



# DATA VALIDATION REPORT

Boeing SSFL RFI Group 8 Data Gap

SAMPLE DELIVERY GROUP: IQB2449

Prepared by

MEC<sup>X</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## I. INTRODUCTION

Task Order Title: Boeing SSFL RFI Group 8 Data Gap  
Contract Task Order: 1261.500D.08.001  
Sample Delivery Group: IQB2449  
Project Manager: Dixie Hambrick  
Matrix: soil  
QC Level: V  
No. of Samples: 2  
No. of Reanalyses/Dilutions: 0  
Laboratory: Test America

**Table 1. Sample Identification**

Sample Name	Lab Sample Name	Sub-Lab Sample Name	Matrix	Collection	Method
BLBS0030D01	IQB2449-01	N/A	Soil	2/21/2007 1:59:00 PM	7199, 9045C
BLBS0030S01	IQB2449-02	N/A	Soil	2/21/2007 1:59:00 PM	7199, 9045C

## II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the samples were couriered directly from the field to the laboratory, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

**Data Qualifier Reference Table**

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

**Qualification Code Reference Table**

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 or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present. Not applicable.	
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.



**Qualification Code Reference Table Cont.**

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.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

### III. Method Analyses

#### A. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks

Date Reviewed: March 31, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Methods 7199 and 9045C*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: Analytical holding times, 24 hours from preparation for pH and 24 hours from preparation for hexavalent chromium, were met.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Hexavalent chromium was detected in a CCB at 0.45 µg/L; therefore, hexavalent chromium detected in BLBS0030D01 was qualified as estimated, "UJ."
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: Laboratory duplicate analyses were performed for pH on BLBS0030D01 and the RPD was within the laboratory-established control limit of ≤5%.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on BLBS0030D01. Recoveries and RPDs were within laboratory-established QC limits.
- Sample Result Verification: Review is not applicable at a Level V validation. Reported nondetects are valid to the reporting limit.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Hexavalent chromium was not detected in either field blank BLQW0018F01 (IQB1202) or equipment rinsate (IBQ1486).
  - Field Duplicates: The samples in this SDG were identified as field duplicates. Hexavalent chromium was detected in the primary sample but was qualified as an estimated nondetect in the duplicate due to CCB contamination. The RPD for pH was ≤100.

MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB2449

Sampled: 02/21/07  
Received: 02/22/07

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB2449-01 (BLBS0030D01 - Soil)									
Reporting Units: %									
* Percent Solids	EPA 160.3 MOD	7C02139	0.10	0.10	93	1	03/02/07	03/05/07	
Sample ID: IQB2449-02 (BLBS0030S01 - Soil)									
Reporting Units: %									
* Percent Solids	EPA 160.3 MOD	7C02139	0.10	0.10	80	1	03/02/07	03/05/07	
Sample ID: IQB2449-01 (BLBS0030D01 - Soil)									
Reporting Units: mg/kg dry									
Chromium VI UJ/B	EPA 7199	7C03038	0.022	0.22	<u>0.12</u>	1	03/03/07	03/03/07	J
Sample ID: IQB2449-02 (BLBS0030S01 - Soil)									
Reporting Units: mg/kg dry									
Chromium VI	EPA 7199	7C03038	0.025	0.25	0.30	1	03/03/07	03/03/07	
Sample ID: IQB2449-01 (BLBS0030D01 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B23117	0.00	NA	9.51	1	02/23/07	02/23/07	
Sample ID: IQB2449-02 (BLBS0030S01 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B23117	0.00	NA	8.98	1	02/23/07	02/23/07	

TestAmerica - Irvine, CA  
Michele Chamberlin  
Project Manager

LEVEL V

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IQB2449 <Page 2 of 6>



# DATA VALIDATION REPORT

Boeing SSFL RFI Group 8 Data Gap

SAMPLE DELIVERY GROUP: IQB1507

Prepared by

MEC^X, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## I. INTRODUCTION

Task Order Title: Boeing SSFL RFI Group 8 Data Gap  
Contract Task Order: 1261.500D.08.001  
Sample Delivery Group: IQB1507  
Project Manager: Dixie Hambrick  
Matrix: Soil  
QC Level: V  
No. of Samples: 4  
No. of Reanalyses/Dilutions: 0  
Laboratory: Test America

**Table 1. Sample Identification**

Sample Name	Lab Sample Name	Sub-Lab Sample name	Matrix Type	Collection Date	Method
BLBS0035S01	IQB1507-01	N/A	Soil	13-Feb-07	6010B, 6020, 7471A, 9045C
BLBS0033S01	IQB1507-02	N/A	Soil	13-Feb-07	6010B, 6020, 7471A, 9045C
BLBS0034S01	IQB1507-03	N/A	Soil	13-Feb-07	8270C SIM
BLBS0034S02	IQB1507-04	N/A	Soil	13-Feb-07	8270C SIM

## II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C  $\pm$ 2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the samples were couriered directly from the field to the laboratory, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

**Data Qualifier Reference Table**

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

**Qualification Code Reference Table**

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 or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present. Not applicable.	
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

**Qualification Code Reference Table Cont.**

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.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.



### III. Method Analyses

#### A. EPA METHODS 6010B, 6020, 7470A/7471A—Metals and Mercury

Reviewed By: P. Meeks

Date Reviewed: 3/28/07

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 6010B, 6020, 7470A/7471A*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.
- Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks had no applicable detects. Boron was detected in a CCB at 10.5 µg/L; therefore boron detected in both samples was qualified as estimated, "UJ."
- Interference Check Samples: Review is not applicable at a Level V validation.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed.
- Serial Dilution: No serial dilution analyses were performed.
- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. All CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.
- Sample Result Verification: Review is not applicable at a Level V validation. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: There were no detects in the field blank BLQW0018F01 (IQB1202) or the equipment rinsate BLQW0018E01 (IQB1486). It should be noted that the equipment rinsate was not analyzed for the 6010B analytes.
- Field Duplicates: There were no field duplicate samples identified for this SDG.

## **B. EPA METHOD 8270C SIM—Polynuclear Aromatic Hydrocarbons (PAHs)**

Reviewed By: L. Calvin

Date Reviewed: March 28, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 8270C*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and analyzed within 40 days of extraction.
- GC/MS Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries and RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the samples of this SDG.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Field blank BLQW0018F01 and equipment rinsate BLQW0018E01 had detects between the MDL and the reporting limit for naphthalene at 0.13 µg/L and 0.098 µg/L, respectively. Naphthalene detects below the reporting limits in associated site samples BLBS0034S01 and BLBS0034S02 were qualified as estimated, "J."
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

- Internal Standards Performance: Review is not applicable at a Level V validation.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for PAH compounds and added phthalates.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Results reported between the MDL and the reporting limit were qualified as estimated, "J." Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.
- System Performance: Review is not applicable at a Level V validation.

### C. EPA METHOD 9045C—General Minerals

Reviewed By: P. Meeks

Date Reviewed: 3/28/07

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Method 9045C*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: the analytical holding time, 24 hours from preparation for pH, was met.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Not applicable to this analysis.
- Blank Spikes and Laboratory Control Samples: Not applicable to this analysis.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: Not applicable to this analysis.
- Sample Result Verification: Review is not applicable at a Level V validation.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Not applicable to this analysis.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

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9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1507

Sampled: 02/13/07  
Received: 02/14/07

## METALS

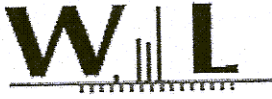
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1507-01 (BLBS0035S01 - Soil)									
Reporting Units: mg/kg dry									
Aluminum	EPA 6010B	7B15107	5.9	12	9500	1	02/15/07	02/15/07	
Antimony	EPA 6020	7B15106	0.035	1.2	0.15	1	02/15/07	02/15/07	J
Arsenic	EPA 6020	7B15106	0.29	0.59	3.2	1	02/15/07	02/15/07	
Barium	EPA 6020	7B15106	0.094	0.59	55	1	02/15/07	02/15/07	
Beryllium	EPA 6020	7B15106	0.047	0.35	0.47	1	02/15/07	02/15/07	
Boron <i>UT/B</i>	EPA 6010B	7B15107	1.2	5.9	3.7	1	02/15/07	02/15/07	J
Cadmium	EPA 6020	7B15106	0.029	0.59	0.12	1	02/15/07	02/15/07	J
Chromium	EPA 6020	7B15106	0.41	1.2	13	1	02/15/07	02/15/07	
Cobalt	EPA 6020	7B15106	0.094	0.59	5.6	1	02/15/07	02/15/07	
Copper	EPA 6020	7B15106	0.24	1.2	6.6	1	02/15/07	02/15/07	
Lead	EPA 6020	7B15106	0.059	0.59	6.8	1	02/15/07	02/15/07	
Lithium	EPA 6010B	7B15107	4.5	7.4	20	1	02/15/07	02/15/07	
Molybdenum	EPA 6020	7B15106	0.12	1.2	0.31	1	02/15/07	02/15/07	J
Nickel	EPA 6020	7B15106	0.53	1.2	8.4	1	02/15/07	02/15/07	
Potassium	EPA 6010B	7B15107	22	59	2500	1	02/15/07	02/15/07	
Selenium	EPA 6020	7B15106	0.24	1.2	0.39	1	02/15/07	02/15/07	J
Silver U	EPA 6020	7B15106	0.059	0.59	ND	1	02/15/07	02/15/07	
Sodium	EPA 6010B	7B15107	28	59	76	1	02/15/07	02/15/07	
Thallium	EPA 6020	7B15106	0.12	0.59	0.23	1	02/15/07	02/15/07	J
Vanadium	EPA 6020	7B15106	0.47	1.2	27	1	02/15/07	02/15/07	
Zinc	EPA 6020	7B15106	1.5	12	36	1	02/15/07	02/15/07	
Zirconium U	EPA 6010B	7B16119	1.8	29	ND	1	02/16/07	02/16/07	

TestAmerica - Irvine, CA  
Nicholas Marz For Michele Chamberlin  
Project Manager

LEVEL V

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IQB1507 <Page 2 of 12>



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Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
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Report ID: 7021615  
Project ID: IQB1507

Date Received: 02/16/07 11:18  
Date Reported: 03/02/07 16:55

BLBS0035501  
IQB1507-01 7021615-01 (Soil)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
% Solids *	85.1	% by Weight	0.100	1	Gravimetric	W7B0880	02/22/07	02/28/07	dj

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Total	0.016	0.00076	mg/kg dry	0.012	1	EPA 7471A	W7B0833	02/21/07	02/22/07	jl

\*Analysis not validated

LEVEL V

MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1507

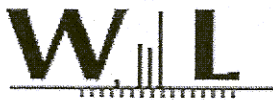
Sampled: 02/13/07  
Received: 02/14/07

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1507-02 (BLBS0033S01 - Soil)									
Reporting Units: mg/kg dry									
Aluminum	EPA 6010B	7B15107	6.0	12	9500	0.995	02/15/07	02/15/07	
Antimony	EPA 6020	7B15106	0.036	1.2	0.12	0.995	02/15/07	02/16/07	J
Arsenic	EPA 6020	7B15106	0.30	0.60	2.7	0.995	02/15/07	02/16/07	
Barium	EPA 6020	7B15106	0.095	0.60	69	0.995	02/15/07	02/16/07	
Beryllium	EPA 6020	7B15106	0.048	0.36	0.39	0.995	02/15/07	02/16/07	
Boron <i>UT/B</i>	EPA 6010B	7B15107	1.2	6.0	4.4	0.995	02/15/07	02/15/07	J
Cadmium	EPA 6020	7B15106	0.030	0.60	0.19	0.995	02/15/07	02/16/07	J
Chromium	EPA 6020	7B15106	0.42	1.2	13	0.995	02/15/07	02/16/07	
Cobalt	EPA 6020	7B15106	0.095	0.60	4.9	0.995	02/15/07	02/16/07	
Copper	EPA 6020	7B15106	0.24	1.2	8.3	0.995	02/15/07	02/16/07	
Lead	EPA 6020	7B15106	0.060	0.60	8.3	0.995	02/15/07	02/16/07	
Lithium	EPA 6010B	7B15107	4.5	7.5	17	0.995	02/15/07	02/15/07	
Molybdenum	EPA 6020	7B15106	0.12	1.2	0.38	0.995	02/15/07	02/16/07	J
Nickel	EPA 6020	7B15106	0.54	1.2	8.6	0.995	02/15/07	02/16/07	
Potassium	EPA 6010B	7B15107	23	60	2400	0.995	02/15/07	02/15/07	
Selenium	EPA 6020	7B15106	0.24	1.2	0.25	0.995	02/15/07	02/16/07	J
Silver <i>U</i>	EPA 6020	7B15106	0.060	0.60	ND	0.995	02/15/07	02/16/07	
Sodium	EPA 6010B	7B15107	29	60	190	0.995	02/15/07	02/15/07	
Thallium	EPA 6020	7B15106	0.12	0.60	0.17	0.995	02/15/07	02/16/07	J
Vanadium	EPA 6020	7B15106	0.48	1.2	30	0.995	02/15/07	02/16/07	
Zinc	EPA 6020	7B15106	1.5	12	64	0.995	02/15/07	02/16/07	
Zirconium <i>U</i>	EPA 6010B	7B16119	1.8	30	ND	1	02/16/07	02/16/07	

TestAmerica - Irvine, CA  
Nicholas Marz For Michele Chamberlin  
Project Manager

LEVEL V



Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7021615  
Project ID: IQB1507

Date Received: 02/16/07 11:18  
Date Reported: 03/02/07 16:55

BLBS0033501

IQB1507-02 7021615-02 (Soil)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
% Solids <del>✓</del>	83.5	% by Weight	0.100	1	Gravimetric	W7B0830	02/22/07	02/28/07	dj

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Total	0.036	0.00078	mg/kg dry	0.012	1	EPA 7471A	W7B0833	02/21/07	02/22/07	jl

\* Analysis not validated

LEVEL V



## Analytical Report



TestAmerica  
 17461 Derian Avenue, Suite 100  
 Irvine, CA 92614-5845

Date Received: 02/16/07  
 Work Order No: 07-02-1062  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM  
 Units: mg/kg

Project: IQB1507

Page 1 of 2

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
IQB1507-03	07-02-1062-2	02/13/07	Solid	GC/MS N	02/19/07	02/22/07	070219L05

BLBS0034501

Comment(s): Results are reported on a dry weight basis.

-Results were evaluated to the MDL, concentrations &gt;= to the MDL but &lt; RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1-Methylnaphthalene	ND	0.035	0.0031	1.74		Chrysene	ND	0.035	0.0036	1.74	
2-Methylnaphthalene	ND	0.035	0.0030	1.74		Di-n-Butyl Phthalate	0.27	0.035	0.0037	1.74	
Acenaphthene	ND	0.035	0.0032	1.74		Dibenz (a,h) Anthracene	ND	0.035	0.0034	1.74	
Acenaphthylene	ND	0.035	0.0029	1.74		Diethyl Phthalate	0.017	0.035	0.0035	1.74	J
Anthracene	ND	0.035	0.0031	1.74		Fluoranthene	ND	0.035	0.0033	1.74	
Benzo (a) Anthracene	ND	0.035	0.0037	1.74		Fluorene	ND	0.035	0.0030	1.74	
Benzo (a) Pyrene	ND	0.035	0.0030	1.74		Indeno (1,2,3-c,d) Pyrene	ND	0.035	0.0031	1.74	
Benzo (b) Fluoranthene	ND	0.035	0.0031	1.74		N-Nitrosodimethylamine	ND	0.035	0.0034	1.74	
Benzo (g,h,i) Perylene	ND	0.035	0.0032	1.74		Naphthalene	0.022	0.035	0.0032	1.74	J
Benzo (k) Fluoranthene	ND	0.035	0.0044	1.74		Phenanthrene	0.013	0.035	0.0033	1.74	J
Bis(2-Ethylhexyl) Phthalate	0.028	0.035	0.0054	1.74	J	Pyrene	ND	0.035	0.0044	1.74	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
2,4,6-Tribromophenol	94	32-143				2-Fluorobiphenyl	92	14-146			
2-Fluorophenol	91	15-138				Nitrobenzene-d5	115	18-162			
p-Terphenyl-d14	102	34-148				Phenol-d6	91	17-141			

IQB1507-04	07-02-1062-3	02/13/07	Solid	GC/MS N	02/19/07	02/22/07	070219L05
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BLBS0034502

Comment(s): Results are reported on a dry weight basis.

-Results were evaluated to the MDL, concentrations &gt;= to the MDL but &lt; RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1-Methylnaphthalene	ND	0.027	0.0024	1.35		Chrysene	ND	0.027	0.0028	1.35	
2-Methylnaphthalene	ND	0.027	0.0024	1.35		Di-n-Butyl Phthalate	0.21	0.027	0.0028	1.35	
Acenaphthene	ND	0.027	0.0025	1.35		Dibenz (a,h) Anthracene	ND	0.027	0.0026	1.35	
Acenaphthylene	ND	0.027	0.0022	1.35		Diethyl Phthalate	0.014	0.027	0.0027	1.35	J
Anthracene	ND	0.027	0.0024	1.35		Fluoranthene	ND	0.027	0.0026	1.35	
Benzo (a) Anthracene	ND	0.027	0.0029	1.35		Fluorene	ND	0.027	0.0024	1.35	
Benzo (a) Pyrene	ND	0.027	0.0024	1.35		Indeno (1,2,3-c,d) Pyrene	ND	0.027	0.0024	1.35	
Benzo (b) Fluoranthene	ND	0.027	0.0024	1.35		N-Nitrosodimethylamine	ND	0.027	0.0026	1.35	
Benzo (g,h,i) Perylene	ND	0.027	0.0025	1.35		Naphthalene	0.0089	0.027	0.0025	1.35	J
Benzo (k) Fluoranthene	ND	0.027	0.0034	1.35		Phenanthrene	0.010	0.027	0.0026	1.35	J
Bis(2-Ethylhexyl) Phthalate	0.032	0.027	0.0042	1.35		Pyrene	ND	0.027	0.0034	1.35	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
2,4,6-Tribromophenol	99	32-143				2-Fluorobiphenyl	96	14-146			
2-Fluorophenol	96	15-138				Nitrobenzene-d5	119	18-162			
p-Terphenyl-d14	106	34-148				Phenol-d6	93	17-141			

Level II

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1507

Sampled: 02/13/07  
Received: 02/14/07

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1507-01 (BLBS0035S01 - Soil)									
Reporting Units: %									
* Percent Solids	EPA 160.3 MOD	7B16117	0.10	0.10	85	1	02/16/07	02/19/07	
Sample ID: IQB1507-02 (BLBS0033S01 - Soil)									
Reporting Units: %									
* Percent Solids	EPA 160.3 MOD	7B16117	0.10	0.10	84	1	02/16/07	02/19/07	
Sample ID: IQB1507-01 (BLBS0035S01 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B15099	0.00	NA	6.57	1	02/15/07	02/15/07	
Sample ID: IQB1507-02 (BLBS0033S01 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B15099	0.00	NA	7.37	1	02/15/07	02/15/07	

\* Analysis not validated

TestAmerica - Irvine, CA  
Nicholas Marz For Michele Chamberlin  
Project Manager

LEVEL V

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IQB1507 <Page 4 of 12>



# DATA VALIDATION REPORT

Boeing SSFL RFI Group 8 Data Gap

SAMPLE DELIVERY GROUP: IQB1505

Prepared by

MEC^X, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## I. INTRODUCTION

Task Order Title: Boeing SSFL RFI Group 8 Data Gap  
Contract Task Order: 1261.500D.08.001  
Sample Delivery Group: IQB1505  
Project Manager: Dixie Hambrick  
Matrix: Soil  
QC Level: V  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Laboratory: Test America

**Table 1. Sample Identification**

Sample Name	Lab Sample Name	Sub-Lab Sample name	Matrix Type	Collection Date	Method
BHBS0005S01	IQB1505-01	N/A	Soil	13-Feb-07	1613B, 6010B, 6020, 7471A, 9045C

## II. Sample Management

No anomalies were observed regarding sample management. The sample in this SDG was received at the laboratory within the temperature limits of 4°C  $\pm$ 2°C. According to the case narrative for this SDG, the sample was received intact, on ice, and properly preserved, if applicable. The COC was appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered directly from the field to the laboratory, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

**Data Qualifier Reference Table**

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

**Qualification Code Reference Table**

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 or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present. Not applicable.	
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

**Qualification Code Reference Table Cont.**

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.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: K. Shadowlight

Date Reviewed: March 26, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review (8/02)*.

