-SB-0.0-0.5** **Collected: 4/17/2013 1:25:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0651 | J | 0.0205 | MDL | 0.205 | PQL | mg/Kg | J | Z |
| STRONTIUM | 22.3 | | 0.0348 | MDL | 0.410 | PQL | mg/Kg | J | Q |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6020A** **Matrix: SO**

**Sample ID: SL-505-SA7-SB-0.0-0.5** **Collected: 4/17/2013 11:10:00** **Analysis Type: REA/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.138 | J | 0.103 | MDL | 0.412 | PQL | mg/Kg | J | Z |

**Sample ID: SL-505-SA7-SB-0.0-0.5** **Collected: 4/17/2013 11:10:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0450 | J | 0.0206 | MDL | 0.206 | PQL | mg/Kg | J | Z |
| STRONTIUM | 14.0 | | 0.0350 | MDL | 0.412 | PQL | mg/Kg | J | Q |

**Sample ID: SL-557-SA7-SB-0.0-0.5** **Collected: 4/17/2013 9:40:00** **Analysis Type: REA/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.202 | J | 0.105 | MDL | 0.418 | PQL | mg/Kg | J | Z |

**Sample ID: SL-557-SA7-SB-0.0-0.5** **Collected: 4/17/2013 9:40:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0582 | J | 0.0209 | MDL | 0.209 | PQL | mg/Kg | J | Z |
| STRONTIUM | 12.1 | | 0.0356 | MDL | 0.418 | PQL | mg/Kg | J | Q |

**Sample ID: SL-558-SA7-SB-3.0-4.0** **Collected: 4/17/2013 9:00:00** **Analysis Type: REA/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SELENIUM | 0.152 | J | 0.104 | MDL | 0.415 | PQL | mg/Kg | J | Z |

**Sample ID: SL-558-SA7-SB-3.0-4.0** **Collected: 4/17/2013 9:00:00** **Analysis Type: RES/TOT** **Dilution: 2**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| SILVER | 0.0854 | J | 0.0207 | MDL | 0.207 | PQL | mg/Kg | J | Z |
| STRONTIUM | 14.7 | | 0.0352 | MDL | 0.415 | PQL | mg/Kg | J | Q |

* denotes a non-reportable result

# Data Qualifier Summary

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 7471B** **Matrix: SO**

**Sample ID: SL-500-SA7-SB-0.0-0.5** **Collected: 4/17/2013 2:45:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0178 | J | 0.0099 | MDL | 0.0192 | PQL | mg/Kg | J | Z |

**Sample ID: SL-502-SA7-SB-0.0-0.5** **Collected: 4/17/2013 1:25:00** **Analysis Type: RES/TOT** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MERCURY | 0.0196 | J | 0.0104 | MDL | 0.0201 | PQL | mg/Kg | J | Z |

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

**Sample ID: SL-500-SA7-SB-0.0-0.5** **Collected: 4/17/2013 2:45:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 2.82 | JB | 0.0246 | MDL | 5.00 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.343 | JB | 0.0324 | MDL | 5.00 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.421 | JB | 0.0471 | MDL | 5.00 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.949 | JB | 0.0352 | MDL | 5.00 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 0.688 | JB | 0.0450 | MDL | 5.00 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.307 | JB | 0.0337 | MDL | 5.00 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 0.437 | JB | 0.0432 | MDL | 5.00 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.184 | JBQ | 0.0323 | MDL | 5.00 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.520 | JB | 0.0260 | MDL | 5.00 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.392 | JBQ | 0.0315 | MDL | 5.00 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.472 | JBQ | 0.0241 | MDL | 5.00 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.0274 | JQ | 0.0246 | MDL | 1.00 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.271 | J | 0.0404 | MDL | 1.00 | PQL | ng/Kg | J | Z |
| OCDF | 4.86 | JB | 0.0282 | MDL | 10.0 | PQL | ng/Kg | J | Z |

**Sample ID: SL-501-SA7-SB-0.0-0.5** **Collected: 4/17/2013 2:00:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 4.02 | JB | 0.0365 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,4,6,7,8-HPCDF | 0.929 | JB | 0.0279 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.161 | JB | 0.0377 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.241 | JBQ | 0.0434 | MDL | 4.90 | PQL | ng/Kg | J | Z |

* denotes a non-reportable result

# Data Qualifier Summary

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

**Sample ID: SL-501-SA7-SB-0.0-0.5** **Collected: 4/17/2013 2:00:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8-HXCDF | 0.234 | JBQ | 0.0397 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 0.324 | JB | 0.0421 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.195 | JB | 0.0376 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 0.420 | JB | 0.0401 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.277 | JB | 0.0379 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.0848 | JBQ | 0.0364 | MDL | 4.90 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.360 | JB | 0.0265 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.242 | JB | 0.0361 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.373 | JBQ | 0.0257 | MDL | 4.90 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.0772 | JQ | 0.0481 | MDL | 0.981 | PQL | ng/Kg | J | Z |
| OCDF | 1.49 | JB | 0.0317 | MDL | 9.81 | PQL | ng/Kg | J | Z |

**Sample ID: SL-502-SA7-SB-0.0-0.5** **Collected: 4/17/2013 1:25:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 3.89 | JB | 0.0238 | MDL | 5.08 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.448 | JB | 0.0304 | MDL | 5.08 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.926 | JB | 0.0424 | MDL | 5.08 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.788 | JBQ | 0.0336 | MDL | 5.08 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDD | 1.00 | JB | 0.0419 | MDL | 5.08 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.525 | JB | 0.0313 | MDL | 5.08 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDD | 0.746 | JB | 0.0404 | MDL | 5.08 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.232 | JB | 0.0359 | MDL | 5.08 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDD | 0.277 | JB | 0.0414 | MDL | 5.08 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8-PECDF | 2.25 | JB | 0.0362 | MDL | 5.08 | PQL | ng/Kg | J | Z |
| 2,3,4,6,7,8-HXCDF | 0.497 | JB | 0.0326 | MDL | 5.08 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.984 | JB | 0.0341 | MDL | 5.08 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDD | 0.0442 | JQ | 0.0245 | MDL | 1.02 | PQL | ng/Kg | J | Z |
| 2,3,7,8-TCDF | 0.653 | J | 0.0638 | MDL | 1.02 | PQL | ng/Kg | J | Z |
| OCDF | 7.16 | JB | 0.0274 | MDL | 10.2 | PQL | ng/Kg | J | Z |

**Sample ID: SL-505-SA7-SB-0.0-0.5** **Collected: 4/17/2013 11:10:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 2000 | BE | 0.223 | MDL | 4.93 | PQL | ng/Kg | J | *XIII |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 1613B** **Matrix: SO**

**Sample ID: SL-505-SA7-SB-0.0-0.5** **Collected: 4/17/2013 11:10:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,7,8-HxCDD | 3660 | BE | 0.114 | MDL | 4.93 | PQL | ng/Kg | J | *XIII |
| 2,3,4,7,8-PECDF | 2.54 | JB | 0.0458 | MDL | 4.93 | PQL | ng/Kg | J | Z |
| OCDD | 23100 | BE | 0.104 | MDL | 9.86 | PQL | ng/Kg | J | *XIII |