- Holding Times: Extraction and analytical holding times were met. The soil sample was extracted and analyzed within one year of collection.
- Instrument Performance: Review is not applicable at a level V validation.
- Calibration: Review is not applicable at a level V validation.
- Blanks: The method blank had detects for OCDD, 2,3,4,7,8-PeCDF, and total PeCDFs above the EDL. Target compound 2,3,4,7,8-PeCDF was reported in the site sample at a concentration less than five times the concentration of the method blank; therefore, the result was qualified as an estimated nondetect, "UJ," at the level of interference. As a portion of total PeCDFs included 2,3,4,7,8-PeCDF the result was qualified as estimated, "J," due to method blank contamination.
- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were several detects in the field blank, BLQW0018F01 (IQB1202), and equipment rinsate, BLQW0018E01 (IQB1486). The results for 2,3,7,8-TCDF and 1,2,3,7,8-PeCDF were qualified as estimated, "J," in the site sample.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: Internal standard recoveries are not routinely evaluated at a Level V validation; however, the recoveries were reported on the sample result summaries. The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Review is not applicable at a level V validation. The laboratory

analyzed for polychlorinated dioxins/furans by EPA Method 1613. A confirmation analysis was not performed for the 2,3,7,8-TCDF detect reported in the site sample; therefore, the result for 2,3,7,8-TCDF was qualified as estimated, "J."

- Compound Quantification and Reported Detection Limits: Review is not applicable at a level V validation. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J." Reported nondetects are valid to the estimated detection limit (EDL).

## **B. EPA METHODS 6010B, 6020, 7470A/7471A—Metals and Mercury**

Reviewed By: Patti Meeks

Date Reviewed: 3/26/07

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 6010B, 6020, 7470A/7471A*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.
- Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks and CCBs had no applicable detects.
- Interference Check Samples: Not applicable.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed.
- Serial Dilution: No serial dilution analyses were performed.
- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. All CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.



- Sample Result Verification: Review is not applicable at a Level V validation. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were no detects in the field blank, BLQW0018F01 (IQB1202), or the equipment rinsate, BLQW0018E01 (IQB1486).
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

### C. EPA METHOD 9045C—General Minerals

Reviewed By: Patti Meeks

Date Reviewed: 3/26/07

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Method 9045C*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The analytical holding times, 24 hours from preparation for pH, was met.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Not applicable to this analysis.
- Blank Spikes and Laboratory Control Samples: Not applicable to this analysis.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: Not applicable to this analysis.
- Sample Result Verification: Review is not applicable at a Level V validation.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Not applicable to this analysis.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

Method 1613

IQB1505-01 BHBS0005501

Test America

Analytical Data Summary Sheet

Analyte	Amount (pg/g)	EDL (pg/g)	Adj. RL (pg/g)	RT (min.)	Ratio	Qualifier
2,3,7,8-TCDD	ND	0.148	0.914			
1,2,3,7,8-PeCDD	0.397	0.161	4.57	34:03	1.34	A
1,2,3,4,7,8-HxCDD	0.634	0.495	4.57	36:36	1.29	A
1,2,3,6,7,8-HxCDD	2.73	0.546	4.57	36:42	1.38	A
1,2,3,7,8,9-HxCDD	2.03	0.516	4.57	36:56	1.28	A
1,2,3,4,6,7,8-HpCDD	131	0.299	4.57	39:58	1.05	
OCDD	1890	0.319	9.14	44:09	0.89	
2,3,7,8-TCDF	0.384	0.154	0.914	30:26	0.82	A
1,2,3,7,8-PeCDF	0.190	0.153	4.57	33:14	1.59	A
2,3,4,7,8-PeCDF	0.386	0.154	4.57	33:51	1.67	A
1,2,3,4,7,8-HxCDF	0.375	0.250	4.57	35:54	1.32	A
1,2,3,6,7,8-HxCDF	0.375	0.240	4.57	36:00	1.13	A
2,3,4,6,7,8-HxCDF	0.424	0.250	4.57	36:29	1.14	A
1,2,3,7,8,9-HxCDF	ND	0.315	4.57			
1,2,3,4,6,7,8-HpCDF	5.06	0.232	4.57	38:43	1.08	
1,2,3,4,7,8,9-HpCDF	0.488	0.348	4.57	40:37	0.98	A
OCDF	14.1	0.233	9.14	44:26	0.88	
Total TCDDs	ND	0.148	0.914			A
Total PeCDDs	3.31	0.161	4.57			
Total HxCDDs	24.8	0.519	4.57			
Total HpCDDs	257	0.299	4.57			
Total TCDFs	1.72	0.154	0.914			
Total PeCDFs	4.61	0.153	4.57			
Total HxCDFs	6.73	0.262	4.57			
Total HpCDFs	18.2	0.284	4.57			
ITEF TEQ (ND=0)	4.37					
ITEF TEQ (ND=1/2)	4.46					

Client Information

Project Name: IQB1505

Sample ID: IQB1505-01

Sample Information

Report Basis: Dry Weight

Matrix: Soil

Weight / Volume: 13.35 Grams

Solids / Lipids: 81.9 %

Original pH : NA

Batch ID: WG14123

Laboratory Information

Project ID: G579-224

Sample ID: G579-224-1B

Collection Date/Time: 13-Feb-07 14:30

Receipt Date: 16-Feb-07 11:55

Extraction Date: 19-Feb-07

Analysis Date: 22-Feb-07 22:49

Filename: a22feb07a-9

Retchk: a22feb07a-1

Begin ConCal: a22feb07a-1

Initial Cal: m1613-071006e

Level I

PM 2/28/07

MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1505

Sampled: 02/13/07  
Received: 02/14/07

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1505-01 (BHBS0005S01 - Soil)									
Reporting Units: mg/kg dry									
Aluminum	EPA 6010B	7B15107	6.2	12	15000	1	02/15/07	02/15/07	
Antimony	EPA 6020	7B15106	0.037	1.2	0.41	1	02/15/07	02/15/07	J
Arsenic	EPA 6020	7B15106	0.31	0.62	2.5	1	02/15/07	02/15/07	
Barium	EPA 6020	7B15106	0.10	0.62	84	1	02/15/07	02/15/07	
Beryllium	EPA 6020	7B15106	0.050	0.37	0.51	1	02/15/07	02/15/07	
Boron	EPA 6010B	7B15107	1.2	6.2	4.8	1	02/15/07	02/15/07	J
Cadmium	EPA 6020	7B15106	0.031	0.62	0.25	1	02/15/07	02/15/07	J
Chromium	EPA 6020	7B15106	0.44	1.2	17	1	02/15/07	02/15/07	
Cobalt	EPA 6020	7B15106	0.10	0.62	5.3	1	02/15/07	02/15/07	
Copper	EPA 6020	7B15106	0.25	1.2	8.7	1	02/15/07	02/15/07	
Lead	EPA 6020	7B15106	0.062	0.62	9.3	1	02/15/07	02/15/07	
Lithium	EPA 6010B	7B15107	4.7	7.9	20	1	02/15/07	02/15/07	
Molybdenum	EPA 6020	7B15106	0.12	1.2	0.46	1	02/15/07	02/15/07	J
Nickel	EPA 6020	7B15106	0.56	1.2	10	1	02/15/07	02/15/07	
Potassium	EPA 6010B	7B15107	24	62	3200	1	02/15/07	02/15/07	
Selenium	EPA 6020	7B15106	0.25	1.2	0.35	1	02/15/07	02/15/07	J
Silver	EPA 6020	7B15106	0.062	0.62	0.067	1	02/15/07	02/15/07	J
Sodium	EPA 6010B	7B15107	30	62	68	1	02/15/07	02/15/07	
Thallium	EPA 6020	7B15106	0.12	0.62	0.27	1	02/15/07	02/15/07	J
Vanadium	EPA 6020	7B15106	0.50	1.2	30	1	02/15/07	02/15/07	
Zinc	EPA 6020	7B15106	1.6	12	77	1	02/15/07	02/15/07	
Zirconium	EPA 6010B	7B16119	1.9	31	ND	1	02/16/07	02/16/07	

TestAmerica - Irvine, CA  
Nicholas Marz For Michele Chamberlin  
Project Manager

LEVEL V

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IQB1505 <Page 2 of 11>



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Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7021613  
Project ID: IQB1505

Date Received: 02/16/07 11:18  
Date Reported: 03/02/07 16:56

BHBS0005S01  
IQB1505-01 7021613-01 (Soil)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
% Solids *	80.2	% by Weight	0.100	1	Gravimetric	W7B0880	02/22/07	02/28/07	dj

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Total	0.039	0.00081	mg/kg dry	0.012	1	EPA 7471A	W7B0833	02/21/07	02/22/07	jl

\*Analysis not validated

LEVEL V

MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1505

Sampled: 02/13/07  
Received: 02/14/07

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1505-01 (BHBS0005S01 - Soil) - cont.									
Reporting Units: %									
* Percent Solids	EPA 160.3 MOD	7B16117	0.10	0.10	80	1	02/16/07	02/19/07	
Sample ID: IQB1505-01 (BHBS0005S01 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B15099	N/A	NA	6.38	1	02/15/07	02/15/07	

\* Analysis not validated

TestAmerica - Irvine, CA  
Nicholas Marz For Michele Chamberlin  
Project Manager

LEVEL V



# DATA VALIDATION REPORT

Boeing SSFL RFI Group 8 Data Gap

SAMPLE DELIVERY GROUP: IQB1219

Prepared by

MEC^X, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## I. INTRODUCTION

Task Order Title: Boeing SSFL RFI Group 8 Data Gap  
Contract Task Order: 1261.500D.08.001  
Sample Delivery Group: IQB1219  
Project Manager: Dixie Hambrick  
Matrix: water  
QC Level: V  
No. of Samples: 8  
No. of Reanalyses/Dilutions: 0  
Laboratory: Test America

**Table 1. Sample Identification**

Sample Name	Lab Sample Name	Sub-Lab Sample name	Matrix Type	Collection Date	Method
BLBS0031S01	IQB1219-06	n/a	Soil	12-Feb-07	8270C SIM, 9045C
BLBS0032D01	IQB1219-07	D7B150320001	Soil	12-Feb-07	6010B, 6020, 7471A, 8082, 8330, 9045C
BLBS0032S01	IQB1219-08	D7B150320002	Soil	12-Feb-07	6010B, 6020, 7471A, 8082, 8330, 9045C
BLBS0036S01	IQB1219-04	n/a	Soil	12-Feb-07	6010B, 6020, 7471A, 8015B, 8082, 8270C SIM, 9045C
BLBS0036S02	IQB1219-05	n/a	Soil	12-Feb-07	9045C
BLBS0037S01	IQB1219-01	n/a	Soil	12-Feb-07	6010B, 6020, 7471A, 8015B, 8082, 8270C SIM, 9045C
BLBS0037S02	IQB1219-02	n/a	Soil	12-Feb-07	9045C
BLBS0038S01	IQB1219-03	n/a	Soil	12-Feb-07	6010B, 6020, 7471A, 8015B, 8082, 8270C SIM, 9045C

## II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were signed and dated by appropriate field and/or laboratory personnel. As the samples were couriered directly from the field to the laboratory, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

**Data Qualifier Reference Table**

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.



**Qualification Code Reference Table**

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 or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present. Not applicable.	
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

**Qualification Code Reference Table Cont.**

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.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

### III. Method Analyses

#### A. EPA Method 8330 - Energetics

Reviewed By: E. Wessling

Date Reviewed: March 27, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Explosives, Nitroaromatics, and Nitramines (DVP-16, Rev. 0)*, *EPA Method 8330*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank, JPP3F1AA, had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits for LCS JPP3F1AC.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample BLBS0032S01 from this SDG. All recoveries and RPDs were within the laboratory established QC limits with the exception of 4-amino-2,6-dinitrotoluene recovered below QC limits in the MS only. No qualification of the data was deemed necessary.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: The associated field blank, BLQW0018F01 (IQB1202), and the equipment rinsate, BLQW0018E01 (IQB1486), were free of target compound contamination.
  - Field Duplicates: The two samples in this SDG were field duplicate samples identified for this SDG. As neither sample contained target compound detects, the pair were considered to be in good agreement
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for energetic compounds by Method 8330.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a

Level V validation. The reporting limits (RLs) and/or method detection limits (MDLs) were not adjusted by the laboratory for the actual sample weights extracted. The RLs and/or MDLs were adjusted by the reviewer as necessary. Reported nondetects are valid to the reporting limit.

## **B. EPA METHODS 6010B, 6020, 7470A/7471A—Metals and Mercury**

Reviewed By: P. Meeks

Date Reviewed: 3/28/07

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 6010B, 6020, 7470A/7471A*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.
- Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks and CCBs had no applicable detects.
- Interference Check Samples: Boron was detected in the ICSA solution at 19.5 µg/L; therefore, boron detected in BLBS0037S01 and LBS0038S01 was qualified as estimated, "J."
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed.
- Serial Dilution: No serial dilution analyses were performed.
- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. All CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.
- Sample Result Verification: Review is not applicable at a Level V validation. Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were no detects in the field blank, BLQW0018F01 (IQB1202), or the equipment rinsate, BLQW0018E01 (IQB1486). It should be noted that the equipment rinsate was not analyzed for the 6010B analytes.
  - Field Duplicates: BLBS0032S01 and BLBS0032D01 were identified as field duplicates. Silver and zirconium were detected in the duplicate sample but were not detected in the primary sample. All other detects were in common and all RPDs were  $\leq 100\%$ .

### C. EPA METHOD 8270C SIM—Polynuclear Aromatic Hydrocarbons (PAHs)

Reviewed By: L. Calvin

Date Reviewed: March 28, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 8270C*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and analyzed within 40 days of extraction.
- GC/MS Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries and RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the samples of this SDG.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: Field blank BLQW0018F01 (IQB1202) and equipment rinsate BLQW0018E01 had detects between the MDL and the reporting limit for naphthalene at 0.13 µg/L and 0.098 µg/L, respectively. Naphthalene was not detected in the associated site samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: Review is not applicable at a Level V validation.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for PAH compounds and added phthalates.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Results reported between the MDL and the reporting limit were qualified as estimated, "J." Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.
- System Performance: Review is not applicable at a Level V validation.

#### **D. EPA Method 8082 – PCBs**

Reviewed By: L. Calvin

Date Reviewed: March 28, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 0)*, *EPA Method 8082*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the samples of this SDG.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Field blank BLQW0018F01 (IQB1202) and equipment rinsate FSQW0002E01 (IQB2570) had no reported target compound detects above the MDL.
  - Field Duplicates: Samples BLBS0032S01 and BLBS0032D01 had no target compound detects above the MDL. The reviewer noted the samples were analyzed at different dilutions, 1× and 2× dilutions, respectively.
- Compound Identification: Review is not applicable at a Level V validation.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. The laboratory analyzed samples BLBS0037S01, BLBS0038S01, and BLBS0032D01 at 2× dilutions due to sample matrix effect. Results reported between the MDL and the reporting limit were qualified as estimated, “J.” Reported nondetects are valid to the reporting limit.

#### **E. EPA METHOD 8015B—Extractable Total Fuel Hydrocarbons (EFHs)**

Reviewed By: Kristin Shadowlight

Date Reviewed: March 26, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Total Fuel Hydrocarbons (DVP-8, Rev. 0)*, *EPA Method 8015B*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recovery was within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed for the sample in this SDG.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were no target compound detects in the field blank, BLQW0018F01 (IQB1202), or the equipment rinsate, BLQW0018E01 (IQB1486).
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Compound Identification: Review is not applicable at a Level V validation. Four EFH hydrocarbon ranges were reported: C8-C11, C12-C14, C15-C20, and C21-C30.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. The samples in this SDG were each analyzed and reported at a 2× dilution. The MDL and reporting limits were appropriately adjusted for the dilution. Results reported between the MDL and the reporting limit were qualified as estimated, “J.” Reported nondetects are valid to the reporting limit.

## F. EPA METHOD 9045C—General Minerals

Reviewed By: P. Meeks  
Date Reviewed: 3/28/07

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Method 9045C*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The analytical holding time, 24 hours from preparation for pH, was met.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Not applicable to this analysis.
- Blank Spikes and Laboratory Control Samples: Not applicable to this analysis.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: Not applicable to this analysis.
- Sample Result Verification: Review is not applicable at a Level V validation.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based



on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: Not applicable to this analysis.
- Field Duplicates: BLBS0032S01 and BLBS0032D01 were identified as field duplicates. The RPD was  $\leq 100\%$ .

TestAmerica Analytical Testing Corp

Client Sample ID: IQB1219-07

34BS00321001

HPLC

Lot-Sample #...: D7B150320-001 Work Order #...: JPHN81AA Matrix.....: SOLID  
 Date Sampled...: 02/12/07 14:05 Date Received...: 02/15/07  
 Prep Date.....: 02/20/07 Analysis Date...: 02/23/07  
 Prep Batch #...: 7051331 Analysis Time...: 00:43  
 Dilution Factor: 1

Method.....: SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
4-Amino-2,6-dinitrotoluene	ND	0.24 0.25	mg/kg	0.039 0.038
2-Amino-4,6-dinitrotoluene	ND	0.24 0.25	mg/kg	0.046 0.044
1,3-Dinitrobenzene	ND	0.24 0.25	mg/kg	0.061 0.059
2,4-Dinitrotoluene	ND	0.24 0.25	mg/kg	0.050 0.048
2,6-Dinitrotoluene	ND	0.24 0.25	mg/kg	0.054 0.052
HMX	ND	0.24 0.25	mg/kg	0.078 0.075
Nitrobenzene	ND	0.24 0.25	mg/kg	0.061 0.059
Nitroglycerin	ND	4.8 5.0	mg/kg	1.7 1.6
4-Nitrotoluene	ND	0.39 0.40	mg/kg	0.11
2-Nitrotoluene	ND	0.24 0.25	mg/kg	0.084 0.081
3-Nitrotoluene	ND	0.24 0.25	mg/kg	0.042 0.041
PETN	ND	3.9 4.0	mg/kg	1.3
RDX	ND	0.24 0.25	mg/kg	0.085 0.082
Tetryl	ND	0.48 0.50	mg/kg	0.055 0.053
1,3,5-Trinitrobenzene	ND	0.24 0.25	mg/kg	0.071 0.069
2,4,6-Trinitrotoluene	ND	0.24 0.25	mg/kg	0.058 0.056
2,4-diamino-6-nitrotoluene	ND	0.97 1.0	mg/kg	0.10 0.097
2,6-diamino-4-nitrotoluene	ND	0.97 1.0	mg/kg	0.18 0.17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dinitrobenzene	99	(83 - 122)

Level IV

3/27/07

TestAmerica Analytical Testing Corp

Client Sample ID: IQB1219-08

BLBS0032501

HPLC

Lot-Sample #....: D7B150320-002 Work Order #....: JPHPC1AA  
 Date Sampled....: 02/12/07 14:05 Date Received...: 02/15/07  
 Prep Date.....: 02/20/07 Analysis Date...: 02/23/07  
 Prep Batch #....: 7051331 Analysis Time...: 01:19  
 Dilution Factor: 1

Matrix.....: SOLID

Method.....: SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
4-Amino-2,6-dinitrotoluene	ND	0.24 0.25	mg/kg	0.039 0.038
2-Amino-4,6-dinitrotoluene	ND	0.24 0.25	mg/kg	0.046 0.044
1,3-Dinitrobenzene	ND	0.24 0.25	mg/kg	0.061 0.059
2,4-Dinitrotoluene	ND	0.24 0.25	mg/kg	0.050 0.048
2,6-Dinitrotoluene	ND	0.24 0.25	mg/kg	0.054 0.052
HMX	ND	0.24 0.25	mg/kg	0.078 0.075
Nitrobenzene	ND	0.24 0.25	mg/kg	0.061 0.059
Nitroglycerin	ND	4.8 5.0	mg/kg	1.7 1.6
4-Nitrotoluene	ND	0.38 0.40	mg/kg	0.11 0.11
2-Nitrotoluene	ND	0.24 0.25	mg/kg	0.084 0.081
3-Nitrotoluene	ND	0.24 0.25	mg/kg	0.042 0.041
PETN	ND	3.8 4.0	mg/kg	1.3 1.2
RDX	ND	0.24 0.25	mg/kg	0.085 0.082
Tetryl	ND	0.43 0.50	mg/kg	0.055 0.053
1,3,5-Trinitrobenzene	ND	0.24 0.25	mg/kg	0.071 0.069
2,4,6-Trinitrotoluene	ND	0.24 0.25	mg/kg	0.058 0.056
2,4-diamino-6-nitrotoluene	ND	0.94 1.0	mg/kg	0.10 0.097
2,6-diamino-4-nitrotoluene	ND	0.94 1.0	mg/kg	0.18 0.17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dinitrobenzene	101	(83 - 122)

Level V

3/27/07

MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1219

Sampled: 02/12/07  
Received: 02/13/07

## METALS

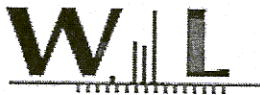
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1219-01 (BLBS0037S01 - Soil)									
Reporting Units: mg/kg dry									
Aluminum	EPA 6010B	7B14110	5.8	12	12000	1	02/14/07	02/15/07	
Antimony	EPA 6020	7B14108	0.035	1.2	0.13	1	02/14/07	02/15/07	J
Arsenic	EPA 6020	7B14108	0.29	0.58	2.0	1	02/14/07	02/15/07	
Barium	EPA 6020	7B14108	0.094	0.58	96	1	02/14/07	02/15/07	
Beryllium	EPA 6020	7B14108	0.047	0.35	0.40	1	02/14/07	02/15/07	
Boron JH	EPA 6010B	7B14110	1.2	5.8	4.6	1	02/14/07	02/15/07	J
Cadmium	EPA 6020	7B14108	0.029	0.58	0.23	1	02/14/07	02/15/07	J
Chromium	EPA 6020	7B14108	0.41	1.2	14	1	02/14/07	02/15/07	
Cobalt	EPA 6020	7B14108	0.094	0.58	4.7	1	02/14/07	02/15/07	
Copper	EPA 6020	7B14108	0.23	1.2	8.6	1	02/14/07	02/15/07	
Lead	EPA 6020	7B14108	0.058	0.58	12	1	02/14/07	02/15/07	
Lithium	EPA 6010B	7B14110	4.4	7.4	21	1	02/14/07	02/15/07	
Molybdenum	EPA 6020	7B14108	0.12	1.2	0.48	1	02/14/07	02/15/07	J
Nickel	EPA 6020	7B14108	0.53	1.2	9.1	1	02/14/07	02/15/07	
Potassium	EPA 6010B	7B14110	22	58	4000	1	02/14/07	02/15/07	
Selenium	EPA 6020	7B14108	0.23	1.2	0.28	1	02/14/07	02/15/07	J
Silver	EPA 6020	7B14108	0.058	0.58	0.062	1	02/14/07	02/15/07	J
Sodium	EPA 6010B	7B14110	28	58	61	1	02/14/07	02/15/07	
Thallium	EPA 6020	7B14108	0.12	0.58	0.25	1	02/14/07	02/15/07	J
Vanadium	EPA 6020	7B14108	0.47	1.2	22	1	02/14/07	02/15/07	
Zinc	EPA 6020	7B14108	1.5	12	47	1	02/14/07	02/15/07	B
Zirconium U	EPA 6010B	7B16119	1.8	29	ND	1	02/16/07	02/16/07	

TestAmerica - Irvine, CA  
Nicholas Marz For Michele Chamberlin  
Project Manager

LEVEL V

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IQB1219 <Page 5 of 22>



Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7021428  
Project ID: IQB1219

Date Received: 02/14/07 11:40  
Date Reported: 03/02/07 16:54

BLB50637501

IQB1219-01 7021428-01 (Solid)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
% Solids *	85.5	% by Weight	0.100	1	Gravimetric	W7B0880	02/22/07	02/28/07	dj

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Total	0.030	0.00076	mg/kg dry	0.012	1	EPA 7471A	W7B0623	02/15/07	02/22/07	jl

\* Analysis not validated

LEVEL V

MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1219

Sampled: 02/12/07  
Received: 02/13/07

## METALS

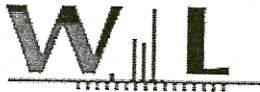
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1219-03 (BLBS0038S01 - Soil)									
Reporting Units: mg/kg dry									
Aluminum	EPA 6010B	7B14110	5.7	11	13000	0.995	02/14/07	02/15/07	
Antimony	EPA 6020	7B14108	0.034	1.1	0.20	0.995	02/14/07	02/15/07	J
Arsenic	EPA 6020	7B14108	0.29	0.57	2.0	0.995	02/14/07	02/15/07	
Barium	EPA 6020	7B14108	0.091	0.57	94	0.995	02/14/07	02/15/07	
Beryllium	EPA 6020	7B14108	0.046	0.34	0.48	0.995	02/14/07	02/15/07	
Boron J/I	EPA 6010B	7B14110	1.1	5.7	3.4	0.995	02/14/07	02/15/07	J
Cadmium	EPA 6020	7B14108	0.029	0.57	1.1	0.995	02/14/07	02/15/07	
Chromium	EPA 6020	7B14108	0.40	1.1	15	0.995	02/14/07	02/15/07	
Cobalt	EPA 6020	7B14108	0.091	0.57	4.9	0.995	02/14/07	02/15/07	
Copper	EPA 6020	7B14108	0.23	1.1	8.8	0.995	02/14/07	02/15/07	
Lead	EPA 6020	7B14108	0.057	0.57	11	0.995	02/14/07	02/15/07	
Lithium	EPA 6010B	7B14110	4.3	7.2	20	0.995	02/14/07	02/15/07	
Molybdenum	EPA 6020	7B14108	0.11	1.1	0.62	0.995	02/14/07	02/15/07	J
Nickel	EPA 6020	7B14108	0.51	1.1	9.4	0.995	02/14/07	02/15/07	
Potassium	EPA 6010B	7B14110	22	57	3800	0.995	02/14/07	02/15/07	
Selenium	EPA 6020	7B14108	0.23	1.1	0.34	0.995	02/14/07	02/15/07	J
Silver	EPA 6020	7B14108	0.057	0.57	0.42	0.995	02/14/07	02/15/07	J
Sodium	EPA 6010B	7B14110	27	57	68	0.995	02/14/07	02/15/07	
Thallium	EPA 6020	7B14108	0.11	0.57	0.33	0.995	02/14/07	02/15/07	J
Vanadium	EPA 6020	7B14108	0.46	1.1	23	0.995	02/14/07	02/15/07	
Zinc	EPA 6020	7B14108	1.5	11	52	0.995	02/14/07	02/15/07	B
Zirconium U	EPA 6010B	7B16119	1.7	29	ND	1	02/16/07	02/16/07	

LEVEL V

TestAmerica - Irvine, CA  
Nicholas Marz For Michele Chamberlin  
Project Manager

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IQB1219 <Page 6 of 22>



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Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7021428  
Project ID: IQB1219

Date Received: 02/14/07 11:40  
Date Reported: 03/02/07 16:54

BLB50038501  
IQB1219-03 7021428-02 (Solid)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
% Solids *	87.0	% by Weight	0.100	1	Gravimetric	W7B0880	02/22/07	02/28/07	dj

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Total	0.061	0.00075	mg/kg dry	0.011	1	EPA 7471A	W7B0623	02/15/07	02/22/07	jl

\* Analysis not validated

LEVEL V



MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1219

Sampled: 02/12/07  
Received: 02/13/07

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1219-04 (BLBS0036S01 - Soil)									
Reporting Units: mg/kg dry									
Aluminum	EPA 6010B	7B14110	10	21	11000	1.98	02/14/07	02/20/07	
Antimony	EPA 6020	7B14108	0.031	1.0	0.13	0.99	02/14/07	02/15/07	J
Arsenic	EPA 6020	7B14108	0.26	0.52	2.3	0.99	02/14/07	02/15/07	
Barium	EPA 6020	7B14108	0.082	0.52	82	0.99	02/14/07	02/15/07	
Beryllium	EPA 6020	7B14108	0.041	0.31	0.34	0.99	02/14/07	02/15/07	
Boron	EPA 6010B	7B14110	2.1	10	4.1	1.98	02/14/07	02/20/07	RL1, J
Cadmium	EPA 6020	7B14108	0.026	0.52	0.31	0.99	02/14/07	02/15/07	J
Chromium	EPA 6020	7B14108	0.36	1.0	14	0.99	02/14/07	02/15/07	
Cobalt	EPA 6020	7B14108	0.082	0.52	7.1	0.99	02/14/07	02/15/07	
Copper	EPA 6020	7B14108	0.21	1.0	14	0.99	02/14/07	02/15/07	
Lead	EPA 6020	7B14108	0.052	0.52	11	0.99	02/14/07	02/15/07	
Lithium	EPA 6010B	7B14110	7.8	13	27	1.98	02/14/07	02/20/07	
Molybdenum	EPA 6020	7B14108	0.10	1.0	0.80	0.99	02/14/07	02/15/07	J
Nickel	EPA 6020	7B14108	0.46	1.0	9.3	0.99	02/14/07	02/15/07	
Potassium	EPA 6010B	7B14110	39	100	4200	1.98	02/14/07	02/20/07	
Selenium	EPA 6020	7B14108	0.21	1.0	0.25	0.99	02/14/07	02/15/07	J
Silver	EPA 6020	7B14108	0.052	0.52	0.072	0.99	02/14/07	02/15/07	J
Sodium	EPA 6010B	7B14110	49	100	100	1.98	02/14/07	02/20/07	
Thallium	EPA 6020	7B14108	0.10	0.52	0.28	0.99	02/14/07	02/15/07	J
Vanadium	EPA 6020	7B14108	0.41	1.0	20	0.99	02/14/07	02/15/07	
Zinc	EPA 6020	7B14108	1.3	10	41	0.99	02/14/07	02/15/07	B
Zirconium	EPA 6010B	7B16119	1.6	26	ND	1	02/16/07	02/16/07	

LEVEL V

TestAmerica - Irvine, CA  
Nicholas Marz For Michele Chamberlin  
Project Manager

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IQB1219 <Page 7 of 22>





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Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7021428  
Project ID: IQB1219

Date Received: 02/14/07 11:40  
Date Reported: 03/02/07 16:54

BLB50036501  
IQB1219-04 7021428-03 (Solid)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
% Solids *	96.1	% by Weight	0.100	1	Gravimetric	W7B0880	02/22/07	02/28/07	dj

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Total	0.017	0.00068	mg/kg dry	0.010	1	EPA 7471A	W7B0623	02/15/07	02/22/07	jl

Analysis not validated

LEVEL V

MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1219

Sampled: 02/12/07  
Received: 02/13/07

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1219-07 (BLBS0032D01 - Soil)									
Reporting Units: mg/kg dry									
Aluminum	EPA 6010B	7B22115	5.7	11	12000	1	02/22/07	02/23/07	
Antimony	EPA 6020	7B14108	0.034	1.1	0.13	0.99	02/14/07	02/15/07	J
Arsenic	EPA 6020	7B14108	0.28	0.57	2.6	0.99	02/14/07	02/15/07	
Barium	EPA 6020	7B14108	0.091	0.57	64	0.99	02/14/07	02/15/07	
Beryllium	EPA 6020	7B14108	0.045	0.34	0.47	0.99	02/14/07	02/15/07	
Boron U	EPA 6010B	7B22115	1.1	5.7	ND	1	02/22/07	02/23/07	
Cadmium	EPA 6020	7B14108	0.028	0.57	0.089	0.99	02/14/07	02/15/07	J
Chromium	EPA 6020	7B14108	0.40	1.1	18	0.99	02/14/07	02/15/07	
Cobalt	EPA 6020	7B14108	0.091	0.57	4.2	0.99	02/14/07	02/15/07	
Copper	EPA 6020	7B14108	0.23	1.1	7.0	0.99	02/14/07	02/15/07	
Lead	EPA 6020	7B14108	0.057	0.57	8.0	0.99	02/14/07	02/15/07	
Lithium	EPA 6010B	7B22115	4.4	7.2	21	1	02/22/07	02/23/07	
Molybdenum	EPA 6020	7B14108	0.11	1.1	0.35	0.99	02/14/07	02/15/07	J
Nickel	EPA 6020	7B14108	0.51	1.1	9.7	0.99	02/14/07	02/15/07	
Potassium	EPA 6010B	7B22115	22	57	2700	1	02/22/07	02/23/07	
Selenium	EPA 6020	7B14108	0.23	1.1	0.30	0.99	02/14/07	02/15/07	J
Silver	EPA 6020	7B14108	0.057	0.57	0.059	0.99	02/14/07	02/15/07	J
Sodium	EPA 6010B	7B22115	28	57	160	1	02/22/07	02/23/07	
Thallium	EPA 6020	7B14108	0.11	0.57	0.24	0.99	02/14/07	02/15/07	J
Vanadium	EPA 6020	7B14108	0.45	1.1	29	0.99	02/14/07	02/15/07	
Zinc	EPA 6020	7B14108	1.5	11	43	0.99	02/14/07	02/15/07	B
Zirconium	EPA 6010B	7B22115	1.7	29	1.7	1	02/22/07	02/23/07	J

TestAmerica - Irvine, CA  
Nicholas Marz For Michele Chamberlin  
Project Manager

LEVEL V

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Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7021428  
Project ID: IQB1219

Date Received: 02/14/07 11:40  
Date Reported: 03/02/07 16:54

BLBS0632.D01

IQB1219-07 7021428-04 (Solid)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
% Solids *	87.2	% by Weight	0.100	1	Gravimetric	W7B0880	02/22/07	02/28/07	dj

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Total	0.026	0.00075	mg/kg dry	0.011	1	EPA 7471A	W7B0623	02/15/07	02/22/07	jl

\* Analysis not validated

LEVEL V



ANALYTICAL TESTING CORPORATION

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax: (949) 260-3297

MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1219

Sampled: 02/12/07  
Received: 02/13/07

## METALS

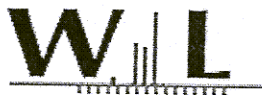
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1219-08 (BLBS0032S01 - Soil)									
Reporting Units: mg/kg dry									
Aluminum	EPA 6010B	7B22115	5.8	12	10000	1	02/22/07	02/23/07	
Antimony	EPA 6020	7B14108	0.035	1.2	0.12	0.995	02/14/07	02/15/07	J
Arsenic	EPA 6020	7B14108	0.29	0.58	2.5	0.995	02/14/07	02/15/07	
Barium	EPA 6020	7B14108	0.092	0.58	63	0.995	02/14/07	02/15/07	
Beryllium	EPA 6020	7B14108	0.046	0.35	0.43	0.995	02/14/07	02/15/07	
Boron U	EPA 6010B	7B22115	1.2	5.8	ND	1	02/22/07	02/23/07	
Cadmium	EPA 6020	7B14108	0.029	0.58	0.088	0.995	02/14/07	02/15/07	J
Chromium	EPA 6020	7B14108	0.40	1.2	16	0.995	02/14/07	02/15/07	
Cobalt	EPA 6020	7B14108	0.092	0.58	4.5	0.995	02/14/07	02/15/07	
Copper	EPA 6020	7B14108	0.23	1.2	7.1	0.995	02/14/07	02/15/07	
Lead	EPA 6020	7B14108	0.058	0.58	7.7	0.995	02/14/07	02/15/07	
Lithium	EPA 6010B	7B22115	4.4	7.3	19	1	02/22/07	02/23/07	
Molybdenum	EPA 6020	7B14108	0.12	1.2	0.34	0.995	02/14/07	02/15/07	J
Nickel	EPA 6020	7B14108	0.52	1.2	9.1	0.995	02/14/07	02/15/07	
Potassium	EPA 6010B	7B22115	22	58	2400	1	02/22/07	02/23/07	
Selenium	EPA 6020	7B14108	0.23	1.2	0.29	0.995	02/14/07	02/15/07	J
Silver U	EPA 6020	7B14108	0.058	0.58	ND	0.995	02/14/07	02/15/07	
Sodium	EPA 6010B	7B22115	28	58	100	1	02/22/07	02/23/07	
Thallium	EPA 6020	7B14108	0.12	0.58	0.22	0.995	02/14/07	02/15/07	J
Vanadium	EPA 6020	7B14108	0.46	1.2	27	0.995	02/14/07	02/15/07	
Zinc	EPA 6020	7B14108	1.5	12	44	0.995	02/14/07	02/15/07	B
Zirconium U	EPA 6010B	7B22115	1.7	29	ND	1	02/22/07	02/23/07	

TestAmerica - Irvine, CA  
Nicholas Marz For Michele Chamberlin  
Project Manager

LEVEL V

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IQB1219 &lt;Page 9 of 22&gt;



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TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7021428  
Project ID: IQB1219

Date Received: 02/14/07 11:40  
Date Reported: 03/02/07 16:54

BLBS663Z S01  
IQB1219-08 7021428-05 (Solid)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
% Solids *	86.4	% by Weight	0.100	1	Gravimetric	W7B0880	02/22/07	02/28/07	dj

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Total	0.029	0.00075	mg/kg dry	0.012	1	EPA 7471A	W7B0623	02/15/07	02/22/07	jl

\* Analysis not validated

LEVEL V



## Analytical Report

TestAmerica  
 17461 Derian Avenue, Suite 100  
 Irvine, CA 92614-5845

Date Received: 02/14/07  
 Work Order No: 07-02-0875  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM  
 Units: mg/kg

Project: IQB1219

Page 1 of 3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
IQB1219-01	07-02-0875-1	02/12/07	Solid	GC/MS N	02/15/07	02/22/07	070215L09

Comment(s): -Results are reported on a dry weight basis.