**Sample ID: SL-557-SA7-SB-0.0-0.5** **Collected: 4/17/2013 9:40:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDD | 3.42 | JB | 0.0293 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 1,2,3,4,6,7,8-HPCDF | 0.576 | JB | 0.0126 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.0644 | JB | 0.0169 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,4,7,8-HXCDF | 0.0896 | JB | 0.0199 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDD | 0.167 | JB | 0.0263 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.0717 | JB | 0.0196 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDD | 0.142 | JB | 0.0244 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDF | 0.0468 | JB | 0.0201 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.0514 | JB | 0.0229 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.133 | JB | 0.0160 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 2,3,4,6,7,8-HXCDF | 0.0959 | JBQ | 0.0189 | MDL | 5.18 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.113 | JB | 0.0155 | MDL | 5.18 | PQL | ng/Kg | U | B |
| 2,3,7,8-TCDF | 0.0749 | J | 0.0267 | MDL | 1.04 | PQL | ng/Kg | J | Z |
| OCDF | 1.34 | JB | 0.0324 | MDL | 10.4 | PQL | ng/Kg | J | Z |

**Sample ID: SL-558-SA7-SB-3.0-4.0** **Collected: 4/17/2013 9:00:00** **Analysis Type: RES** **Dilution: 1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HPCDF | 3.96 | JB | 0.0138 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8,9-HPCDF | 0.438 | JB | 0.0197 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HxCDD | 0.400 | JB | 0.0350 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 1,2,3,4,7,8-HXCDF | 0.162 | JBQ | 0.0275 | MDL | 5.14 | PQL | ng/Kg | U | B |
| 1,2,3,6,7,8-HXCDD | 2.48 | JB | 0.0358 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 1,2,3,6,7,8-HXCDF | 0.115 | JB | 0.0259 | MDL | 5.14 | PQL | ng/Kg | U | B |
| 1,2,3,7,8,9-HXCDD | 1.15 | JB | 0.0342 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 1,2,3,7,8,9-HXCDF | 0.103 | JB | 0.0263 | MDL | 5.14 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDD | 0.174 | JB | 0.0306 | MDL | 5.14 | PQL | ng/Kg | U | B |
| 1,2,3,7,8-PECDF | 0.0704 | JBQ | 0.0131 | MDL | 5.14 | PQL | ng/Kg | U | B |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**
**Method: 1613B** **Matrix: SO**

*Sample ID:* SL-558-SA7-SB-3.0-4.0 *Collected:* 4/17/2013 9:00:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2,3,4,6,7,8-HXCDF | 0.168 | JB | 0.0255 | MDL | 5.14 | PQL | ng/Kg | J | Z |
| 2,3,4,7,8-PECDF | 0.0479 | JBQ | 0.0122 | MDL | 5.14 | PQL | ng/Kg | U | B |

**Method Category: SVOA**
**Method: 8015M** **Matrix: SO**

*Sample ID:* SL-502-SA7-SB-0.0-0.5 *Collected:* 4/17/2013 1:25:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 2.1 | J | 2.1 | MDL | 5.2 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-505-SA7-SB-0.0-0.5 *Collected:* 4/17/2013 11:10:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 2.3 | J | 2.1 | MDL | 5.1 | PQL | mg/Kg | J | Z |

**Method Category: SVOA**
**Method: 8082A** **Matrix: SO**

*Sample ID:* SL-502-SA7-SB-0.0-0.5 *Collected:* 4/17/2013 1:25:00 *Analysis Type:* RES *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor 5460 | 24 | J | 10 | MDL | 34 | PQL | ug/Kg | J | Z |

**Method Category: SVOA**
**Method: 8270D SIM** **Matrix: SO**

*Sample ID:* SL-500-SA7-SB-0.0-0.5 *Collected:* 4/17/2013 2:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(A)ANTHRACENE | 0.90 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(A)PYRENE | 1.2 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(G,H,I)PERYLENE | 0.86 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 7.2 | J | 6.1 | MDL | 18 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 8270D SIM** **Matrix: SO**

***Sample ID:*** **SL-500-SA7-SB-0.0-0.5** ***Collected:*** **4/17/2013 2:45:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| INDENO(1,2,3-CD)PYRENE | 0.84 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PHENANTHRENE | 1.1 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

***Sample ID:*** **SL-501-SA7-SB-0.0-0.5** ***Collected:*** **4/17/2013 2:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTHRACENE | 0.83 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(E)PYRENE | 4.8 | J | 3.4 | MDL | 17 | PQL | ug/Kg | J | Z |
| DIBENZO(A,H)ANTHRACENE | 0.99 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

***Sample ID:*** **SL-502-SA7-SB-0.0-0.5** ***Collected:*** **4/17/2013 1:25:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 2-METHYLNAPHTHALENE | 0.75 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| ANTHRACENE | 0.92 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 12 | J | 6.2 | MDL | 19 | PQL | ug/Kg | J | Z |
| NAPHTHALENE | 1.2 | J | 0.69 | MDL | 1.7 | PQL | ug/Kg | J | Z |

***Sample ID:*** **SL-505-SA7-SB-0.0-0.5** ***Collected:*** **4/17/2013 11:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| 1-METHYLNAPHTHALENE | 0.98 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| 2-METHYLNAPHTHALENE | 1.6 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| ANTHRACENE | 0.71 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BENZO(E)PYRENE | 5.4 | J | 3.4 | MDL | 17 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 13 | J | 6.2 | MDL | 18 | PQL | ug/Kg | J | Z |
| DIBENZO(A,H)ANTHRACENE | 1.3 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| FLUORENE | 1.4 | J | 0.68 | MDL | 1.7 | PQL | ug/Kg | J | Z |

***Sample ID:*** **SL-557-SA7-SB-0.0-0.5** ***Collected:*** **4/17/2013 9:40:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| BENZO(B)FLUORANTHENE | 1.2 | J | 0.70 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| BIS(2-ETHYLHEXYL)PHTHALATE | 7.3 | J | 6.3 | MDL | 19 | PQL | ug/Kg | J | Z |
| CHRYSENE | 0.97 | J | 0.35 | MDL | 1.7 | PQL | ug/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: SVOA**

**Method: 8270D SIM** **Matrix: SO**

*Sample ID:* **SL-557-SA7-SB-0.0-0.5** *Collected:* **4/17/2013 9:40:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| FLUORANTHENE | 1.3 | J | 0.70 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| NAPHTHALENE | 0.70 | J | 0.70 | MDL | 1.7 | PQL | ug/Kg | U | F |
| PHENANTHRENE | 0.80 | J | 0.70 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| PYRENE | 1.0 | J | 0.70 | MDL | 1.7 | PQL | ug/Kg | J | Z |