-Results were evaluated to the MDL, concentrations  $\geq$  to the MDL but  $<$  RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1-Methylnaphthalene	ND	0.025	0.0022	1.23		Chrysene	ND	0.025	0.0025	1.23	
2-Methylnaphthalene	ND	0.025	0.0022	1.23		Di-n-Butyl Phthalate	ND	0.025	0.0026	1.23	
Acenaphthene	ND	0.025	0.0023	1.23		Dibenz (a,h) Anthracene	ND	0.025	0.0024	1.23	
Acenaphthylene	ND	0.025	0.0020	1.23		Diethyl Phthalate	ND	0.025	0.0025	1.23	
Anthracene	ND	0.025	0.0022	1.23		Fluoranthene	ND	0.025	0.0023	1.23	
Benzo (a) Anthracene	ND	0.025	0.0026	1.23		Fluorene	ND	0.025	0.0022	1.23	
Benzo (a) Pyrene	ND	0.025	0.0022	1.23		Indeno (1,2,3-c,d) Pyrene	ND	0.025	0.0022	1.23	
Benzo (b) Fluoranthene	ND	0.025	0.0022	1.23		N-Nitrosodimethylamine	ND	0.025	0.0024	1.23	
Benzo (g,h,i) Perylene	ND	0.025	0.0023	1.23		Naphthalene	ND	0.025	0.0023	1.23	
Benzo (k) Fluoranthene	ND	0.025	0.0031	1.23		Phenanthrene	ND	0.025	0.0023	1.23	
Bis(2-Ethylhexyl) Phthalate	0.0085	0.025	0.0038	1.23	J	Pyrene	ND	0.025	0.0031	1.23	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
2,4,6-Tribromophenol	57	32-143				2-Fluorobiphenyl	60	14-146			
2-Fluorophenol	60	15-138				Nitrobenzene-d5	68	18-162			
p-Terphenyl-d14	68	34-148				Phenol-d6	59	17-141			

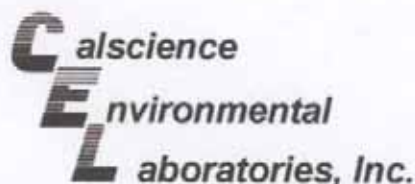
IQB1219-03	07-02-0875-3	02/12/07	Solid	GC/MS N	02/15/07	02/22/07	070215L09
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Comment(s): -Results are reported on a dry weight basis.

-Results were evaluated to the MDL, concentrations  $\geq$  to the MDL but  $<$  RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1-Methylnaphthalene	ND	0.024	0.0022	1.2		Chrysene	ND	0.024	0.0025	1.2	
2-Methylnaphthalene	ND	0.024	0.0021	1.2		Di-n-Butyl Phthalate	0.015	0.024	0.0025	1.2	J
Acenaphthene	ND	0.024	0.0022	1.2		Dibenz (a,h) Anthracene	ND	0.024	0.0023	1.2	
Acenaphthylene	ND	0.024	0.0020	1.2		Diethyl Phthalate	ND	0.024	0.0024	1.2	
Anthracene	ND	0.024	0.0022	1.2		Fluoranthene	ND	0.024	0.0023	1.2	
Benzo (a) Anthracene	ND	0.024	0.0026	1.2		Fluorene	ND	0.024	0.0021	1.2	
Benzo (a) Pyrene	ND	0.024	0.0021	1.2		Indeno (1,2,3-c,d) Pyrene	ND	0.024	0.0022	1.2	
Benzo (b) Fluoranthene	ND	0.024	0.0022	1.2		N-Nitrosodimethylamine	ND	0.024	0.0023	1.2	
Benzo (g,h,i) Perylene	ND	0.024	0.0022	1.2		Naphthalene	ND	0.024	0.0022	1.2	
Benzo (k) Fluoranthene	ND	0.024	0.0030	1.2		Phenanthrene	ND	0.024	0.0023	1.2	
Bis(2-Ethylhexyl) Phthalate	0.015	0.024	0.0037	1.2	J	Pyrene	ND	0.024	0.0030	1.2	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
2,4,6-Tribromophenol	76	32-143				2-Fluorobiphenyl	73	14-146			
2-Fluorophenol	76	15-138				Nitrobenzene-d5	87	18-162			
p-Terphenyl-d14	91	34-148				Phenol-d6	79	17-141			

RL - Reporting Limit    DF - Dilution Factor    Qual - Qualifiers



## Analytical Report



TestAmerica  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614-5845

Date Received: 02/14/07  
Work Order No: 07-02-0875  
Preparation: EPA 3545  
Method: EPA 8270C SIM  
Units: mg/kg

Project: IQB1219

Page 2 of 3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
IQB1219-04	07-02-0875-4	02/12/07	Solid	GC/MS N	02/15/07	02/22/07	070215L09

Comment(s): -Results are reported on a dry weight basis.

-Results were evaluated to the MDL, concentrations  $\geq$  to the MDL but  $<$  RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1-Methylnaphthalene	ND	0.021	0.0019	1.03		Chrysene	ND	0.021	0.0021	1.03	
2-Methylnaphthalene	ND	0.021	0.0018	1.03		Di-n-Butyl Phthalate	0.0079	0.021	0.0022	1.03	J
Acenaphthene	ND	0.021	0.0019	1.03		Dibenz (a,h) Anthracene	ND	0.021	0.0020	1.03	
Acenaphthylene	ND	0.021	0.0017	1.03		Diethyl Phthalate	ND	0.021	0.0021	1.03	
Anthracene	ND	0.021	0.0019	1.03		Fluoranthene	ND	0.021	0.0020	1.03	
Benzo (a) Anthracene	ND	0.021	0.0022	1.03		Fluorene	ND	0.021	0.0018	1.03	
Benzo (a) Pyrene	ND	0.021	0.0018	1.03		Indeno (1,2,3-c,d) Pyrene	ND	0.021	0.0019	1.03	
Benzo (b) Fluoranthene	ND	0.021	0.0019	1.03		N-Nitrosodimethylamine	ND	0.021	0.0020	1.03	
Benzo (g,h,i) Perylene	ND	0.021	0.0019	1.03		Naphthalene	ND	0.021	0.0019	1.03	
Benzo (k) Fluoranthene	ND	0.021	0.0026	1.03		Phenanthrene	ND	0.021	0.0020	1.03	
Bis(2-Ethylhexyl) Phthalate	0.013	0.021	0.0032	1.03	J	Pyrene	ND	0.021	0.0026	1.03	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
2,4,6-Tribromophenol	49	32-143				2-Fluorobiphenyl	75	14-146			
2-Fluorophenol	62	15-138				Nitrobenzene-d5	84	18-162			
p-Terphenyl-d14	87	34-148				Phenol-d6	55	17-141			

IQB1219-06	07-02-0875-6	02/12/07	Solid	GC/MS N	02/15/07	02/22/07	070215L09
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Comment(s): -Results are reported on a dry weight basis.

-Results were evaluated to the MDL, concentrations  $\geq$  to the MDL but  $<$  RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
1-Methylnaphthalene	ND	0.024	0.0021	1.18		Chrysene	ND	0.024	0.0024	1.18	
2-Methylnaphthalene	ND	0.024	0.0021	1.18		Di-n-Butyl Phthalate	0.0077	0.024	0.0025	1.18	J
Acenaphthene	ND	0.024	0.0022	1.18		Dibenz (a,h) Anthracene	ND	0.024	0.0023	1.18	
Acenaphthylene	ND	0.024	0.0019	1.18		Diethyl Phthalate	ND	0.024	0.0024	1.18	
Anthracene	ND	0.024	0.0021	1.18		Fluoranthene	ND	0.024	0.0022	1.18	
Benzo (a) Anthracene	ND	0.024	0.0025	1.18		Fluorene	ND	0.024	0.0021	1.18	
Benzo (a) Pyrene	ND	0.024	0.0021	1.18		Indeno (1,2,3-c,d) Pyrene	ND	0.024	0.0021	1.18	
Benzo (b) Fluoranthene	ND	0.024	0.0021	1.18		N-Nitrosodimethylamine	ND	0.024	0.0023	1.18	
Benzo (g,h,i) Perylene	ND	0.024	0.0022	1.18		Naphthalene	ND	0.024	0.0022	1.18	
Benzo (k) Fluoranthene	ND	0.024	0.0030	1.18		Phenanthrene	ND	0.024	0.0022	1.18	
Bis(2-Ethylhexyl) Phthalate	0.0086	0.024	0.0037	1.18	J	Pyrene	ND	0.024	0.0030	1.18	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
2,4,6-Tribromophenol	86	32-143				2-Fluorobiphenyl	79	14-146			
2-Fluorophenol	88	15-138				Nitrobenzene-d5	100	18-162			
p-Terphenyl-d14	109	34-148				Phenol-d6	90	17-141			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Level II



MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1219

Sampled: 02/12/07  
Received: 02/13/07

## POLYCHLORINATED BIPHENYLS (EPA 3545/8082)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1219-01 (BLBS0037S01 - Soil)									RL1
Reporting Units: ug/kg dry									
Aroclor 1016	EPA 8082	7B14097	35	120	ND	2.01	02/14/07	02/15/07	
Aroclor 1221	EPA 8082	7B14097	35	120	ND	2.01	02/14/07	02/15/07	
Aroclor 1232	EPA 8082	7B14097	23	120	ND	2.01	02/14/07	02/15/07	
Aroclor 1242	EPA 8082	7B14097	23	120	ND	2.01	02/14/07	02/15/07	
Aroclor 1248	EPA 8082	7B14097	23	120	ND	2.01	02/14/07	02/15/07	
Aroclor 1254	EPA 8082	7B14097	23	120	ND	2.01	02/14/07	02/15/07	
Aroclor 1260	EPA 8082	7B14097	23	120	ND	2.01	02/14/07	02/15/07	
Surrogate: Decachlorobiphenyl (45-120%)					85 %				

Sample ID: IQB1219-03 (BLBS0038S01 - Soil)									RL1
Reporting Units: ug/kg dry									
Aroclor 1016	EPA 8082	7B14097	34	110	ND	1.99	02/14/07	02/15/07	
Aroclor 1221	EPA 8082	7B14097	34	110	ND	1.99	02/14/07	02/15/07	
Aroclor 1232	EPA 8082	7B14097	23	110	ND	1.99	02/14/07	02/15/07	
Aroclor 1242	EPA 8082	7B14097	23	110	ND	1.99	02/14/07	02/15/07	
Aroclor 1248	EPA 8082	7B14097	23	110	ND	1.99	02/14/07	02/15/07	
Aroclor 1254	EPA 8082	7B14097	23	110	ND	1.99	02/14/07	02/15/07	
Aroclor 1260	EPA 8082	7B14097	23	110	ND	1.99	02/14/07	02/15/07	
Surrogate: Decachlorobiphenyl (45-120%)					95 %				

Sample ID: IQB1219-04 (BLBS0036S01 - Soil)									
Reporting Units: ug/kg dry									
Aroclor 1016	EPA 8082	7B14097	16	52	ND	1	02/14/07	02/15/07	
Aroclor 1221	EPA 8082	7B14097	16	52	ND	1	02/14/07	02/15/07	
Aroclor 1232	EPA 8082	7B14097	10	52	ND	1	02/14/07	02/15/07	
Aroclor 1242	EPA 8082	7B14097	10	52	ND	1	02/14/07	02/15/07	
Aroclor 1248	EPA 8082	7B14097	10	52	ND	1	02/14/07	02/15/07	
Aroclor 1254	EPA 8082	7B14097	10	52	ND	1	02/14/07	02/15/07	
Aroclor 1260	EPA 8082	7B14097	10	52	ND	1	02/14/07	02/15/07	
Surrogate: Decachlorobiphenyl (45-120%)					86 %				

LEVEL V

TestAmerica - Irvine, CA  
Michele Chamberlin  
Project Manager



MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1219

Sampled: 02/12/07  
Received: 02/13/07

## POLYCHLORINATED BIPHENYLS (EPA 3545/8082)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1219-07 (BLBS0032D01 - Soil)									RL1
Reporting Units: ug/kg dry									
Aroclor 1016	EPA 8082	7B14097	34	110	ND	1.96	02/14/07	02/15/07	
Aroclor 1221	EPA 8082	7B14097	34	110	ND	1.96	02/14/07	02/15/07	
Aroclor 1232	EPA 8082	7B14097	22	110	ND	1.96	02/14/07	02/15/07	
Aroclor 1242	EPA 8082	7B14097	22	110	ND	1.96	02/14/07	02/15/07	
Aroclor 1248	EPA 8082	7B14097	22	110	ND	1.96	02/14/07	02/15/07	
Aroclor 1254	EPA 8082	7B14097	22	110	ND	1.96	02/14/07	02/15/07	
Aroclor 1260	EPA 8082	7B14097	22	110	ND	1.96	02/14/07	02/15/07	
Surrogate: Decachlorobiphenyl (45-120%)					84 %				

## Sample ID: IQB1219-08 (BLBS0032S01 - Soil)

Reporting Units: ug/kg dry									
Aroclor 1016	EPA 8082	7B14097	17	58	ND	0.995	02/14/07	02/15/07	
Aroclor 1221	EPA 8082	7B14097	17	58	ND	0.995	02/14/07	02/15/07	
Aroclor 1232	EPA 8082	7B14097	12	58	ND	0.995	02/14/07	02/15/07	
Aroclor 1242	EPA 8082	7B14097	12	58	ND	0.995	02/14/07	02/15/07	
Aroclor 1248	EPA 8082	7B14097	12	58	ND	0.995	02/14/07	02/15/07	
Aroclor 1254	EPA 8082	7B14097	12	58	ND	0.995	02/14/07	02/15/07	
Aroclor 1260	EPA 8082	7B14097	12	58	ND	0.995	02/14/07	02/15/07	
Surrogate: Decachlorobiphenyl (45-120%)					82 %				

TestAmerica - Irvine, CA  
Michele Chamberlin  
Project Manager

LEVEL V

MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1219

Sampled: 02/12/07  
Received: 02/13/07

## EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1219-01 (BLBS0037S01 - Soil)									
Reporting Units: mg/kg dry									
EFH (C8 - C11)	EPA 8015B	7B14102	8.2	12	ND	2	02/14/07	02/17/07	
EFH (C12 - C14)	EPA 8015B	7B14102	8.2	12	ND	2	02/14/07	02/17/07	
EFH (C15 - C20)	EPA 8015B	7B14102	8.2	12	ND	2	02/14/07	02/17/07	
EFH (C21 - C30)	EPA 8015B	7B14102	8.2	12	ND	2	02/14/07	02/17/07	
Surrogate: n-Octacosane (40-125%)					92 %				
Sample ID: IQB1219-03 (BLBS0038S01 - Soil)									
Reporting Units: mg/kg dry									
EFH (C8 - C11)	EPA 8015B	7B14102	8.0	11	ND	2	02/14/07	02/17/07	
EFH (C12 - C14)	EPA 8015B	7B14102	8.0	11	ND	2	02/14/07	02/17/07	
EFH (C15 - C20)	EPA 8015B	7B14102	8.0	11	ND	2	02/14/07	02/17/07	
EFH (C21 - C30)	EPA 8015B	7B14102	8.0	11	9.5	2	02/14/07	02/17/07	J
Surrogate: n-Octacosane (40-125%)					83 %				
Sample ID: IQB1219-04 (BLBS0036S01 - Soil)									
Reporting Units: mg/kg dry									
EFH (C8 - C11)	EPA 8015B	7B14102	7.3	10	ND	2	02/14/07	02/17/07	
EFH (C12 - C14)	EPA 8015B	7B14102	7.3	10	ND	2	02/14/07	02/17/07	
EFH (C15 - C20)	EPA 8015B	7B14102	7.3	10	ND	2	02/14/07	02/17/07	
EFH (C21 - C30)	EPA 8015B	7B14102	7.3	10	ND	2	02/14/07	02/17/07	
Surrogate: n-Octacosane (40-125%)					91 %				

Level V

TestAmerica - Irvine, CA  
Michele Chamberlin  
Project Manager

MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1219

Sampled: 02/12/07  
Received: 02/13/07

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1219-01 (BLBS0037S01 - Soil)									
Reporting Units: %									
* Percent Solids	EPA 160.3 MOD	7B15123	0.10	0.10	86	1	02/15/07	02/16/07	
Sample ID: IQB1219-03 (BLBS0038S01 - Soil)									
Reporting Units: %									
Percent Solids	EPA 160.3 MOD	7B15123	0.10	0.10	87	1	02/15/07	02/16/07	
Sample ID: IQB1219-04 (BLBS0036S01 - Soil)									
Reporting Units: %									
Percent Solids	EPA 160.3 MOD	7B15123	0.10	0.10	96	1	02/15/07	02/16/07	
Sample ID: IQB1219-06 (BLBS0031S01 - Soil)									
Reporting Units: %									
Percent Solids	EPA 160.3 MOD	7B15123	0.10	0.10	86	1	02/15/07	02/16/07	
Sample ID: IQB1219-07 (BLBS0032D01 - Soil)									
Reporting Units: %									
Percent Solids	EPA 160.3 MOD	7B15123	0.10	0.10	87	1	02/15/07	02/16/07	
Sample ID: IQB1219-08 (BLBS0032S01 - Soil)									
Reporting Units: %									
Percent Solids	EPA 160.3 MOD	7B15123	0.10	0.10	86	1	02/15/07	02/16/07	
Sample ID: IQB1219-01 (BLBS0037S01 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B13136	N/A	NA	6.63	1	02/13/07	02/13/07	
Sample ID: IQB1219-02 (BLBS0037S02 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B13136	N/A	NA	7.05	1	02/13/07	02/13/07	
Sample ID: IQB1219-03 (BLBS0038S01 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B13136	N/A	NA	6.82	1	02/13/07	02/13/07	
Sample ID: IQB1219-04 (BLBS0036S01 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B13136	N/A	NA	6.61	1	02/13/07	02/13/07	

\* Analysis not validated

TestAmerica - Irvine, CA  
Nicholas Marz For Michele Chamberlin  
Project Manager

LEVEL V



ANALYTICAL TESTING CORPORATION

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax: (949) 260-3297

MWH-San Diego/Boeing  
9444 Farnham Street, Suite 300  
San Diego, CA 92123  
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE  
1891264  
Report Number: IQB1219

Sampled: 02/12/07  
Received: 02/13/07

### INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB1219-05 (BLBS0036S02 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B13136	N/A	NA	6.75	1	02/13/07	02/13/07	
Sample ID: IQB1219-06 (BLBS0031S01 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B13136	N/A	NA	7.41	1	02/13/07	02/13/07	
Sample ID: IQB1219-07 (BLBS0032D01 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B13136	N/A	NA	7.65	1	02/13/07	02/13/07	
Sample ID: IQB1219-08 (BLBS0032S01 - Soil)									
Reporting Units: pH Units									
pH	EPA 9045C	7B13136	N/A	NA	7.28	1	02/13/07	02/13/07	

TestAmerica - Irvine, CA  
Nicholas Marz For Michele Chamberlin  
Project Manager

LEVEL V

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced,  
except in full, without written permission from TestAmerica.