*Sample ID:* **SL-558-SA7-SB-3.0-4.0** *Collected:* **4/17/2013 9:00:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **1**

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| CHRYSENE | 0.47 | J | 0.34 | MDL | 1.7 | PQL | ug/Kg | J | Z |
| Di-n-butylphthalate | 24 | | 6.2 | MDL | 19 | PQL | ug/Kg | J | Q, Q |

* denotes a non-reportable result

# Data Qualifier Summary

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

## Reason Code Legend

| *Reason Code* | *Description* |
|---|---|
| *XIII | Exceeded Calibration Range |
| A | Professional Judgment |
| B | Method Blank Contamination |
| E | Laboratory Duplicate Precision |
| E | Matrix Spike Precision |
| F | Equipment Blank Contamination |
| F | Field Blank Contamination |
| Q | Laboratory Duplicate Precision |
| Q | Matrix Spike Lower Estimation |
| Q | Matrix Spike Precision |
| Q | Matrix Spike Upper Estimation |
| S | Surrogate/Tracer Recovery Upper Estimation |
| Z | Reporting Limit Trace Value |

* denotes a non-reportable result

# Enclosure I

# Level III ADR Outliers
# (including Manual Review Outliers)

# Quality Control
# Outlier Reports

# PH033

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**
**Matrix: SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| BLK1090B371642 | 4/22/2013 4:42:00 PM | 1,2,3,4,6,7,8-HPCDD | 0.0607 ng/Kg | SL-500-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,6,7,8-HPCDF | 0.0593 ng/Kg | SL-501-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8,9-HPCDF | 0.0303 ng/Kg | SL-502-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8-HxCDD | 0.0268 ng/Kg | SL-505-SA7-SB-0.0-0.5 |
| | | 1,2,3,4,7,8-HXCDF | 0.0414 ng/Kg | SL-557-SA7-SB-0.0-0.5 |
| | | 1,2,3,6,7,8-HXCDD | 0.0283 ng/Kg | SL-558-SA7-SB-3.0-4.0 |
| | | 1,2,3,6,7,8-HXCDF | 0.0288 ng/Kg | |
| | | 1,2,3,7,8,9-HXCDD | 0.0385 ng/Kg | |
| | | 1,2,3,7,8,9-HXCDF | 0.0430 ng/Kg | |
| | | 1,2,3,7,8-PECDD | 0.0517 ng/Kg | |
| | | 1,2,3,7,8-PECDF | 0.0627 ng/Kg | |
| | | 2,3,4,6,7,8-HXCDF | 0.0179 ng/Kg | |
| | | 2,3,4,7,8-PECDF | 0.0283 ng/Kg | |
| | | OCDD | 0.147 ng/Kg | |
| | | OCDF | 0.0804 ng/Kg | |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-500-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDD | 0.184 ng/Kg | 0.184U ng/Kg |
| SL-501-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDD | 0.0848 ng/Kg | 0.0848U ng/Kg |
| SL-557-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8,9-HPCDF | 0.0644 ng/Kg | 0.0644U ng/Kg |
| SL-557-SA7-SB-0.0-0.5(RES) | 1,2,3,4,7,8-HXCDF | 0.0896 ng/Kg | 0.0896U ng/Kg |
| SL-557-SA7-SB-0.0-0.5(RES) | 1,2,3,6,7,8-HXCDF | 0.0717 ng/Kg | 0.0717U ng/Kg |
| SL-557-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDD | 0.142 ng/Kg | 0.142U ng/Kg |
| SL-557-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8,9-HXCDF | 0.0468 ng/Kg | 0.0468U ng/Kg |
| SL-557-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDD | 0.0514 ng/Kg | 0.0514U ng/Kg |
| SL-557-SA7-SB-0.0-0.5(RES) | 1,2,3,7,8-PECDF | 0.133 ng/Kg | 0.133U ng/Kg |
| SL-557-SA7-SB-0.0-0.5(RES) | 2,3,4,7,8-PECDF | 0.113 ng/Kg | 0.113U ng/Kg |
| SL-558-SA7-SB-3.0-4.0(RES) | 1,2,3,4,7,8-HXCDF | 0.162 ng/Kg | 0.162U ng/Kg |
| SL-558-SA7-SB-3.0-4.0(RES) | 1,2,3,6,7,8-HXCDF | 0.115 ng/Kg | 0.115U ng/Kg |
| SL-558-SA7-SB-3.0-4.0(RES) | 1,2,3,7,8,9-HXCDF | 0.103 ng/Kg | 0.103U ng/Kg |
| SL-558-SA7-SB-3.0-4.0(RES) | 1,2,3,7,8-PECDD | 0.174 ng/Kg | 0.174U ng/Kg |
| SL-558-SA7-SB-3.0-4.0(RES) | 1,2,3,7,8-PECDF | 0.0704 ng/Kg | 0.0704U ng/Kg |
| SL-558-SA7-SB-3.0-4.0(RES) | 2,3,4,7,8-PECDF | 0.0479 ng/Kg | 0.0479U ng/Kg |

**Method: 6010C**
**Matrix: SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| P11537AB221818 | 4/28/2013 6:18:00 PM | ALUMINUM | 10.3 mg/Kg | SL-500-SA7-SB-0.0-0.5 |
| | | BORON | 1.62 mg/Kg | SL-501-SA7-SB-0.0-0.5 |
| | | CALCIUM | 25.6 mg/Kg | SL-502-SA7-SB-0.0-0.5 |
| | | PHOSPHORUS | 1.45 mg/Kg | SL-505-SA7-SB-0.0-0.5 |
| | | TIN | 1.45 mg/Kg | SL-557-SA7-SB-0.0-0.5 |
| | | | | SL-558-SA7-SB-3.0-4.0 |

# Method Blank Outlier Report

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **6010C**
***Matrix:*** **SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-500-SA7-SB-0.0-0.5(RES/TOT) | BORON | 4.56 mg/Kg | 4.56U mg/Kg |
| SL-500-SA7-SB-0.0-0.5(RES/TOT) | TIN | 3.07 mg/Kg | 3.07U mg/Kg |
| SL-501-SA7-SB-0.0-0.5(RES/TOT) | BORON | 4.03 mg/Kg | 4.03U mg/Kg |
| SL-501-SA7-SB-0.0-0.5(RES/TOT) | TIN | 2.94 mg/Kg | 2.94U mg/Kg |
| SL-502-SA7-SB-0.0-0.5(RES/TOT) | BORON | 3.38 mg/Kg | 3.38U mg/Kg |
| SL-502-SA7-SB-0.0-0.5(RES/TOT) | TIN | 3.62 mg/Kg | 3.62U mg/Kg |
| SL-505-SA7-SB-0.0-0.5(RES/TOT) | BORON | 4.25 mg/Kg | 4.25U mg/Kg |
| SL-505-SA7-SB-0.0-0.5(RES/TOT) | TIN | 3.15 mg/Kg | 3.15U mg/Kg |
| SL-557-SA7-SB-0.0-0.5(RES/TOT) | BORON | 3.19 mg/Kg | 3.19U mg/Kg |
| SL-557-SA7-SB-0.0-0.5(RES/TOT) | TIN | 3.34 mg/Kg | 3.34U mg/Kg |
| SL-558-SA7-SB-3.0-4.0(RES/TOT) | BORON | 5.62 mg/Kg | 5.62U mg/Kg |
| SL-558-SA7-SB-3.0-4.0(RES/TOT) | TIN | 3.17 mg/Kg | 3.17U mg/Kg |

***Method:*** **6020A**
***Matrix:*** **SO**

| Method Blank Sample ID | Analysis Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| P11537AB220821A | 4/29/2013 8:21:00 AM | STRONTIUM | 0.179 mg/Kg | SL-500-SA7-SB-0.0-0.5<br>SL-501-SA7-SB-0.0-0.5<br>SL-502-SA7-SB-0.0-0.5<br>SL-505-SA7-SB-0.0-0.5<br>SL-557-SA7-SB-0.0-0.5<br>SL-558-SA7-SB-3.0-4.0 |

# Equipment Rinsate Blank Outlier Report

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **6010C**
***Matrix:*** **SO**

| Equipment Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| EB-041813(RES) | 4/18/2013 3:00:00 PM | MOLYBDENUM | 0.0036 mg/L | SL-500-SA7-SB-0.0-0.5<br>SL-501-SA7-SB-0.0-0.5<br>SL-502-SA7-SB-0.0-0.5<br>SL-505-SA7-SB-0.0-0.5<br>SL-557-SA7-SB-0.0-0.5<br>SL-558-SA7-SB-3.0-4.0 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-500-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.257 mg/Kg | 0.257U mg/Kg |
| SL-501-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.336 mg/Kg | 0.336U mg/Kg |
| SL-502-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.404 mg/Kg | 0.404U mg/Kg |
| SL-505-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.309 mg/Kg | 0.309U mg/Kg |
| SL-557-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.240 mg/Kg | 0.240U mg/Kg |
| SL-558-SA7-SB-3.0-4.0(RES/TOT) | MOLYBDENUM | 0.377 mg/Kg | 0.377U mg/Kg |

# Field Blank Outlier Report

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6010C**
**Matrix: SO**

| Field Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| FB-041113(REA2) | 4/11/2013 3:00:00 PM | COPPER<br>MOLYBDENUM | 0.0036 mg/L<br>0.0036 mg/L | SL-500-SA7-SB-0.0-0.5<br>SL-501-SA7-SB-0.0-0.5<br>SL-502-SA7-SB-0.0-0.5<br>SL-505-SA7-SB-0.0-0.5<br>SL-557-SA7-SB-0.0-0.5<br>SL-558-SA7-SB-3.0-4.0 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-500-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.257 mg/Kg | 0.257U mg/Kg |
| SL-501-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.336 mg/Kg | 0.336U mg/Kg |
| SL-502-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.404 mg/Kg | 0.404U mg/Kg |
| SL-505-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.309 mg/Kg | 0.309U mg/Kg |
| SL-557-SA7-SB-0.0-0.5(RES/TOT) | MOLYBDENUM | 0.240 mg/Kg | 0.240U mg/Kg |
| SL-558-SA7-SB-3.0-4.0(RES/TOT) | MOLYBDENUM | 0.377 mg/Kg | 0.377U mg/Kg |

**Method: 8270D SIM**
**Matrix: SO**

| Field Blank Sample ID | Collected Date | Analyte | Result | Associated Samples |
|---|---|---|---|---|
| FB-041113(RES) | 4/11/2013 3:00:00 PM | 1-METHYLNAPHTHALENE<br>2-METHYLNAPHTHALENE<br>BIS(2-ETHYLHEXYL)PHTHALATE<br>Diethylphthalate<br>Di-n-butylphthalate<br>NAPHTHALENE | 0.019 ug/L<br>0.024 ug/L<br>0.082 ug/L<br>0.18 ug/L<br>0.17 ug/L<br>0.17 ug/L | SL-500-SA7-SB-0.0-0.5<br>SL-501-SA7-SB-0.0-0.5<br>SL-502-SA7-SB-0.0-0.5<br>SL-505-SA7-SB-0.0-0.5<br>SL-557-SA7-SB-0.0-0.5<br>SL-558-SA7-SB-3.0-4.0 |

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

| Sample ID | Analyte | Reported Result | Modified Final Result |
|---|---|---|---|
| SL-557-SA7-SB-0.0-0.5(RES) | NAPHTHALENE | 0.70 ug/Kg | 1.7U ug/Kg |

# Surrogate Outlier Report

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PH033_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **8082A**
***Matrix:*** **SO**

| *Sample ID (Analysis Type)* | *Surrogate* | *Sample % Recovery* | *% Recovery Limits* | *Affected Compounds* | *Flag* |
|---|---|---|---|---|---|
| **SL-557-SA7-SB-0.0 -0.5** | TETRACHLORO-M-XYLENE | 133 | 45.00-120.00 | All Target Analytes | J (all detects) |
| **SL-558-SA7-SB-3.0 -4.0** | TETRACHLORO-M-XYLENE | 129 | 45.00-120.00 | All Target Analytes | J(all detects) |

# Matrix Spike/Matrix Spike Duplicate Outlier Report

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PH033_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **8270D SIM**
***Matrix:*** **SO**

| *QC Sample ID (Associated Samples)* | *Compound* | *MS %R* | *MSD %R* | *%R Limits* | *RPD (Limits)* | *Affected Compounds* | *Flag* |
|---|---|---|---|---|---|---|---|
| **SL-558-SA7-SB-3.0-4.0MSD** (SL-558-SA7-SB-3.0-4.0) | Di-n-butylphthalate | - | 159 | 62.00-154.00 | 34 (30.00) | Di-n-butylphthalate | J (all detects) |

# *Lab Duplicate Outlier Report*

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PrepPH033** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method: 7471B***
***Matrix: SO***

| *QC Sample ID (Associated Sample ID)* | *Analyte* | *Sample RPD* | *eQAPP RPD* | *Flag* |
|---|---|---|---|---|
| SL-558-SA7-SB-3.0-4.0DUP (TOT) (SL-500-SA7-SB-0.0-0.5 SL -501-SA7-SB-0.0-0.5 SL -502-SA7-SB-0.0-0.5 SL -505-SA7-SB-0.0-0.5 SL -557-SA7-SB-0.0-0.5 SL -558-SA7-SB-3.0-4.0) | MERCURY | 200 | 20.00 | No Qual, OK by Difference |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PH033_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **1613B**