IQB1219 <Page 11 of 22>



# DATA VALIDATION REPORT

Boeing SSFL RFI Group 8 Data Gap

SAMPLE DELIVERY GROUP: D7E180378

Prepared by

MEC^X, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## I. INTRODUCTION

Task Order Title: Boeing SSFL RFI Group 8 Data Gap  
Contract Task Order: 1261.500D.08.001  
Sample Delivery Group: D7E180378  
Project Manager: Dixie Hambrick  
Matrix: soil  
QC Level: V  
No. of Samples: 4  
No. of Reanalyses/Dilutions: 0  
Laboratory: STL-Denver

**Table 1. Sample Identification**

Sample Name	Lab Name	Sample Name	Sub-Lab Sample Name	Matrix	Collection	Method
BLBS0063S01SP	D7E180378004	N/A		Soil	5/17/2007 8:45:00 AM	9056
FSBS0084S01SP	D7E180378002	N/A		Soil	5/17/2007 8:43:00 AM	6010B, 9056
FSBS0086S01SP	D7E180378003	N/A		Soil	5/17/2007 9:12:00 AM	6010B, 9056
FSBS0093S01SP	D7E180378001	N/A		Soil	5/17/2007 7:57:00 AM	1613B, 6010B, 7471A, 8082, 9056

## II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact. If necessary, the client ID was added to the sample result summary by the reviewer.

**Data Qualifier Reference Table**

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

**Qualification Code Reference Table**

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 or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.



**Qualification Code Reference Table Cont.**

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.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: K. Shadowlight

Date Reviewed: June 15, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review (8/02)*.

- Holding Times: Extraction and analytical holding times were met. The samples were extracted and analyzed within one year of collection.
- Instrument Performance: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: OCDD was reported as an EMPC in the method blank; however, there were no target compound detects above the EDL in the sample.
- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613.
- Matrix Spike/ Matrix Spike Duplicate: MS/MSD analyses were performed on FSBS0093S01SP. The recoveries and RPDs were within the laboratory-established control limits.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were no reportable detects in field blank BLQW0019F01 (186235) or equipment rinsate FSQW0005E01 (186348).
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: Internal standard recoveries are not routinely evaluated at a Level V validation; however, the recoveries were reported on the sample result summaries. The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.

- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. The laboratory calculated and reported compound-specific detection limits. Any reported estimated maximum possible concentration (EMPC) was qualified as an estimated nondetect, "UJ." Any detect below the laboratory lower calibration level was qualified as estimated, "J." The laboratory reported results in two significant figures rather than three. Nondetects are valid to the estimated detection limit (EDL).

## **B. EPA METHODS 6010B, 6020, 7470A/7471A—Metals and Mercury**

Reviewed By: P. Meeks

Date Reviewed: June 15, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 6010B, 6020, 7470A/7471A*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: Analytical holding times, six months for ICP metals and 28 days for mercury, were met.
- Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: There were no applicable method blanks or CCBs detects.
- Interference Check Samples: Review is not applicable at a Level V validation.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: Laboratory duplicate analyses were not performed on a sample from this SDG.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a sample from this SDG.
- Serial Dilution: Serial dilution analyses were not performed on a sample from this SDG.
- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. All CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.

- Sample Result Verification: Review is not applicable at a Level V validation. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were no applicable detects in field blank BLQW0019F01 (186235) or equipment rinsate FSQW0005E01 (186348).
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

### C. EPA METHOD 8082—PCBs

Reviewed By: K. Shadowlight  
Date Reviewed: June 15, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 0)*, *EPA Method 8082*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample FSBS0093S01SP. The recoveries and RPDs were within the laboratory-established control limits.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were no reportable detects in field blank BLQW0019F01 (186235) or equipment rinsate FSQW0005E01 (186348).

- Field Duplicates: There were no field duplicate samples identified for this SDG.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for Aroclors by Method 8082.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. The laboratory reported results in two significant figures rather than three. Reported nondetects are valid to the reporting limit.

#### **D. VARIOUS EPA METHODS—General Minerals**

Reviewed By: P. Meeks

Date Reviewed: June 15, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Method 300.0*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: Analytical holding times, 28 days from collection for fluoride, were met.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks and CCBs had no detects.
- Blank Spikes and Laboratory Control Samples: Recoveries and the RPD were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on FSBS0093S01SP. Recoveries and the RPD were within laboratory-established QC limits.
- Sample Result Verification: Review is not applicable at a Level V validation. Nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Fluoride was not detected in field blank ESQW0002F01 (186314) or equipment rinsates BLQW0019E01 (186235) and FSQW0005E01 (186348).

- Field Duplicates: There were no field duplicate samples identified for this SDG.

MWH Americas, Inc.  
Sample ID: FSBS0093S01SP  
Trace Level Organic Compounds

Lot - Sample #....: D7E180378 - 001      Work Order #....: JXAPE1AH      Matrix....: SO  
Date Sampled....: 05/17/07      Date Received....: 05/18/07      Dilution Factor: 1  
Prep Date....: 05/25/07      Analysis Date....: 06/01/07      Percent Moisture: 1.9  
Prep Batch # ....: 7145343  
Initial Wgt/Vol : 10.2 g      Instrument ID....: M2A      Method: EPA-5 1613B  
Analyst ID....: Patricia(Trish) M. Parsly

PARAMETER	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND	1.0	0.64	ng/kg
Total TCDD	ND	1.0	0.64	ng/kg
1,2,3,7,8-PeCDD	ND	5.0	0.24	ng/kg
Total PeCDD	ND	5.0	0.24	ng/kg
1,2,3,4,7,8-HxCDD	ND	5.0	0.19	ng/kg
1,2,3,6,7,8-HxCDD	ND	5.0	0.24	ng/kg
1,2,3,7,8,9-HxCDD	ND	5.0	0.20	ng/kg
Total HxCDD	ND	5.0	0.21	ng/kg
1,2,3,4,6,7,8-HpCDD	1.9 J	5.0	0.30	ng/kg
Total HpCDD	4.7 J	5.0	0.30	ng/kg
OCDD	16 B	10	0.34	ng/kg
2,3,7,8-TCDF	ND	1.0	0.47	ng/kg
Total TCDF	2.6 Q	1.0	0.47	ng/kg
1,2,3,7,8-PeCDF	ND	5.0	0.26	ng/kg
2,3,4,7,8-PeCDF	ND	5.0	0.18	ng/kg
Total PeCDF	3.1 J Q	5.0	0.22	ng/kg
1,2,3,4,7,8-HxCDF	ND	5.0	0.11	ng/kg
1,2,3,6,7,8-HxCDF	ND	5.0	0.11	ng/kg
2,3,4,6,7,8-HxCDF	ND	5.0	0.12	ng/kg
1,2,3,7,8,9-HxCDF	ND	5.0	0.18	ng/kg
Total HxCDF	1.4 Q J	5.0	0.12	ng/kg
1,2,3,4,6,7,8-HpCDF	0.55 Q J	5.0	0.18	ng/kg
1,2,3,4,7,8,9-HpCDF	ND	5.0	0.25	ng/kg
Total HpCDF	0.55 Q J	5.0	0.21	ng/kg
OCDF	0.69 Q J	10	0.29	ng/kg

Level V

# STL

MWH Americas, Inc.

## Total Metals Analysis Data Sheet

Lab Name: STL DENVER

Lot/SDG Number: D7E180378

Matrix: SOLID

% Moisture: 1.9

Basis: Dry

Analysis Method: 6010B

Unit: mg/kg

QC Batch ID: 7142591

Sample Aliquot: 1.01 g

Dilution Factor: 1

Client Sample ID: FSBS0093S01SP

Lab Sample ID: D7E180378-001

Lab WorkOrder: IXAPE

Date/Time Collected: 05/17/07 07:57

Date/Time Received: 05/18/07 08:45

Date Leached:

Date/Time Extracted: 05/23/07 08:00

Date/Time Analyzed: 05/25/07 03:58

Instrument ID: 025

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-67-7	Zirconium	2.8	0.69	3.1	J

LEVEL V



# STL

MWH Americas, Inc.

## Total Metals Analysis Data Sheet

Lab Name: STL DENVER  
Lot/SDG Number: D7E180378  
Matrix: SOLID  
% Moisture: 1.9  
Basis: Dry  
Analysis Method: 7471A  
Unit: ug/kg  
QC Batch ID: 7141529  
Sample Aliquot: 0.31 g  
Dilution Factor: 1

Client Sample ID: FSBS0093S01SP  
Lab Sample ID: D7E180378-001  
Lab WorkOrder: JXAPE  
Date/Time Collected: 05/17/07 07:57  
Date/Time Received: 05/18/07 08:45  
Date Leached:  
Date/Time Extracted: 05/23/07 10:40  
Date/Time Analyzed: 05/23/07 20:48  
Instrument ID: 023

CAS No.	Analyte	Conc.	MDL	RL	Q
7439-97-6	Mercury	3.9	2.9	34	J

LEVEL V

# STL

MWH Americas, Inc.

## Total Metals Analysis Data Sheet

Lab Name: STL DENVER

Lot/SDG Number: D7E180378

Matrix: SOLID

% Moisture: 3.3

Basis: Dry

Analysis Method: 6010B

Unit: mg/kg

QC Batch ID: 7142591

Sample Aliquot: 1.01 g

Dilution Factor: 1

Client Sample ID: FSBS0084S01SP

Lab Sample ID: D7E180378-002

Lab WorkOrder: JXAPF

Date/Time Collected: 05/17/07 08:43

Date/Time Received: 05/18/07 08:45

Date Leached:

Date/Time Extracted: 05/23/07 08:00

Date/Time Analyzed: 05/25/07 04:03

Instrument ID: 025

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-67-7	Zirconium	3.8	0.70	3.1	

LEVEL V

# STL

MWH Americas, Inc.

## Total Metals Analysis Data Sheet

Lab Name: STL DENVER

Lot/SDG Number: D7E180378

Matrix: SOLID

% Moisture: 7.7

Basis: Dry

Analysis Method: 6010B

Unit: mg/kg

QC Batch ID: 7142591

Sample Aliquot: 1.01 g

Dilution Factor: 1

Client Sample ID: FSBS0086S01SP

Lab Sample ID: D7E180378-003

Lab WorkOrder: JXAPG

Date/Time Collected: 05/17/07 09:12

Date/Time Received: 05/18/07 08:45

Date Leached:

Date/Time Extracted: 05/23/07 08:00

Date/Time Analyzed: 05/25/07 04:08

Instrument ID: 025

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-67-7	Zirconium	4.0	0.74	3.3	

LEVEL ✓

STL

MWH Americas, Inc.  
Analysis Data Sheet

Lab Name:

STL DENVER

Client Sample ID:

FSBS0093S01SP

Lot/SDG Number:

D7E180378

Lab Sample ID:

D7E180378-001

Matrix:

SOLID

Lab WorkOrder:

JXAPE1AK

% Moisture:

L9

Date/Time Collected:

05/17/07 07:57

Basis:

Dry

Date/Time Received:

05/18/07 08:45

Analysis Method:

8082

Date Leached:

Unit:

ug/kg

Date/Time Extracted:

05/21/07 07:15

QC Batch ID:

7141093

Date/Time Analyzed:

05/24/07 19:50

Sample Aliquot:

30.3 g

Instrument ID:

W1

Dilution Factor:

1

CAS No.	Analyte	Conc.	MDL	RL	Q
12674-11-2	Aroclor 1016	5.2	5.2	34	U
11104-28-2	Aroclor 1221	16	16	48	U
11141-16-5	Aroclor 1232	5.2	5.2	34	U
53469-21-9	Aroclor 1242	9.3	9.3	34	U
12672-29-6	Aroclor 1248	5.7	5.7	34	U
11097-69-1	Aroclor 1254	5.6	5.6	34	U
11096-82-5	Aroclor 1260	2.7	2.7	34	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
1051-24-3	Decachlorobiphenyl	96	38	162	
1077-09-8	Tetrachloro-m-xylene	87	53	132	

Level IV

MWH Americas, Inc.

Client Sample ID: FSBS0093S01SP

General Chemistry

Lot-Sample #...: D7E180378-001 Work Order #...: JXAPE  
Date Sampled...: 05/17/07 07:57 Date Received...: 05/18/07

Matrix.....: SO

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Fluoride	1.2 J	10	mg/kg	SW846 9056	05/25/07	7146065
		Dilution Factor: 1		Analysis Time...: 19:40	MDL.....: 0.84	
Total Solids *	98	0.10	%	MCAWW 160.3 MOD	05/23/07	7143403
		Dilution Factor: 1		Analysis Time...: 11:30	MDL.....:	

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

J Estimated result; result is less than RL and greater than or equal to the MDL.

\* Analysis not validated

LEVEL V

MWH Americas, Inc.

Client Sample ID: FSBS0084S01SP

General Chemistry

Lot-Sample #...: D7E180378-002    Work Order #...: JXAPF    Matrix.....: SO  
 Date Sampled...: 05/17/07 08:43    Date Received...: 05/18/07

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Fluoride	2.0 J	10	mg/kg	SW846 9056	05/25/07	7146065
		Dilution Factor: 1		Analysis Time...: 20:28	MDL.....: 0.85	
Total Solids *	97	0.10	%	MCAWW 160.3 MOD	05/21/07	7141589
		Dilution Factor: 1		Analysis Time...: 11:45	MDL.....:	

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

J Estimated result: result is less than RL and greater than or equal to the MDL.

\* Analysis not validated

LEVEL V

MWH Americas, Inc.

Client Sample ID: FSBS0086S01SP

General Chemistry

Lot-Sample #....: D7E180378-003    Work Order #....: JXAPG  
 Date Sampled....: 05/17/07 09:12    Date Received...: 05/18/07

Matrix.....: SO

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Fluoride	2.0 J	11	mg/kg	SW846 9056 Analysis Time...: 20:43	05/25/07 MDL.....: 0.89	7146065
Total Solids *	92	0.10	%	MCAWW 160.3 MOD Analysis Time...: 11:45	05/21/07 MDL.....:	7141589

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

J Estimated result: result is less than RL and greater than or equal to the MDL.

\* Analysis not validated

LEVEL V

MWH Americas, Inc.

Client Sample ID: BLBS0063S01SP

General Chemistry

Lot-Sample #....: D7E180378-004    Work Order #....: JXAPH    Matrix.....: SO  
 Date Sampled....: 05/17/07 08:45    Date Received...: 05/18/07

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Fluoride	5.5 J	11	mg/kg	SW846 9056	05/25/07	7146065
		Dilution Factor: 1		Analysis Time...: 20:59	MDL.....: 0.87	
Total Solids *	95	0.10	%	MCAWW 160.3 MOD	05/21/07	7141589
		Dilution Factor: 1		Analysis Time...: 11:45	MDL.....:	

NOTE(S) :

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

J Estimated result: result is less than RL and greater than or equal to the MDL.

\* Analysis not validated

LEVEL V





# DATA VALIDATION REPORT

Boeing SSFL RFI Group 8 Data Gap

SAMPLE DELIVERY GROUP: D7E170351

Prepared by

MEC^X, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## I. INTRODUCTION

Task Order Title: Boeing SSFL RFI Group 8 Data Gap  
Contract Task Order: 1261.500D.08.001  
Sample Delivery Group: D7E170351  
Project Manager: Dixie Hambrick  
Matrix: soil  
QC Level: V  
No. of Samples: 2  
No. of Reanalyses/Dilutions: 0  
Laboratory: STL-Denver

**Table 1. Sample Identification**

Sample Name	Lab Name	Sample Name	Sub-Lab Sample Name	Matrix	Collection	Method
BLBS0058S01SP	D7E170351001	N/A		Soil	5/16/2007 9:45:00 AM	9056
BLBS0060S01SP	D7E170351002	N/A		Soil	5/16/2007 11:00:00 AM	9056

## II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory below the temperature limits of 4°C ±2°C; the sample was not noted to be frozen or damaged. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact. If necessary, the client ID was added to the sample result summary by the reviewer.