***Matrix:*** **SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-500-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 2.82 | 5.00 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.343 | 5.00 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.421 | 5.00 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.949 | 5.00 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 0.688 | 5.00 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.307 | 5.00 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.437 | 5.00 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JBQ | 0.184 | 5.00 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDF | JB | 0.520 | 5.00 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.392 | 5.00 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.472 | 5.00 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JQ | 0.0274 | 1.00 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.271 | 1.00 | PQL | ng/Kg | |
| | OCDF | JB | 4.86 | 10.0 | PQL | ng/Kg | |
| SL-501-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDD | JB | 4.02 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,4,6,7,8-HPCDF | JB | 0.929 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.161 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JBQ | 0.241 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JBQ | 0.234 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 0.324 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.195 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.420 | 4.90 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8,9-HXCDF | JB | 0.277 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JBQ | 0.0848 | 4.90 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.360 | 4.90 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.242 | 4.90 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.373 | 4.90 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | JQ | 0.0772 | 0.981 | PQL | ng/Kg | |
| | OCDF | JB | 1.49 | 9.81 | PQL | ng/Kg | |
| SL-502-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDF | JB | 3.89 | 5.08 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.448 | 5.08 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.926 | 5.08 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JBQ | 0.788 | 5.08 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 1.00 | 5.08 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.525 | 5.08 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.746 | 5.08 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JB | 0.232 | 5.08 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,7,8-PECDD | JB | 0.277 | 5.08 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 2.25 | 5.08 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.497 | 5.08 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.984 | 5.08 | PQL | ng/Kg | |
| | 2,3,7,8-TCDD | JQ | 0.0442 | 1.02 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.653 | 1.02 | PQL | ng/Kg | |
| | OCDF | JB | 7.16 | 10.2 | PQL | ng/Kg | |
| SL-505-SA7-SB-0.0-0.5 | 2,3,4,7,8-PECDF | JB | 2.54 | 4.93 | PQL | ng/Kg | J (all detects) |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PH033_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 1613B**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-557-SA7-SB-0.0-0.5 | 1,2,3,4,6,7,8-HPCDD | JB | 3.42 | 5.18 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,4,6,7,8-HPCDF | JB | 0.576 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.0644 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JB | 0.0896 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 0.167 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.0717 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 0.142 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JB | 0.0468 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JB | 0.0514 | 5.18 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JB | 0.133 | 5.18 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JBQ | 0.0959 | 5.18 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JB | 0.113 | 5.18 | PQL | ng/Kg | |
| | 2,3,7,8-TCDF | J | 0.0749 | 1.04 | PQL | ng/Kg | |
| | OCDF | JB | 1.34 | 10.4 | PQL | ng/Kg | |
| SL-558-SA7-SB-3.0-4.0 | 1,2,3,4,6,7,8-HPCDF | JB | 3.96 | 5.14 | PQL | ng/Kg | J (all detects) |
| | 1,2,3,4,7,8,9-HPCDF | JB | 0.438 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HxCDD | JB | 0.400 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,4,7,8-HXCDF | JBQ | 0.162 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDD | JB | 2.48 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,6,7,8-HXCDF | JB | 0.115 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDD | JB | 1.15 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,7,8,9-HXCDF | JB | 0.103 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDD | JB | 0.174 | 5.14 | PQL | ng/Kg | |
| | 1,2,3,7,8-PECDF | JBQ | 0.0704 | 5.14 | PQL | ng/Kg | |
| | 2,3,4,6,7,8-HXCDF | JB | 0.168 | 5.14 | PQL | ng/Kg | |
| | 2,3,4,7,8-PECDF | JBQ | 0.0479 | 5.14 | PQL | ng/Kg | |

**Method: 6010C**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-500-SA7-SB-0.0-0.5 | BERYLLIUM | J | 0.466 | 0.993 | PQL | mg/Kg | J (all detects) |
| | BORON | J | 4.56 | 9.93 | PQL | mg/Kg | |
| | CADMIUM | J | 0.165 | 0.993 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.257 | 1.99 | PQL | mg/Kg | |
| | TIN | J | 3.07 | 9.93 | PQL | mg/Kg | |
| | Zirconium | J | 2.35 | 4.96 | PQL | mg/Kg | |
| SL-501-SA7-SB-0.0-0.5 | BERYLLIUM | J | 0.551 | 0.996 | PQL | mg/Kg | J (all detects) |
| | BORON | J | 4.03 | 9.96 | PQL | mg/Kg | |
| | CADMIUM | J | 0.239 | 0.996 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.336 | 1.99 | PQL | mg/Kg | |
| | SODIUM | J | 84.1 | 99.6 | PQL | mg/Kg | |
| | TIN | J | 2.94 | 9.96 | PQL | mg/Kg | |
| | Zirconium | J | 3.15 | 4.98 | PQL | mg/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PH033_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 6010C**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-502-SA7-SB-0.0-0.5 | ANTIMONY | J | 0.580 | 4.10 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.695 | 1.02 | PQL | mg/Kg | |
| | BORON | J | 3.38 | 10.2 | PQL | mg/Kg | |
| | CADMIUM | J | 0.204 | 1.02 | PQL | mg/Kg | J (all detects) |
| | MOLYBDENUM | J | 0.404 | 2.05 | PQL | mg/Kg | |
| | SODIUM | J | 87.1 | 102 | PQL | mg/Kg | |
| | TIN | J | 3.62 | 10.2 | PQL | mg/Kg | |
| | Zirconium | J | 3.53 | 5.12 | PQL | mg/Kg | |
| SL-505-SA7-SB-0.0-0.5 | BERYLLIUM | J | 0.514 | 1.03 | PQL | mg/Kg | |
| | BORON | J | 4.25 | 10.3 | PQL | mg/Kg | |
| | CADMIUM | J | 0.174 | 1.03 | PQL | mg/Kg | |
| | MOLYBDENUM | J | 0.309 | 2.06 | PQL | mg/Kg | J (all detects) |
| | SODIUM | J | 79.4 | 103 | PQL | mg/Kg | |
| | TIN | J | 3.15 | 10.3 | PQL | mg/Kg | |
| | Zirconium | J | 2.44 | 5.15 | PQL | mg/Kg | |
| SL-557-SA7-SB-0.0-0.5 | ANTIMONY | J | 0.592 | 4.18 | PQL | mg/Kg | |
| | BERYLLIUM | J | 0.740 | 1.05 | PQL | mg/Kg | |
| | BORON | J | 3.19 | 10.5 | PQL | mg/Kg | |
| | CADMIUM | J | 0.0858 | 1.05 | PQL | mg/Kg | J (all detects) |
| | MOLYBDENUM | J | 0.240 | 2.09 | PQL | mg/Kg | |
| | SODIUM | J | 80.6 | 105 | PQL | mg/Kg | |
| | TIN | J | 3.34 | 10.5 | PQL | mg/Kg | |
| | Zirconium | J | 2.47 | 5.23 | PQL | mg/Kg | |
| SL-558-SA7-SB-3.0-4.0 | BERYLLIUM | J | 0.573 | 1.04 | PQL | mg/Kg | |
| | BORON | J | 5.62 | 10.4 | PQL | mg/Kg | |
| | CADMIUM | J | 0.102 | 1.04 | PQL | mg/Kg | J (all detects) |
| | MOLYBDENUM | J | 0.377 | 2.07 | PQL | mg/Kg | |
| | TIN | J | 3.17 | 10.4 | PQL | mg/Kg | |
| | Zirconium | J | 2.38 | 5.18 | PQL | mg/Kg | |

**Method: 6020A**

**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-500-SA7-SB-0.0-0.5 | SILVER | J | 0.0356 | 0.199 | PQL | mg/Kg | J (all detects) |
| | THALLIUM | J | 0.189 | 0.199 | PQL | mg/Kg | |
| SL-501-SA7-SB-0.0-0.5 | SILVER | J | 0.0465 | 0.199 | PQL | mg/Kg | J (all detects) |
| SL-502-SA7-SB-0.0-0.5 | SELENIUM | J | 0.162 | 0.410 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0651 | 0.205 | PQL | mg/Kg | |
| SL-505-SA7-SB-0.0-0.5 | SELENIUM | J | 0.138 | 0.412 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0450 | 0.206 | PQL | mg/Kg | |
| SL-557-SA7-SB-0.0-0.5 | SELENIUM | J | 0.202 | 0.418 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0582 | 0.209 | PQL | mg/Kg | |
| SL-558-SA7-SB-3.0-4.0 | SELENIUM | J | 0.152 | 0.415 | PQL | mg/Kg | J (all detects) |
| | SILVER | J | 0.0854 | 0.207 | PQL | mg/Kg | |

# Reporting Limit Outliers

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PH033_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method: 7471B**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-500-SA7-SB-0.0-0.5 | MERCURY | J | 0.0178 | 0.0192 | PQL | mg/Kg | J (all detects) |
| SL-502-SA7-SB-0.0-0.5 | MERCURY | J | 0.0196 | 0.0201 | PQL | mg/Kg | J (all detects) |

**Method: 8015M**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-502-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 2.1 | 5.2 | PQL | mg/Kg | J (all detects) |
| SL-505-SA7-SB-0.0-0.5 | EFH (C15-C20) | J | 2.3 | 5.1 | PQL | mg/Kg | J (all detects) |

**Method: 8082A**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-502-SA7-SB-0.0-0.5 | Aroclor 5460 | J | 24 | 34 | PQL | ug/Kg | J (all detects) |

**Method: 8270D SIM**
**Matrix: SO**

| SampleID | Analyte | Lab Qual | Result | Reporting Limit | RL Type | Units | Flag |
|---|---|---|---|---|---|---|---|
| SL-500-SA7-SB-0.0-0.5 | BENZO(A)ANTHRACENE | J | 0.90 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BENZO(A)PYRENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| | BENZO(G,H,I)PERYLENE | J | 0.86 | 1.7 | PQL | ug/Kg | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 7.2 | 18 | PQL | ug/Kg | |
| | INDENO(1,2,3-CD)PYRENE | J | 0.84 | 1.7 | PQL | ug/Kg | |
| | PHENANTHRENE | J | 1.1 | 1.7 | PQL | ug/Kg | |
| SL-501-SA7-SB-0.0-0.5 | ANTHRACENE | J | 0.83 | 1.7 | PQL | ug/Kg | J (all detects) |
| | BENZO(E)PYRENE | J | 4.8 | 17 | PQL | ug/Kg | |
| | DIBENZO(A,H)ANTHRACENE | J | 0.99 | 1.7 | PQL | ug/Kg | |
| SL-502-SA7-SB-0.0-0.5 | 2-METHYLNAPHTHALENE | J | 0.75 | 1.7 | PQL | ug/Kg | J (all detects) |
| | ANTHRACENE | J | 0.92 | 1.7 | PQL | ug/Kg | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 12 | 19 | PQL | ug/Kg | |
| | NAPHTHALENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| SL-505-SA7-SB-0.0-0.5 | 1-METHYLNAPHTHALENE | J | 0.98 | 1.7 | PQL | ug/Kg | J (all detects) |
| | 2-METHYLNAPHTHALENE | J | 1.6 | 1.7 | PQL | ug/Kg | |
| | ANTHRACENE | J | 0.71 | 1.7 | PQL | ug/Kg | |
| | BENZO(E)PYRENE | J | 5.4 | 17 | PQL | ug/Kg | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 13 | 18 | PQL | ug/Kg | |
| | DIBENZO(A,H)ANTHRACENE | J | 1.3 | 1.7 | PQL | ug/Kg | |
| | FLUORENE | J | 1.4 | 1.7 | PQL | ug/Kg | |

# *Reporting Limit Outliers*

**Lab Reporting Batch ID: PH033** **Laboratory: LL**

**EDD Filename: PH033_v1** **eQAPP Name: CDM_SSFL_130621_Lan**

***Method:*** **8270D SIM**

***Matrix:*** **SO**

| *SampleID* | *Analyte* | *Lab Qual* | *Result* | *Reporting Limit* | *RL Type* | *Units* | *Flag* |
|---|---|---|---|---|---|---|---|
| SL-557-SA7-SB-0.0-0.5 | BENZO(B)FLUORANTHENE | J | 1.2 | 1.7 | PQL | ug/Kg | |
| | BIS(2-ETHYLHEXYL)PHTHALATE | J | 7.3 | 19 | PQL | ug/Kg | |
| | CHRYSENE | J | 0.97 | 1.7 | PQL | ug/Kg | |
| | FLUORANTHENE | J | 1.3 | 1.7 | PQL | ug/Kg | J (all detects) |
| | NAPHTHALENE | J | 0.70 | 1.7 | PQL | ug/Kg | |
| | PHENANTHRENE | J | 0.80 | 1.7 | PQL | ug/Kg | |
| | PYRENE | J | 1.0 | 1.7 | PQL | ug/Kg | |
| SL-558-SA7-SB-3.0-4.0 | CHRYSENE | J | 0.47 | 1.7 | PQL | ug/Kg | J (all detects) |

LDC #: 29836G4
SDG #: PH033
Laboratory: Eurofins Lancaster Laboratories

# VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 6/11/13
Page: 1 of 1
Reviewer: CA
2nd Reviewer: LW

**METHOD:** Metals (EPA SW 846 Method 6010C/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

| | Validation Area | | Comments |
|---|---|---|---|
| I. | Technical holding times | — | Sampling dates: 4/17/13 |
| II. | ICP/MS Tune | — | |
| III. | Calibration | — | |
| IV. | Blanks | A | |
| V. | ICP Interference Check Sample (ICS) Analysis | — | |
| VI. | Matrix Spike Analysis | N | MS/D (Hg only: 6010/6020: ~~SB~~ from PH036) |
| VII. | Duplicate Sample Analysis | N | Dup ↓ Hg - OK by Difference, No Qual |
| VIII. | Laboratory Control Samples (LCS) | A | LCS |
| IX. | Internal Standard (ICP-MS) | N | |
| X. | Furnace Atomic Absorption QC | N | |
| XI. | ICP Serial Dilution | A | |
| XII. | Sample Result Verification | N | |
| XIII. | Overall Assessment of Data | N | |
| XIV. | Field Duplicates | — | |
| XV | Field Blanks | SW | FB= ~~FB~~-041113 (PH029) EB=EB-041813 (PH034) |