**Data Qualifier Reference Table**

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

**Qualification Code Reference Table**

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 or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

**Qualification Code Reference Table Cont.**

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.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

### III. Method Analyses

#### A. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks

Date Reviewed: June 15, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Methods 7196A and 9045C*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The analytical holding time, 28 days from collection for fluoride, was met.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks and CCBs had no detects.
- Blank Spikes and Laboratory Control Samples: Recoveries and RPD were within laboratory-established QC limits.
- Laboratory Duplicates: Laboratory duplicate analyses were performed on BLBS0058S01SP. The RPD was within the laboratory-established control limit.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on BLBS0058S01SP. Both recoveries were marginally below the control limit; therefore, fluoride detected in both samples was qualified as estimated, "J." The RPD was within laboratory-established QC limits.
- Sample Result Verification: Review is not applicable at a Level V validation. Nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Fluoride was not detected in field blank ESQW0002F01 (186314) or equipment rinsate BLQW0019E01 (186235).
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

MWH Americas, Inc.

Client Sample ID: BLBS0058S01SP

General Chemistry

Lot-Sample #....: D7E170351-001

Work Order #....: JW7C8

Matrix.....: SO

Date Sampled....: 05/16/07 09:45

Date Received...: 05/17/07

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Fluoride	1.2 J	10	mg/kg	SW846 9056	05/23-05/24/07	7144342
				Dilution Factor: 1	Analysis Time...: 02:31	MDL.....: 0.84
Total Solids	98	0.10	%	MCAWW 160.3 MOD	05/21/07	7141589
				Dilution Factor: 1	Analysis Time...: 11:45	MDL.....:

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

J Estimated result: result is less than RL and greater than or equal to the MDL.

\* Analysis not validated

LEVEL V

MWH Americas, Inc.

Client Sample ID: BLBS0060S01SP

General Chemistry

Lot-Sample #....: D7E170351-002    Work Order #....: JW7DA    Matrix.....: SO  
 Date Sampled....: 05/16/07 11:00    Date Received...: 05/17/07

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Fluoride J/Q	1.1 J	11	mg/kg	SW846 9056	05/23-05/24/07	7144342
			Dilution Factor: 1	Analysis Time...: 03:21	MDL.....: 0.87	
Total Solids *	95	0.10	%	MCAWW 160.3 MOD	05/21/07	7141589
			Dilution Factor: 1	Analysis Time...: 11:45	MDL.....:	

NOTE(S) :

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

J Estimated result: result is less than RL and greater than or equal to the MDL.

\* Analysis not validated

LEVEL ✓





# DATA VALIDATION REPORT

Boeing SSFL RFI Group 8 Data Gap

SAMPLE DELIVERY GROUP: D7B150349

Prepared by

MEC^X, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## I. INTRODUCTION

Task Order Title: Boeing SSFL RFI Group 8 Data Gap  
Contract Task Order: 1261.500D.08.001  
Sample Delivery Group: D7B150349  
Project Manager: Dixie Hambrick  
Matrix: Soil  
QC Level: V  
No. of Samples: 2  
No. of Reanalyses/Dilutions: 0  
Laboratory: STL-DENVER

**Table 1. Sample Identification**

Sample Name	Lab Sample Name	Sub-Lab Sample Name	Matrix	Collection	Method
BHBS0005S01SP	D7B150 349001	N/A	Soil	2/13/2007 2:30:00 PM	1613B, 6010B, 6020, 7471A, 9045C
BLBS0036S01SP	D7B150 349002	N/A	Soil	2/12/2007 11:20:00 AM	6010B, 6020, 7471A, 8015B, 8082, 8270C SIM, 9045C

## II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the samples were couriered directly from the field to the laboratory, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

**Data Qualifier Reference Table**

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

**Qualification Code Reference Table**

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 or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present. Not applicable.	
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

**Qualification Code Reference Table Cont.**

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.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

## A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: K. Shadowlight

Date Reviewed: March 28, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review (8/02)*.

- Holding Times: Extraction and analytical holding times were met. The soil sample was extracted and analyzed within one year of collection.
- Instrument Performance: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had no target compound detects above the EDL; however, OCDD was reported as an EMPC (estimated maximum possible concentration). No qualifications were required.
- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613.
- Matrix Spike /Matrix Spike Duplicate: The recovery for OCDD in the MS only and the RPD for OCDD exceeded laboratory QC limits. No qualification was required. The remaining recoveries were within the laboratory QC limits.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were several detects in the field blank, BLQW0018F01 (IQB1202), and the equipment rinsate, BLQW0018E01 (IQB1486) however, qualification of the sample was not required.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: Internal standard recoveries are not routinely evaluated at a Level V validation; however, the recoveries were reported on the sample result summaries. The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.

- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. The laboratory calculated and reported compound-specific detection limits. The detect for 1,2,3,6,7,8-HxCDD was reported as an EMPC and was qualified as an estimated nondetect, "UJ," in the site sample. The results for total HxCDD, total TCDF, total PeCDF, and total HxCDF were identified as EMPCs by the laboratory. As the total concentrations for these compounds included one or more valid peaks, the results for total HxCDD, total TCDF, and total PeCDF were qualified as estimated, "J," in the site sample. Any detects below the laboratory lower calibration level were qualified as estimated, "J." Reported nondetects are valid to the estimated detection limit (EDL).

## **B. EPA METHODS 6010B, 6020, 7470A/7471A—Metals and Mercury**

Reviewed By: Patti Meeks

Date Reviewed: 3/24/07

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 6010B, 6020, 7470A/7471A*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.
- Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks had no applicable detects. Boron was detected in a CCB at 12.2 µg/L and mercury was reported in a CCB at -0.039 µg/L. The boron detect was qualified as estimated, "UJ," and mercury was qualified as estimated, "UJ" or "J."
- Interference Check Samples: Not applicable at a Level V validation.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on BHBS0005S01SP. Antimony was recovered below 30% in both the MS and the MSD; therefore, nondetected antimony was rejected, "R." Molybdenum was recovered below the laboratory-established control limit in both the MS and the MSD and nickel was recovered above the control limit in the MS. Molybdenum and nickel detects were qualified as estimated, "J."

- Serial Dilution: Serial dilution analyses were performed on BHBS0005S01SP. The %Ds for arsenic, chromium, cobalt, copper, nickel, and zinc exceeded 10%; therefore, detects for these analytes were qualified as estimated, "J."
- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. All CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.
- Sample Result Verification: Review is not applicable at a Level V validation. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were no detects in the field blank, BLQW0018F01 (IQB1202), or the equipment rinsate, BLQW0018E01 (IQB1486).
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

#### **A. EPA METHOD 8270C SIM—Polynuclear Aromatic Hydrocarbons (PAHs)**

Reviewed By: L. Calvin

Date Reviewed: March 27, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 8270C*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil sample was extracted within 14 days of collection and analyzed within 40 days of extraction.
- GC/MS Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had detects between the MDL and the reporting limit for fluoranthene (0.21 µg/Kg) and naphthalene (0.41 µg/Kg). Both compounds were detected in sample BLBS0036S01SP below the reporting limit, and were qualified as nondetects, "U," at the reporting limit.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.



- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: BLBS0036S01SP was analyzed as the batch MS/MSD. Recoveries and RPDs were within laboratory-established QC limits.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Field blank BLQW0018F01 had a detect for naphthalene; however, naphthalene was not detected in the site sample. Equipment rinsate FSQW0002E01 (IQB2570) had no reported target compound detects above the MDL.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: Review is not applicable at a Level V validation.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for PAH compounds and added phthalates.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Any results reported between the MDL and the reporting limit were qualified as estimated, "J." Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.
- System Performance: Review is not applicable at a Level V validation.

## B. EPA METHOD 8082—PCBs

Reviewed By: L. Calvin

Date Reviewed: March 27, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 0)*, *EPA Method 8082*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil sample was extracted within 14 days of collection and analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had no target compound detects above the MDL.

- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: BLBS0036S01SP was analyzed as the batch MS/MSD. Recoveries and RPDs were within laboratory-established QC limits.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Field blank BLQW0018F01 and equipment rinseate FSQW0002E01 (IQB2570) had no reported target compound detects above the MDL.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Compound Identification: Review is not applicable at a Level V validation.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Any results reported between the MDL and the reporting limit were qualified as estimated, "J." Reported nondetects are valid to the reporting limit.

### C. EPA METHOD 8015B—Extractable Total Fuel Hydrocarbons (EFHs)

Reviewed By: K. Shadowlight

Date Reviewed: March 28, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Total Fuel Hydrocarbons (DVP-8, Rev. 0)*, *EPA Method 8015B*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil sample was extracted within 14 days of collection and analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries and RPD were within laboratory-established QC limits for the LCS/LCSD pair.
- Surrogate Recovery: The recovery was within laboratory-established QC limits.

- Matrix Spike/Matrix Spike Duplicate: Recoveries and RPD were within laboratory-established QC limits.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were no detects reported in the field blank, BSQW0018F01 (IQB1202), or the equipment rinsate BSQW0018E01 (IQB1486).
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Compound Identification: Review is not applicable at a Level V validation. Four EFH hydrocarbon ranges were reported: C8-C11, C12-C14, C15-C20, and C21-C30.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Reported nondetects are valid to the reporting limit.

#### **D. EPA METHOD 9045C—General Minerals**

Reviewed By: P. Meeks

Date Reviewed: 3/30/07

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Method 9045C*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The analytical holding time, 24 hours from preparation for pH, was met.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Not applicable to this analysis.
- Blank Spikes and Laboratory Control Samples: Not applicable to this analysis.
- Laboratory Duplicates: Laboratory duplicate analyses were performed on BHBS0005S01SP and the RPD was within the laboratory-established limit of  $\leq 5\%$ .
- Matrix Spike/Matrix Spike Duplicate: Not applicable to this analysis.
- Sample Result Verification: Review is not applicable at a Level V validation.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Not applicable to this analysis.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

## MECX LLC

Sample ID: BHBS0005S01SP

Trace Level Organic Compounds

Lot - Sample #....: D7B150349 - 001  
 Date Sampled....: 02/13/07  
 Prep Date....: 02/20/07  
 Prep Batch # ....: 7051334  
 Initial Wgt/Vol : 10 g  
 Analyst ID....: Melissa A. Davidson

Work Order #....: JPH1T1AE  
 Date Received....: 02/15/07  
 Analysis Date....: 02/23/07  
 Instrument ID....: M2A

Matrix....: SO  
 Dilution Factor: 1  
 Percent Moisture: 3.8  
 Method: EPA-5 1613B

PARAMETER	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
u 2,3,7,8-TCDD	ND	1.0	0.41	ng/kg
Total TCDD	ND	1.0	0.41	ng/kg
1,2,3,7,8-PeCDD	ND	5.2	0.17	ng/kg
Total PeCDD	ND	5.2	0.17	ng/kg
1,2,3,4,7,8-HxCDD	ND	5.2	0.16	ng/kg
u 1,2,3,6,7,8-HxCDD	0.43 Q J	5.2	0.18	ng/kg
u 1,2,3,7,8,9-HxCDD	ND	5.2	0.16	ng/kg
J/*III Total HxCDD	1.8 Q J	5.2	0.17	ng/kg
1,2,3,4,6,7,8-HpCDD	12	5.2	0.23	ng/kg
Total HpCDD	25	5.2	0.23	ng/kg
OCDD	310 B	10	0.18	ng/kg
u 2,3,7,8-TCDF	ND	1.0	0.28	ng/kg
u 1,2,3,7,8-PeCDF	4.6 Q	1.0	0.28	ng/kg
u 1,2,3,7,8-PeCDF	ND	5.2	0.13	ng/kg
u 2,3,4,7,8-PeCDF	ND	5.2	0.11	ng/kg
J/*III Total PeCDF	4.8 Q J	5.2	0.12	ng/kg
u 1,2,3,4,7,8-HxCDF	ND	5.2	0.097	ng/kg
1,2,3,6,7,8-HxCDF	ND	5.2	0.10	ng/kg
2,3,4,6,7,8-HxCDF	ND	5.2	0.11	ng/kg
1,2,3,7,8,9-HxCDF	ND	5.2	0.14	ng/kg
J/*III Total HxCDF	3.4 J Q	5.2	0.11	ng/kg
1,2,3,4,6,7,8-HpCDF	1.3 J	5.2	0.16	ng/kg
u 1,2,3,4,7,8,9-HpCDF	ND	5.2	0.19	ng/kg
J Total HpCDF	3.9 J	5.2	0.17	ng/kg
J OCDF	2.2 J	10	0.16	ng/kg

Level II

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## MECX LLC

## Total Metals Analysis Data Sheet

Lab Name: STL DENVER  
Lot/SDG Number: D7B150349  
Matrix: SOLID  
% Moisture: 3.8  
Basis: Dry  
Analysis Method: 6020  
Unit: mg/kg  
QC Batch ID: 7052575  
Sample Aliquot: 1.01 g  
Dilution Factor: 1

Client Sample ID: BHBS0005S01SP  
Lab Sample ID: D7B150349-001  
Lab WorkOrder: JPH1T  
Date/Time Collected: 02/13/07 14:30  
Date/Time Received: 02/15/07 10:00  
Date Leached:   
Date/Time Extracted: 02/22/07 08:00  
Date/Time Analyzed: 02/23/07 16:45  
Instrument ID: 004

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-36-0	Antimony R/Q	0.066	0.066	0.21	U
7440-38-2	Arsenic J/A	3.0	0.015	0.62	L
7440-39-3	Barium	100	0.054	0.21	
7440-41-7	Beryllium	0.59	0.021	0.10	
7440-43-9	Cadmium	0.18	0.0064	0.10	
7440-47-3	Chromium J/A	19	0.062	0.21	B L
7440-48-4	Cobalt J/A	6.1	0.0026	0.10	L
7440-50-8	Copper J/A	9.2	0.084	0.26	L
7439-92-1	Lead	9.0	0.052	0.16	
7439-98-7	Molybdenum J/Q	0.38	0.017	0.21	
7440-02-0	Nickel J/A, Q	13	0.042	0.16	L
7782-49-2	Selenium	0.36	0.083	0.52	J
7440-22-4	Silver	0.048	0.016	0.10	J
7440-28-0	Thallium	0.28	0.0031	0.10	
7440-62-2	Vanadium	37	0.031	0.52	
7440-66-6	Zinc J/A	55	0.26	1.0	B L

LEVEL V

MECX LLC

Total Metals Analysis Data Sheet

Lab Name: STL DENVER  
 Lot/SDG Number: D7B150349  
 Matrix: SOLID  
 % Moisture: 3.8  
 Basis: Dry  
 Analysis Method: 6010B  
 Unit: mg/kg  
 QC Batch ID: 7052568  
 Sample Aliquot: 1 g  
 Dilution Factor: 1

Client Sample ID: BHBS0005S01SP  
 Lab Sample ID: D7B150349-001  
 Lab WorkOrder: JPH1T  
 Date/Time Collected: 02/13/07 14:30  
 Date/Time Received: 02/15/07 10:00  
 Date Leached:  
 Date/Time Extracted: 02/22/07 08:00  
 Date/Time Analyzed: 02/23/07 13:08  
 Instrument ID: 021

CAS No.	Analyte	Conc.	MDL	RL	Q
7429-90-5	Aluminum	15000	5.1	10	
7440-42-8	Boron U	1.0	1.0	10	U
7439-93-2	Lithium	21	0.31	5.2	
7440-09-7	Potassium	3400	43	310	
7440-23-5	Sodium	71	61	520	J
7440-67-7	Zirconium	2.9	0.71	3.1	J

LEVEL V

MECX LLC

Total Metals Analysis Data Sheet

Lab Name: STL DENVER  
 Lot/SDG Number: D7B150349  
 Matrix: SOLID  
 % Moisture: 3.8  
 Basis: Dry  
 Analysis Method: 7471A  
 Unit: mg/kg  
 QC Batch ID: 7050153  
 Sample Aliquot: 0.3 g  
 Dilution Factor: 1

Client Sample ID: BHBS0005S01SP  
 Lab Sample ID: D7B150349-001  
 Lab WorkOrder: JPH1T  
 Date/Time Collected: 02/13/07 14:30  
 Date/Time Received: 02/15/07 10:00  
 Date Leached:  
 Date/Time Extracted: 02/19/07 11:20  
 Date/Time Analyzed: 02/19/07 21:08  
 Instrument ID: 023

CAS No.	Analyte	Conc.	MDL	RL	Q
7439-97-6	Mercury <u>NJ/B</u>	0.0031	0.0029	0.034	J

*PM 4/3/07*

LEVEL V



MECX LLC

Total Metals Analysis Data Sheet

Lab Name: STL DENVER  
 Lot/SDG Number: D7B150349  
 Matrix: SOLID  
 % Moisture: 10  
 Basis: Dry  
 Analysis Method: 6020  
 Unit: mg/kg  
 QC Batch ID: 7052575  
 Sample Aliquot: 1 g  
 Dilution Factor: 1

Client Sample ID: BLBS0036S01SP  
 Lab Sample ID: D7B150349-002  
 Lab WorkOrder: JPXG  
 Date/Time Collected: 02/12/07 11:20  
 Date/Time Received: 02/16/07 09:30  
 Date Leached:   
 Date/Time Extracted: 02/22/07 08:00  
 Date/Time Analyzed: 02/23/07 17:03  
 Instrument ID: 004

CAS No.	Analyte	Conc.	MDL	RL	Q
7440-36-0	Antimony <i>R/Q</i>	0.071	0.071	0.22	U
7440-38-2	Arsenic <i>J/A</i>	2.7	0.016	0.67	L
7440-39-3	Barium	110	0.058	0.22	
7440-41-7	Beryllium	0.46	0.022	0.11	
7440-43-9	Cadmium	0.18	0.0068	0.11	
7440-47-3	Chromium <i>J/A</i>	17	0.067	0.22	B L
7440-48-4	Cobalt <i>J/A</i>	6.0	0.0028	0.11	L
7440-50-8	Copper <i>J/A</i>	10	0.090	0.28	L
7439-92-1	Lead	4.9	0.056	0.17	
7439-98-7	Molybdenum <i>J/Q</i>	0.36	0.018	0.22	
7440-02-0	Nickel <i>J/A, Q</i>	12	0.045	0.17	L
7782-49-2	Selenium	0.36	0.089	0.56	J
7440-22-4	Silver	0.044	0.018	0.11	J
7440-28-0	Thallium	0.27	0.0033	0.11	
7440-62-2	Vanadium	34	0.033	0.56	
7440-66-6	Zinc <i>J/A</i>	63	0.28	1.1	B L

LEVEL V

## MECX LLC

## Total Metals Analysis Data Sheet

Lab Name: STL DENVER  
Lot/SDG Number: D7B150349  
Matrix: SOLID  
% Moisture: 10  
Basis: Dry  
Analysis Method: 6010B  
Unit: mg/kg  
QC Batch ID: 7052568  
Sample Aliquot: 1.01 g  
Dilution Factor: 1

Client Sample ID: BLBS0036S01SP  
Lab Sample ID: D7B150349-002  
Lab WorkOrder: JPKXG  
Date/Time Collected: 02/12/07 11:20  
Date/Time Received: 02/16/07 09:30  
Date Leached:   
Date/Time Extracted: 02/22/07 08:00  
Date/Time Analyzed: 02/23/07 13:37  
Instrument ID: 021

CAS No.	Analyte	Conc.	MDL	RL	Q
7429-90-5	Aluminum	12000	5.5	11	
7440-42-8	Boron <u>UJ/B</u>	1.4	1.1	11	J
7439-93-2	Lithium	24	0.33	5.6	
7440-09-7	Potassium	4200	46	330	
7440-23-5	Sodium	72	66	560	J
7440-67-7	Zirconium	2.4	0.76	3.3	J

LEVEL V

MECX LLC

Total Metals Analysis Data Sheet

Lab Name: STL DENVER  
 Lot/SDG Number: D7B150349  
 Matrix: SOLID  
 % Moisture: 10  
 Basis: Dry  
 Analysis Method: 7471A  
 Unit: mg/kg  
 QC Batch ID: 7050153  
 Sample Aliquot: 0.31 g  
 Dilution Factor: 1

Client Sample ID: BLBS0036S01SP  
 Lab Sample ID: D7B150349-002  
 Lab WorkOrder: JPXG  
 Date/Time Collected: 02/12/07 11:20  
 Date/Time Received: 02/16/07 09:30  
 Date Leached:  
 Date/Time Extracted: 02/19/07 11:20  
 Date/Time Analyzed: 02/19/07 21:11  
 Instrument ID: 023

CAS No.	Analyte	Conc.	MDL	RL	Q
7439-97-6	Mercury <u>UJ/B</u>	0.0031	0.0031	0.037	U

LEVEL V

MECX LLC  
Analysis Data Sheet

Lab Name: STL DENVER  
Lot/SDG Number: D7B150349  
Matrix: SOLID  
% Moisture: 10  
Basis: Dry  
Analysis Method: 8270C-SIM  
Unit: ug/kg  
QC Batch ID: 7051144  
Sample Aliquot: 29.5 g  
Dilution Factor: 1.02

Client Sample ID: BLBS0036S01SP  
Lab Sample ID: D7B150349-002  
Lab WorkOrder: JPKXG1A5  
Date/Time Collected: 02/12/07 11:20  
Date/Time Received: 02/16/07 09:30  
Date Leached:   
Date/Time Extracted: 02/20/07 09:00  
Date/Time Analyzed: 02/28/07 11:22  
Instrument ID: Q

CAS No.	Analyte	Conc.	MDL	RL	Q
90-12-0	1-Methylnaphthalene	0.30	0.30	5.7	U
91-57-6	2-Methylnaphthalene	0.35	0.35	5.7	U
83-32-9	Acenaphthene	0.18	0.18	5.7	U
208-96-8	Acenaphthylene	0.19	0.19	5.7	U
120-12-7	Anthracene	0.15	0.15	5.7	U
56-55-3	Benzo(a)anthracene	0.17	0.17	5.7	U
50-32-8	Benzo(a)pyrene	0.16	0.16	5.7	U
205-99-2	Benzo(b)fluoranthene	0.22	0.16	5.7	J
191-24-2	Benzo(ghi)perylene	0.23	0.23	5.7	U
207-08-9	Benzo(k)fluoranthene	0.15	0.15	5.7	U
218-01-9	Chrysene	0.27	0.22	5.7	J
53-70-3	Dibenzo(a,h)anthracene	0.28	0.28	5.7	U
206-44-0	Fluoranthene	0.41	0.24	5.7	JB
86-73-7	Fluorene	0.26	0.26	5.7	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.28	0.28	5.7	U
91-20-3	Naphthalene	0.49	0.37	5.7	JB
85-01-8	Phenanthrene	0.49	0.35	5.7	J
129-00-0	Pyrene	0.32	0.20	5.7	J

CAS No.	Substrate	Conc.	Lower Limit	Upper Limit	Q
321-60-8	2-Fluorobiphenyl	83	39	104	
4165-60-0	Nitrobenzene-d5	76	42	112	
1718-51-0	Terphenyl-d14	88	35	112	

MECX LLC  
Analysis Data Sheet

Lab Name: STL DENVER  
Lot/SDG Number: D7B150349  
Matrix: SOLID  
% Moisture: 10  
Basis: Dry  
Analysis Method: 8082  
Unit: ug/kg  
QC Batch ID: 7051139  
Sample Aliquot: 29 g  
Dilution Factor: 1.03

Client Sample ID: BLBS0036S01SP  
Lab Sample ID: D7B150349-002  
Lab WorkOrder: IPKXG1A6  
Date/Time Collected: 02/12/07 11:20  
Date/Time Received: 02/16/07 09:30  
Date Leached:  
Date/Time Extracted: 02/20/07 09:00  
Date/Time Analyzed: 02/23/07 17:25  
Instrument ID: P3

CAS No.	Analyte	Conc.	MDL	RL	Q
12674-11-2	Aroclor 1016	5.8	5.8	38	U
11104-28-2	Aroclor 1221	18	18	54	U
11141-16-5	Aroclor 1232	5.9	5.9	38	U
53469-21-9	Aroclor 1242	10	10	38	U
12672-29-6	Aroclor 1248	6.4	6.4	38	U
11097-69-1	Aroclor 1254	6.3	6.3	38	U
11096-82-5	Aroclor 1260	3.0	3.0	38	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
2051-24-3	Decachlorobiphenyl	88	68	125	
877-09-8	Tetrachloro-m-xylene	81	67	129	

Level II



MECX LLC  
Analysis Data Sheet

Lab Name: STL DENVER  
 Lot/SDG Number: D7B150349  
 Matrix: SOLID  
 % Moisture: 10  
 Basis: Dry  
 Analysis Method: 8015B  
 Unit: mg/kg  
 QC Batch ID: 7050144  
 Sample Aliquot: 30 g  
 Dilution Factor: 1

Client Sample ID: BLBS0036S01SP  
 Lab Sample ID: D7B150349-002  
 Lab WorkOrder: JPXG1A7  
 Date/Time Collected: 02/12/07 11:20  
 Date/Time Received: 02/16/07 09:30  
 Date Leached:   
 Date/Time Extracted: 02/19/07 08:30  
 Date/Time Analyzed: 02/28/07 02:01  
 Instrument ID: U

CAS No.	Analyte	Conc.	MDL	RL	Q
Q937	EFH (C12-C14) <i>u</i>	1.1	1.1	4.5	U
Q1124	EFH (C15-C20)	1.1	1.1	4.5	U
Q853	EFH (C21-C30)	1.1	1.1	4.5	U
Q743	EFH (C8-C11) <i>↓</i>	1.1	1.1	4.5	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
84-15-1	o-Terphenyl	86	45	115	

*Level V*

MECX LLC

Client Sample ID: BHBS0005S01SP

General Chemistry

Lot-Sample #...: D7B150349-001 Work Order #...: JPH1T  
Date Sampled...: 02/13/07 14:30 Date Received...: 02/15/07

Matrix.....: SO

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	6.6	0.10	No Units	SW846 9045C	02/21/07	7053187
		Dilution Factor: 1		Analysis Time...: 17:54	MDL.....:	
* Total Solids	96	0.10	%	MCAWW 160.3 MOD	02/19/07	7059400
		Dilution Factor: 1		Analysis Time...: 15:15	MDL.....:	

\* Analysis not validated

LEVEL V

MRCX LLC

Client Sample ID: BLBS0036S01SP

General Chemistry

Lot-Sample #....: D7B150349-002    Work Order #....: JPKXG    Matrix.....: SO  
 Date Sampled....: 02/12/07 11:20    Date Received...: 02/16/07

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	7.2	0.10	No Units	SW846 9045C	02/21/07	7053187
		Dilution Factor: 1		Analysis Time...: 17:53	MDL.....:	
* Total Solids	90	0.10	%	MCAWW 160.3 MOD	02/19/07	7059400
		Dilution Factor: 1		Analysis Time...: 15:15	MDL.....:	

\* Analysis not validated

LEVEL V





# DATA VALIDATION REPORT

Boeing SSFL RFI Group 8 Data Gap

SAMPLE DELIVERY GROUP: 186359

Prepared by

MEC^X, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

**I. INTRODUCTION**

Task Order Title: Boeing SSFL RFI Group 8 Data Gap  
 Contract Task Order: 1261.500D.08.001  
 Sample Delivery Group: 186359  
 Project Manager: Dixie Hambrick  
 Matrix: water/soil  
 QC Level: V  
 No. of Samples: 10  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: GEL

**Table 1. Sample Identification**

Sample Name	Lab Sample Name	Sub-Lab Sample Name	Matrix	Collection	Method
BLBS0049S01	186359007	N/A	Soil	5/17/2007 12:50:00 PM	6010B, 6020, 7471A, 8015B, 8082, 8270C (PAH)
BLBS0050D01	186359008	N/A	Soil	5/17/2007 1:15:00 PM	6010B, 6020, 7471A, 8015B, 8082, 8270C (PAH)
BLBS0050S01	186359009	N/A	Soil	5/17/2007 1:15:00 PM	6010B, 6020, 7471A, 8015B, 8082, 8270C (PAH)
BLBS0051S01	186359006	N/A	Soil	5/17/2007 12:30:00 PM	6010B, 6020, 7471A, 8015B, 8082, 8270C (PAH)
BLBS0056S01	186359004	N/A	Soil	5/17/2007 9:15:00 AM	300.0, 8015B, 8270C
BLBS0056S02	186359005	N/A	Soil	5/17/2007 9:30:00 AM	300.0, 8015B, 8270C
BLBS0062D01	186359001	N/A	Soil	5/17/2007 8:00:00 AM	300.0, 8015B, 8270C
BLBS0062S01	186359002	N/A	Soil	5/17/2007 8:00:00 AM	300.0, 8015B, 8270C
BLBS0063S01	186359003	N/A	Soil	5/17/2007 8:45:00 AM	300.0, 8015B, 8270C
BLQW0019E01	186361001	N/A	Water	5/17/2007 1:00:00 PM	300.0, 6010B, 6020, 7470A 8015B, 8082, 8270C

## II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Sample custody seals were intact. If necessary, the client ID was added to the sample result summary by the reviewer.

**Data Qualifier Reference Table**

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

**Qualification Code Reference Table**

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 or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

**Qualification Code Reference Table Cont.**

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.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

### III. Method Analyses

#### A. EPA METHODS 6010B, 6020, 7470A/7471A—Metals and Mercury

Reviewed By: P. Meeks

Date Reviewed: June 1, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 6020, 7470A/7471A*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.
- Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Molybdenum was detected in method blank 635856 at 0.0365 mg/kg and mercury was reported in method blank 635900 at -0.00283 mg/kg. Molybdenum detected in BLBS0050D01 was qualified as estimated, "UJ." Mercury detected in BLBS0049S01, BLBS0050S01, and BLBS0050D01 was qualified as estimated, "J." Arsenic was detected in method blank 635858 at 2.19 µg/L, therefore, arsenic detected in BLQW0019E01 was qualified as estimated, "UJ."
- Interference Check Samples: Review is not applicable at a Level V validation.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed.
- Serial Dilution: No serial dilution analyses were performed.
- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. All CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.
- Sample Result Verification: Review is not applicable at a Level V validation. Nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were no detects in equipment rinsate BLBS0019E01. Thallium was detected in field blank BLQW0019E01 (186235) at 0.440 µg/L; therefore, thallium detected in BLBS0049S01, BLBS50S01, and BLBS0050D01 was qualified as estimated, “J.”
  - Field Duplicates: Samples BLBS0050S01 and BLBS0050D01 were identified as field duplicate samples. Sodium and molybdenum were reported in BLBS0050D01 but not in BLBS0050S01 and molybdenum was reported in BLBS0050S01 but not in BLBS0050D01. All remaining detects were in common and all RPDS were ≤100%.

## **B. EPA METHOD 8270C—Polynuclear Aromatic Hydrocarbons (PAHs)**

Reviewed By: L. Calvin

Date Reviewed: June 4, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 8270C*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and analyzed within 40 days of extraction.
- GC/MS Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had a detect between the MDL and the RL for bis(2-ethylhexyl) phthalate at 6.41 µg/Kg. Any sample detects for bis(2-ethylhexyl) phthalate less than ten times the blank concentration were qualified as estimated nondetects, “UJ.”
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a soil sample from this SDG. Evaluation of method accuracy was based on the blank spike results.



- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: No target compounds were detected in field blank BLQW0019F01 (186235). This SDG had no identified equipment rinsate for this analysis.
  - Field Duplicates: Field duplicates BLBS0050S01 and BLBS0050D01 had a common detect between the MDL and the RL for di-n-butyl phthalate. The pair was considered to be in agreement.
- Internal Standards Performance: Review is not applicable at a Level V validation.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for PAH compounds, NDMA, and added phthalates by Method 8270C/SIM.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this analysis.
- System performance: System performance is not evaluated at a Level V validation.

### C. EPA METHOD 8082—PCBs

Reviewed By: K. Shadowlight

Date Reviewed: June 2, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 0)*, *EPA Method 8082*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and the water sample was extracted within seven days of collection. All samples were analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blanks had no target compound detects above the MDL.

- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed for sample BLQW0019E01. The sample was identified as field QC and was not a good candidate for MS/MSD; therefore, the results were not assessed.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were no target compounds detected in the field blank, BLQW001901 (186235) or equipment rinsate, BLQW0019E01.
  - Field Duplicates: Samples BLBS0050S01 and BLBS0050D01 were identified as the field duplicate pair for this SDG. There were common detects for Aroclor 1248 and Aroclor 1254 with calculated RPDs  $\leq 100\%$ . The pair was considered to be in good agreement.
- Compound Identification: Intercolumn %D comparison is not routinely evaluated at a Level V validation; however, the laboratory flagged a result on the summary report for an intercolumn %D comparison that exceeded 40%. The laboratory denoted this detect with a P flag. Therefore, the result for Aroclor 1248 was qualified as estimated, "J," in site sample BLBS0051S01. The laboratory analyzed for Aroclors by Method 8082.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. According to the case narrative for this SDG, samples BLBS0050S01 and BLBS0050D01 were each analyzed at a 10 $\times$  dilution to report target compounds within linear range. Reported nondetects are valid to the reporting limit.

#### **D. EPA METHOD 8015B—Extractable Total Fuel Hydrocarbons (EFHs)**

Reviewed By: K. Shadowlight

Date Reviewed: June 2, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Total Fuel Hydrocarbons (DVP-8, Rev. 0)*, *EPA Method 8015B*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and the water sample was extracted within seven days of collection. All samples were analyzed within 40 days of extraction.

- Calibration: Review is not applicable at a Level V validation.
- Blanks: Target compound EFH (C8-C11) was reported at 1.34 mg/kg in the soil method blank. Any detects for EFH (C8-C11) reported at concentration less than five times the concentration of the method blank were qualified as nondetects, "U," and raised to the reporting limit in the soil site samples. There were no other target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits.
- Surrogate Recovery: The surrogate recovery exceeded QC limits in sample BLBS0049S01; therefore, detects were qualified as estimated, "J," in the sample. The remaining recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed for a sample in this SDG. Evaluation of method accuracy was based on blank spike results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: There were no target compounds detected in the field blank, BLQW0019F01 (186235), or equipment rinsate, BLQW0019E01.
  - Field Duplicates: Samples BLBS0050S01/BLBS0050D01 and BLBS0062S01/BLBS0062D01 were the field duplicate pairs identified for this SDG. Target compound EFH (C21-C30) was reported in field duplicate pair BLBS0050S01/D01, with a calculated RPD  $\leq 100\%$ . Target compound EFH (C15-C20) was reported at a concentration between the MDL and the reporting limit in BLBS0050D01 only. There were no other reportable target compounds detected in the field duplicate pairs. The pairs were considered to be in agreement.
- Compound Identification: Review is not applicable at a Level V validation. Four EFH hydrocarbon ranges were reported: C8-C11, C12-C14, C15-C20, and C21-C30. In addition the laboratory reported m-terphenyl, o-terphenyl, and p-terphenyl. For a selection of samples only terphenyls were reported.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Any results reported between the MDL and the reporting limit were qualified as estimated, "J." Reported nondetects are valid to the reporting limit.

## E. EPA METHOD 8270C —Semivolatile Organic Compounds (SVOC)

Reviewed By: L. Calvin

Date Reviewed: June 4, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 8270C*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and were analyzed within 40 days of extraction.
- GC/MS Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blanks had no target compound detects above the MDL. Three TICs were reported in the soil method blank, and six TICs were reported in the water method blank. Any sample TICs at the same retention times as the blank TICs were rejected, "R."
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a soil sample from this SDG. The laboratory performed MS/MSD analyses on the equipment rinsate BLQW0019E01; however, as field QC samples are not valid MS/MSD candidates, the results were not evaluated. Evaluation of method accuracy was based on the blank spike results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: No target compounds were detected in field blank BLQW0019F01 (186235) or equipment rinsate BLQW0019E01.
  - Field Duplicates: Field duplicates BLBS0062S01 and BLBS0062D01 had no target compounds detected above the MDL. Both samples had nine reportable TICs. The pair was considered to be in agreement.
- Internal Standards Performance: Review is not applicable at a Level V validation.

- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for SVOC compounds by Method 8270C. Any reportable TICs in the samples of this SDG were qualified as tentatively identified, "N."
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: The laboratory performed a TIC search for the samples. Any reportable TICs in the samples of this SDG were qualified as estimated, "J."
- System performance: System performance is not evaluated at a Level V validation.

#### A. EPA METHOD 300.0—General Minerals

Reviewed By: P. Meeks

Date Reviewed: June 1, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Method 300.0*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The analytical holding time, 28 days from collection for fluoride, was met.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks and CCBs had no detects.
- Blank Spikes and Laboratory Control Samples: The recovery was within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed.
- Sample Result Verification: Review is not applicable at a Level V validation. Reported nondetects are valid to the reporting limit.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Fluoride was not detected in field blank BLQW0019F01 (186235) or equipment rinsate BLQW0019E01.

- Field Duplicates: Samples BLBS0062S01 and BLBS0062D01 were identified as field duplicate samples. Fluoride was detected in both samples and the RPD was  $\leq 100\%$ .