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | SL-558-SA7-SB-3.0-4.0 | 11 | | 21 | | 31 | |
| 2 | SL-557-SA7-SB-0.0-0.5 | 12 | | 22 | | 32 | |
| 3 | SL-505-SA7-SB-0.0-0.5 | 13 | | 23 | | 33 | |
| 4 | SL-502-SA7-SB-0.0-0.5 | 14 | | 24 | | 34 | |
| 5 | SL-501-SA7-SB-0.0-0.5 | 15 | | 25 | | 35 | |
| 6 | SL-500-SA7-SB-0.0-0.5 | 16 | | 26 | | 36 | |
| 7 | (#1) MS (Hg only) | 17 | | 27 | | 37 | |
| 8 | ↓ MSD | 18 | | 28 | | 38 | |
| 9 | ↓ Dup ↓ | 19 | | 29 | | 39 | |
| 10 | | 20 | | 30 | | 40 | |

Notes: _____

LDC #: 29836G4

# VALIDATION FINDINGS WORKSHEET
## Field Blanks


Reviewer: a
2nd Reviewer: w

**METHOD:** Trace Metals (EPA SW846 6010B/7000)

**Blank units:** mg/L **Associated sample units:** mg/Kg Reason: F
**Sampling date:** EB=4/18/13 FB=4/11/13 Soil factor applied 100x
**Field blank type:** (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

| Analyte | Blank ID | Blank ID | Sample Identification | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EB-041813 | FB-041113 | Action Limit | 1 | 2 | 3 | 4 | 5 | 6 | | | | |
| Cu | | 0.0036 | 1.8 | | | | | | | | | | |
| Mo | 0.0036 | 0.0036 | 1.8 | 0.38 | 0.24 | 0.31 | 0.40 | 0.34 | 0.26 | | | | |
| Sr | 0.000028 | | 0.014 | | | | | | | | | | |
| | | | | | | | | | | | | | |

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

# Attachment I

# Sample ID Cross Reference and Data Review Level

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 18-Apr-2013 | SL-531-SA7-SB-0.0-0.5 | 7028427 | N | 3050B | 6010C | III |
| 18-Apr-2013 | SL-531-SA7-SB-0.0-0.5 | 7028427 | N | 3050B | 6020A | III |
| 18-Apr-2013 | SL-531-SA7-SB-0.0-0.5 | 7028427 | N | 3546 | 8015M | III |
| 18-Apr-2013 | SL-531-SA7-SB-0.0-0.5 | 7028427 | N | 3546 | 8082A | III |
| 18-Apr-2013 | SL-531-SA7-SB-0.0-0.5 | 7028427 | N | 3546 | 8270D SIM | III |
| 18-Apr-2013 | SL-531-SA7-SB-0.0-0.5 | 7028427 | N | METHOD | 1613B | III |
| 18-Apr-2013 | SL-531-SA7-SB-0.0-0.5 | 7028427 | N | METHOD | 7471B | III |
| 18-Apr-2013 | SL-532-SA7-SB-0.0-0.5 | 7028428 | N | 3050B | 6010C | III |
| 18-Apr-2013 | SL-532-SA7-SB-0.0-0.5 | 7028428 | N | 3050B | 6020A | III |
| 18-Apr-2013 | SL-532-SA7-SB-0.0-0.5 | 7028428 | N | 3546 | 8015M | III |
| 18-Apr-2013 | SL-532-SA7-SB-0.0-0.5 | 7028428 | N | 3546 | 8082A | III |
| 18-Apr-2013 | SL-532-SA7-SB-0.0-0.5 | 7028428 | N | 3546 | 8270D SIM | III |
| 18-Apr-2013 | SL-532-SA7-SB-0.0-0.5 | 7028428 | N | METHOD | 1613B | III |
| 18-Apr-2013 | SL-532-SA7-SB-0.0-0.5 | 7028428 | N | METHOD | 7471B | III |
| 18-Apr-2013 | SL-533-SA7-SB-0.0-0.5 | 7028429 | N | 3050B | 6010C | III |
| 18-Apr-2013 | SL-533-SA7-SB-0.0-0.5 | 7028429 | N | 3050B | 6020A | III |
| 18-Apr-2013 | SL-533-SA7-SB-0.0-0.5 | 7028429 | N | 3546 | 8015M | III |
| 18-Apr-2013 | SL-533-SA7-SB-0.0-0.5 | 7028429 | N | 3546 | 8082A | III |
| 18-Apr-2013 | SL-533-SA7-SB-0.0-0.5 | 7028429 | N | 3546 | 8270D SIM | III |
| 18-Apr-2013 | SL-533-SA7-SB-0.0-0.5 | 7028429 | N | METHOD | 1613B | III |
| 18-Apr-2013 | SL-533-SA7-SB-0.0-0.5 | 7028429 | N | METHOD | 7471B | III |
| 18-Apr-2013 | SL-530-SA7-SB-0.0-0.5 | 7028430 | N | 3050B | 6010C | III |
| 18-Apr-2013 | SL-530-SA7-SB-0.0-0.5 | 7028430 | N | 3050B | 6020A | III |
| 18-Apr-2013 | SL-530-SA7-SB-0.0-0.5 | 7028430 | N | 3546 | 8015M | III |
| 18-Apr-2013 | SL-530-SA7-SB-0.0-0.5 | 7028430 | N | 3546 | 8082A | III |
| 18-Apr-2013 | SL-530-SA7-SB-0.0-0.5 | 7028430 | N | 3546 | 8270D SIM | III |

*III = EPA Level 3 Data Review* *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
*IV = EPA Level 4 Data Validation* *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

# Sample Cross Reference

| Date Collected | Field Sample ID | Lab Sample ID | Sample Type | Prep Method | Analytical Method | Review Level |
|---|---|---|---|---|---|---|
| 18-Apr-2013 | SL-530-SA7-SB-0.0-0.5 | 7028430 | N | METHOD | 1613B | III |
| 18-Apr-2013 | SL-530-SA7-SB-0.0-0.5 | 7028430 | N | METHOD | 7471B | III |
| 18-Apr-2013 | EB-041813 | 7028431 | EB | 3005A | 6010C | III |
| 18-Apr-2013 | EB-041813 | 7028431 | EB | 3510C | 8015M | III |
| 18-Apr-2013 | EB-041813 | 7028431 | EB | 3510C | 8081B | III |
| 18-Apr-2013 | EB-041813 | 7028431 | EB | 3510C | 8082A | III |
| 18-Apr-2013 | EB-041813 | 7028431 | EB | 3510C | 8270D SIM | III |
| 18-Apr-2013 | EB-041813 | 7028431 | EB | 5030B | 8015M | III |
| 18-Apr-2013 | EB-041813 | 7028431 | EB | M3010A | 6020A | III |
| 18-Apr-2013 | EB-041813 | 7028431 | EB | METHOD | 1613B | III |
| 18-Apr-2013 | EB-041813 | 7028431 | EB | METHOD | 7470A | III |

*III = EPA Level 3 Data Review*
*IV = EPA Level 4 Data Validation*
*N = Normal Sample*
*FD = Field Duplicate*
*TB = Trip Blank*
*FB = Field Blank*
*MS = Matrix Spike*
*MSD = Matrix Spike Duplicate*

# Attachment II

# Overall Data Qualification Summary

# Data Qualifier Summary

**Lab Reporting Batch ID: PH034** **Laboratory: LL**

**EDD Filename: PrepPH034** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: AQ**

*Sample ID:* EB-041813 *Collected:* 4/18/2013 3:00:00 *Analysis Type:* RES/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| MOLYBDENUM | 0.0036 | J | 0.0029 | MDL | 0.0200 | PQL | mg/L | U | B |

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

*Sample ID:* SL-530-SA7-SB-0.0-0.5 *Collected:* 4/18/2013 2:10:00 *Analysis Type:* REA/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 4.04 | U | 0.505 | MDL | 4.04 | PQL | mg/Kg | UJ | Q |
| BERYLLIUM | 0.395 | J | 0.0676 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| BORON | 3.08 | J | 0.838 | MDL | 10.1 | PQL | mg/Kg | U | B |
| CADMIUM | 0.194 | J | 0.0333 | MDL | 1.01 | PQL | mg/Kg | J | Z |
| LEAD | 25.2 | | 0.475 | MDL | 3.03 | PQL | mg/Kg | J | E, Q, E |
| POTASSIUM | 3640 | | 13.6 | MDL | 101 | PQL | mg/Kg | J | Q |
| SODIUM | 57.4 | J | 16.9 | MDL | 101 | PQL | mg/Kg | J | Z |
| TIN | 2.98 | J | 0.222 | MDL | 10.1 | PQL | mg/Kg | U | B |
| Zirconium | 1.59 | J | 0.838 | MDL | 5.05 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-531-SA7-SB-0.0-0.5 *Collected:* 4/18/2013 8:55:00 *Analysis Type:* REA/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 3.97 | U | 0.496 | MDL | 3.97 | PQL | mg/Kg | UJ | Q |
| ARSENIC | 3.82 | J | 0.328 | MDL | 3.97 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.463 | J | 0.0665 | MDL | 0.993 | PQL | mg/Kg | J | Z |
| BORON | 2.91 | J | 0.824 | MDL | 9.93 | PQL | mg/Kg | U | B |
| CADMIUM | 0.139 | J | 0.0328 | MDL | 0.993 | PQL | mg/Kg | J | Z |
| LEAD | 7.89 | | 0.467 | MDL | 2.98 | PQL | mg/Kg | J | E, Q, E |
| POTASSIUM | 4180 | | 13.4 | MDL | 99.3 | PQL | mg/Kg | J | Q |
| SODIUM | 56.5 | J | 16.6 | MDL | 99.3 | PQL | mg/Kg | J | Z |
| TIN | 2.97 | J | 0.218 | MDL | 9.93 | PQL | mg/Kg | U | B |
| Zirconium | 1.97 | J | 0.824 | MDL | 4.96 | PQL | mg/Kg | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**

# Data Qualifier Summary

**Lab Reporting Batch ID: PH034** **Laboratory: LL**

**EDD Filename: PrepPH034** **eQAPP Name: CDM_SSFL_130621_Lan**

**Method Category: METALS**

**Method: 6010C** **Matrix: SO**

*Sample ID:* SL-532-SA7-SB-0.0-0.5 *Collected:* 4/18/2013 9:45:00 *Analysis Type:* REA/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 3.99 | U | 0.499 | MDL | 3.99 | PQL | mg/Kg | UJ | Q |
| ARSENIC | 3.93 | J | 0.329 | MDL | 3.99 | PQL | mg/Kg | J | Z |
| BERYLLIUM | 0.382 | J | 0.0669 | MDL | 0.998 | PQL | mg/Kg | J | Z |
| BORON | 1.98 | J | 0.829 | MDL | 9.98 | PQL | mg/Kg | U | B |
| CADMIUM | 0.106 | J | 0.0329 | MDL | 0.998 | PQL | mg/Kg | J | Z |
| LEAD | 5.40 | | 0.469 | MDL | 3.00 | PQL | mg/Kg | J | E, Q, E |
| POTASSIUM | 3290 | | 13.5 | MDL | 99.8 | PQL | mg/Kg | J | Q |
| SODIUM | 53.0 | J | 16.7 | MDL | 99.8 | PQL | mg/Kg | J | Z |
| TIN | 3.04 | J | 0.220 | MDL | 9.98 | PQL | mg/Kg | U | B |
| Zirconium | 1.58 | J | 0.829 | MDL | 4.99 | PQL | mg/Kg | J | Z |

*Sample ID:* SL-533-SA7-SB-0.0-0.5 *Collected:* 4/18/2013 11:25:00 *Analysis Type:* REA/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| ANTIMONY | 0.770 | J | 0.499 | MDL | 3.99 | PQL | mg/Kg | J | Z, Q |
| BERYLLIUM | 0.669 | J | 0.0668 | MDL | 0.997 | PQL | mg/Kg | J | Z |
| BORON | 2.64 | J | 0.828 | MDL | 9.97 | PQL | mg/Kg | U | B |
| CADMIUM | 0.0439 | J | 0.0329 | MDL | 0.997 | PQL | mg/Kg | J | Z |
| LEAD | 10.2 | | 0.469 | MDL | 2.99 | PQL | mg/Kg | J | E, Q, E |
| MOLYBDENUM | 0.423 | J | 0.170 | MDL | 1.99 | PQL | mg/Kg | U | F, F |
| POTASSIUM | 3860 | | 13.5 | MDL | 99.7 | PQL | mg/Kg | J | Q |
| SODIUM | 63.6 | J | 16.7 | MDL | 99.7 | PQL | mg/Kg | J | Z |
| TIN | 3.36 | J | 0.219 | MDL | 9.97 | PQL | mg/Kg | U | B |
| Zirconium | 3.18 | J | 0.828 | MDL | 4.99 | PQL | mg/Kg | J | Z |

**Method Category: METALS**

**Method: 6020A** **Matrix: AQ**

*Sample ID:* EB-041813 *Collected:* 4/18/2013 3:00:00 *Analysis Type:* REA2/TOT *Dilution:* 1

| Analyte | Lab Result | Lab Qual | DL | DL Type | RL | RL Type | Units | Data Review Qual | Reason Code |
|---|---|---|---|---|---|---|---|---|---|
| STRONTIUM | 0.00028 | J | 0.00022 | MDL | 0.0020 | PQL | mg/L | J | Z |

* denotes a non-reportable result

**Project Name and Number: 1204-002-001-AL - SSFL Area IV Phase 3 Subarea 7**