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 186359S

CONTRACT: SSFL00507

METHOD TYPE: SW846

SAMPLE ID: 186359006

BASIS: Dry Weight

DATE COLLECTED 17-MAY-07

CLIENT ID: BLBS0051S01

LEVEL: Low

DATE RECEIVED 18-MAY-07

MATRIX: SOIL

%SOLIDS: 96

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10300	mg/kg		6.87	20.2	20	1	P	JWJ	05/24/07 00:39	052307B-3	635831
7440-36-0	Antimony U	0.103	mg/kg	U	0.103	.413	1	2	MS	BAJ	05/23/07 03:42	070522-4	635857
7440-38-2	Arsenic	3.2	mg/kg		0.31	1.03	1	2	MS	BAJ	05/23/07 03:42	070522-4	635857
7440-39-3	Barium	76.9	mg/kg		0.103	.413	0.5	2	MS	BAJ	05/23/07 03:42	070522-4	635857
7440-41-7	Beryllium	0.470	mg/kg	J	0.103	.517	0.3	10	MS	BAJ	05/23/07 02:29	070522-4	635857
7440-42-8	Boron	2.2	mg/kg	J	1.01	5.05	5	1	P	JWJ	05/24/07 00:39	052307B-3	635831
7440-43-9	Cadmium	0.250	mg/kg		0.0207	.207	0.5	2	MS	BAJ	05/23/07 03:42	070522-4	635857
7440-47-3	Chromium	15.4	mg/kg		1.03	3.1	1	10	MS	BAJ	05/23/07 02:29	070522-4	635857
7440-48-4	Cobalt	5.3	mg/kg		0.103	1.03	0.5	10	MS	BAJ	05/23/07 02:29	070522-4	635857
7440-50-8	Copper	8.4	mg/kg		0.207	1.03	1	10	MS	BAJ	05/23/07 02:29	070522-4	635857
7439-92-1	Lead	10.3	mg/kg		0.103	.413	0.5	2	MS	BAJ	05/23/07 16:02	070523-8	635857
7439-93-2	Lithium	21	mg/kg		2.07	10.3	6.3	10	MS	BAJ	05/23/07 02:29	070522-4	635857
7439-97-6	Mercury	0.034	mg/kg		0.00227	.00906	0.2	1	AV	ETL	05/22/07 08:53	052207S1-1	635902
7439-98-7	Molybdenum	0.290	mg/kg		0.0207	.103	1	2	MS	BAJ	05/23/07 11:35	070523-5	635857
7440-02-0	Nickel	9	mg/kg		0.517	2.07	1	10	MS	BAJ	05/23/07 02:29	070522-4	635857
7440-09-7	Potassium	2750	mg/kg		82.7	310	50	10	MS	BAJ	05/23/07 15:31	070523-8	635857
7782-49-2	Selenium U	0.517	mg/kg	U	0.517	1.03	1	2	MS	BAJ	05/23/07 03:42	070522-4	635857
7440-22-4	Silver	0.047	mg/kg	J	0.0413	.207	0.5	2	MS	BAJ	05/23/07 03:42	070522-4	635857
7440-23-5	Sodium	109	mg/kg	J	82.7	258	50	10	MS	BAJ	05/23/07 15:31	070523-8	635857
7440-28-0	Thallium	0.230	mg/kg		0.0827	.207	0.5	2	MS	BAJ	05/23/07 03:42	070522-4	635857
7440-62-2	Vanadium	26.5	mg/kg		2.07	10.3	2	10	MS	BAJ	05/23/07 02:29	070522-4	635857
7440-66-6	Zinc	94.1	mg/kg		0.413	2.07	10	2	MS	BAJ	05/23/07 03:42	070522-4	635857
7440-67-7	Zirconium	1.9	mg/kg		0.103	.413	25	2	MS	BAJ	05/23/07 15:29	070523-2	635857

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
635831	635829	SW846 3050B	0.516	g	50	mL	05/21/07	SXJ1
635857	635856	SW846 3050B	0.504	g	50	mL	05/21/07	SXJ1
635902	635900	SW846 7471A Prep	0.69	g	30	mL	05/21/07	RDD1

LEVEL V

**METALS**  
-1-  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 186359S

CONTRACT: SSFL00507

METHOD TYPE: SW846

SAMPLE ID: 186359007

BASIS: Dry Weight

DATE COLLECTED 17-MAY-07

CLIENT ID: BLBS0049S01

LEVEL: Low

DATE RECEIVED 18-MAY-07

MATRIX: SOIL

%SOLIDS: 97.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7540	mg/kg		6.69	19.7	20	1	P	JWJ	05/24/07 00:46	052307B-3	635831
7440-36-0	Antimony U	0.103	mg/kg	U	0.103	.41	1	2	MS	BAJ	05/23/07 03:47	070522-4	635857
7440-38-2	Arsenic	2.6	mg/kg		0.308	1.03	1	2	MS	BAJ	05/23/07 03:47	070522-4	635857
7440-39-3	Barium	57	mg/kg		0.103	.41	0.5	2	MS	BAJ	05/23/07 03:47	070522-4	635857
7440-41-7	Beryllium	0.390	mg/kg	J	0.103	.513	0.3	10	MS	BAJ	05/23/07 02:34	070522-4	635857
7440-42-8	Boron	1.7	mg/kg	J	0.984	4.92	5	1	P	JWJ	05/24/07 00:46	052307B-3	635831
7440-43-9	Cadmium	0.240	mg/kg		0.0205	.205	0.5	2	MS	BAJ	05/23/07 03:47	070522-4	635857
7440-47-3	Chromium	13	mg/kg		1.03	3.08	1	10	MS	BAJ	05/23/07 02:34	070522-4	635857
7440-48-4	Cobalt	4.6	mg/kg		0.103	1.03	0.5	10	MS	BAJ	05/23/07 02:34	070522-4	635857
7440-50-8	Copper	10.2	mg/kg		0.205	1.03	1	10	MS	BAJ	05/23/07 02:34	070522-4	635857
7439-92-1	Lead	9.3	mg/kg		0.103	.41	0.5	2	MS	BAJ	05/23/07 16:04	070523-8	635857
7439-93-2	Lithium	20.4	mg/kg		2.05	10.3	6.3	10	MS	BAJ	05/23/07 02:34	070522-4	635857
7439-97-6	Mercury J/B	0.013	mg/kg		0.0023	.00919	0.2	1	AV	ETL	05/22/07 08:55	052207S1-1	635902
7439-98-7	Molybdenum	0.190	mg/kg		0.0205	.103	1	2	MS	BAJ	05/23/07 11:40	070523-5	635857
7440-02-0	Nickel	7.6	mg/kg		0.513	2.05	1	10	MS	BAJ	05/23/07 02:34	070522-4	635857
7440-09-7	Potassium	2200	mg/kg		82	308	50	10	MS	BAJ	05/23/07 15:33	070523-8	635857
7782-49-2	Selenium U	0.513	mg/kg	U	0.513	1.03	1	2	MS	BAJ	05/23/07 03:47	070522-4	635857
7440-22-4	Silver U	0.041	mg/kg	U	0.041	.205	0.5	2	MS	BAJ	05/23/07 03:47	070522-4	635857
7440-23-5	Sodium	105	mg/kg	J	82	256	50	10	MS	BAJ	05/23/07 15:33	070523-8	635857
7440-28-0	Thallium J/F	0.20	mg/kg	J	0.082	.205	0.5	2	MS	BAJ	05/23/07 03:47	070522-4	635857
7440-62-2	Vanadium	23	mg/kg		2.05	10.3	2	10	MS	BAJ	05/23/07 02:34	070522-4	635857
7440-66-6	Zinc	116	mg/kg		0.41	2.05	10	2	MS	BAJ	05/23/07 03:47	070522-4	635857
7440-67-7	Zirconium	1.4	mg/kg		0.103	.41	25	2	MS	BAJ	05/23/07 15:31	070523-2	635857

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
635831	635829	SW846 3050B	0.523	g	50	mL	05/21/07	SXJ1
635857	635856	SW846 3050B	0.502	g	50	mL	05/21/07	SXJ1
635902	635900	SW846 7471A Prep	0.672	g	30	mL	05/21/07	RDD1

LEVEL V



**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 186359S

CONTRACT: SSFL00507

METHOD TYPE: SW846

SAMPLE ID: 186359008

BASIS: Dry Weight

DATE COLLECTED 17-MAY-07

CLIENT ID: BLBS0050D01

LEVEL: Low

DATE RECEIVED 18-MAY-07

MATRIX: SOIL

%SOLIDS: 97.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	6740	mg/kg		6.9	20.3	20	1	P	JWJ	05/24/07 00:53	052307B-3	635831
7440-36-0	Antimony U	0.102	mg/kg	U	0.102	.406	1	2	MS	BAJ	05/23/07 03:52	070522-4	635857
7440-38-2	Arsenic	2	mg/kg		0.305	1.02	1	2	MS	BAJ	05/23/07 03:52	070522-4	635857
7440-39-3	Barium	50.4	mg/kg		0.102	.406	0.5	2	MS	BAJ	05/23/07 03:52	070522-4	635857
7440-41-7	Beryllium	0.270	mg/kg	J	0.102	.508	0.3	10	MS	BAJ	05/23/07 02:39	070522-4	635857
7440-42-8	Boron U	1.02	mg/kg	U	1.02	5.08	5	1	P	JWJ	05/24/07 00:53	052307B-3	635831
7440-43-9	Cadmium	0.110	mg/kg	J	0.0203	.203	0.5	2	MS	BAJ	05/23/07 03:52	070522-4	635857
7440-47-3	Chromium	9.5	mg/kg		1.02	3.05	1	10	MS	BAJ	05/23/07 02:39	070522-4	635857
7440-48-4	Cobalt	3.7	mg/kg		0.102	1.02	0.5	10	MS	BAJ	05/23/07 02:39	070522-4	635857
7440-50-8	Copper	5.1	mg/kg		0.203	1.02	1	10	MS	BAJ	05/23/07 02:39	070522-4	635857
7439-92-1	Lead	4.3	mg/kg		0.102	.406	0.5	2	MS	BAJ	05/23/07 16:06	070523-8	635857
7439-93-2	Lithium	16	mg/kg		2.03	10.2	6.3	10	MS	BAJ	05/23/07 02:39	070522-4	635857
7439-97-6	Mercury J/B	0.004	mg/kg	J	0.00248	.00992	0.2	1	AV	ETL	05/22/07 08:57	052207S1-1	635902
7439-98-7	Molybdenum U/B	0.160	mg/kg		0.0203	.102	1	2	MS	BAJ	05/23/07 11:44	070523-5	635857
7440-02-0	Nickel	5.3	mg/kg		0.508	2.03	1	10	MS	BAJ	05/23/07 02:39	070522-4	635857
7440-09-7	Potassium	1730	mg/kg		81.2	305	50	10	MS	BAJ	05/23/07 15:35	070523-8	635857
7782-49-2	Selenium U	0.508	mg/kg	U	0.508	1.02	1	2	MS	BAJ	05/23/07 03:52	070522-4	635857
7440-22-4	Silver U	0.0406	mg/kg	U	0.0406	.203	0.5	2	MS	BAJ	05/23/07 03:52	070522-4	635857
7440-23-5	Sodium	88.2	mg/kg	J	81.2	254	50	10	MS	BAJ	05/23/07 15:35	070523-8	635857
7440-28-0	Thallium J/F	0.160	mg/kg	J	0.0812	.203	0.5	2	MS	BAJ	05/23/07 03:52	070522-4	635857
7440-62-2	Vanadium	17.7	mg/kg		2.03	10.2	2	10	MS	BAJ	05/23/07 02:39	070522-4	635857
7440-66-6	Zinc	40.6	mg/kg		0.406	2.03	10	2	MS	BAJ	05/23/07 03:52	070522-4	635857
7440-67-7	Zirconium	1.1	mg/kg		0.102	.406	25	2	MS	BAJ	05/23/07 15:32	070523-2	635857

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
635831	635829	SW846 3050B	0.505	g	50	mL	05/21/07	SXJ1
635857	635856	SW846 3050B	0.505	g	50	mL	05/21/07	SXJ1
635902	635900	SW846 7471A Prep	0.62	g	30	mL	05/21/07	RDD1

LEVEL V

METALS  
-1-  
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 186359S

CONTRACT: SSFL00507

METHOD TYPE: SW846

SAMPLE ID: 186359009

BASIS: Dry Weight

DATE COLLECTED 17-MAY-07

CLIENT ID: BLBS0050S01

LEVEL: Low

DATE RECEIVED 18-MAY-07

MATRIX: SOIL

%SOLIDS: 97.9

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	6140	mg/kg		6.78	20	20	1	P	JWJ	05/24/07 01:00	052307B-3	635831
7440-36-0	Antimony U	0.0994	mg/kg	U	0.0994	.398	1	2	MS	BAJ	05/23/07 03:57	070522-4	635857
7440-38-2	Arsenic	2	mg/kg		0.298	.994	1	2	MS	BAJ	05/23/07 03:57	070522-4	635857
7440-39-3	Barium	49.4	mg/kg		0.0994	.398	0.5	2	MS	BAJ	05/23/07 03:57	070522-4	635857
7440-41-7	Beryllium	0.330	mg/kg	J	0.0994	.497	0.3	10	MS	BAJ	05/23/07 02:45	070522-4	635857
7440-42-8	Boron	1.1	mg/kg	J	0.998	4.99	5	1	P	JWJ	05/24/07 01:00	052307B-3	635831
7440-43-9	Cadmium	0.130	mg/kg	J	0.0199	.199	0.5	2	MS	BAJ	05/23/07 03:57	070522-4	635857
7440-47-3	Chromium	10.1	mg/kg		0.994	2.98	1	10	MS	BAJ	05/23/07 02:45	070522-4	635857
7440-48-4	Cobalt	4.3	mg/kg		0.0994	.994	0.5	10	MS	BAJ	05/23/07 02:45	070522-4	635857
7440-50-8	Copper	4.8	mg/kg		0.199	.994	1	10	MS	BAJ	05/23/07 02:45	070522-4	635857
7439-92-1	Lead	4.3	mg/kg		0.0994	.398	0.5	2	MS	BAJ	05/23/07 16:09	070523-8	635857
7439-93-2	Lithium	11.7	mg/kg		1.99	9.94	6.3	10	MS	BAJ	05/23/07 02:45	070522-4	635857
7439-97-6	Mercury J/B	0.0087	mg/kg	J	0.00225	.00902	0.2	1	AV	ETL	05/22/07 08:59	052207S1-1	635902
7439-98-7	Molybdenum	0.190	mg/kg		0.0199	.0994	1	2	MS	BAJ	05/23/07 11:49	070523-5	635857
7440-02-0	Nickel	6.1	mg/kg		0.497	1.99	1	10	MS	BAJ	05/23/07 02:45	070522-4	635857
7440-09-7	Potassium	1310	mg/kg		79.5	298	50	10	MS	BAJ	05/23/07 15:37	070523-8	635857
7782-49-2	Selenium U	0.497	mg/kg	U	0.497	.994	1	2	MS	BAJ	05/23/07 03:57	070522-4	635857
7440-22-4	Silver	0.0398	mg/kg	U	0.0398	.199	0.5	2	MS	BAJ	05/23/07 03:57	070522-4	635857
7440-23-5	Sodium	79.5	mg/kg	U	79.5	248	50	10	MS	BAJ	05/23/07 15:37	070523-8	635857
7440-28-0	Thallium J/F	0.130	mg/kg	J	0.0795	.199	0.5	2	MS	BAJ	05/23/07 03:57	070522-4	635857
7440-62-2	Vanadium	17.9	mg/kg		1.99	9.94	2	10	MS	BAJ	05/23/07 02:45	070522-4	635857
7440-66-6	Zinc	28.8	mg/kg		0.398	1.99	10	2	MS	BAJ	05/23/07 03:57	070522-4	635857
7440-67-7	Zirconium	1.5	mg/kg		0.0994	.398	25	2	MS	BAJ	05/23/07 15:34	070523-2	635857

## Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
635831	635829	SW846 3050B	0.512	g	50	mL	05/21/07	SXJ1
635857	635856	SW846 3050B	0.514	g	50	mL	05/21/07	SXJ1
635902	635900	SW846 7471A Prep	0.68	g	30	mL	05/21/07	RDD1

LEVEL V

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 186359W

CONTRACT: SSFL00507

METHOD TYPE: SW846

SAMPLE ID: 186361001

BASIS: As Received

DATE COLLECTED 17-MAY-07

CLIENT ID: BLQW0019E01

LEVEL: Low

DATE RECEIVED 18-MAY-07

MATRIX: WATER

%SOLIDS:

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	0.068	mg/L	U	0.068	.2	0.05	1	P	JWJ	05/23/07 21:03	052307B-2	635838
7440-36-0	Antimony	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	05/23/07 08:06	070522-7	635859
7440-38-2	Arsenic	2	ug/L	J	1.5	5	1	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7440-39-3	Barium	0.50	ug/L	U	0.5	2	1	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7440-41-7	Beryllium	0.10	ug/L	U	0.1	.5	0.5	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7440-42-8	Boron	0.010	mg/L	U	0.01	.05	0.05	1	P	JWJ	05/23/07 21:03	052307B-2	635838
7440-43-9	Cadmium	0.10	ug/L	U	0.1	1	1	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7440-47-3	Chromium	1	ug/L	U	1	3	2	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7440-48-4	Cobalt	0.10	ug/L	U	0.1	1	1	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7440-50-8	Copper	0.20	ug/L	U	0.2	1	2	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7439-92-1	Lead	0.50	ug/L	U	0.5	2	1	1	MS	BAJ	05/23/07 14:55	070523-8	635859
7439-93-2	Lithium	0.002	mg/L	U	0.002	.01	0.05	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7439-98-7	Molybdenum	0.10	ug/L	U	0.1	.5	2	1	MS	BAJ	05/23/07 08:06	070522-7	635859
7440-02-0	Nickel	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7440-09-7	Potassium	0.080	mg/L	U	0.08	.3	0.5	1	MS	BAJ	05/23/07 14:55	070523-8	635859
7782-49-2	Selenium	2.5	ug/L	U	2.5	5	2	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7440-22-4	Silver	0.20	ug/L	U	0.2	1	1	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7440-23-5	Sodium	0.080	mg/L	U	0.08	.25	0.5	1	MS	BAJ	05/23/07 14:55	070523-8	635859
7440-28-0	Thallium	0.40	ug/L	U	0.4	1	1	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7440-62-2	Vanadium	10	ug/L	UN	10	30	2	1	MS	BAJ	05/23/07 14:55	070523-8	635859
7440-66-6	Zinc	2	ug/L	U	2	10	20	1	MS	BAJ	05/22/07 19:15	070522-3	635859
7440-67-7	Zirconium	0.0005	mg/L	U	0.0005	.002	0.2	1	MS	BAJ	05/23/07 15:45	070523-1	635859

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
635838	635835	SW846 3005A	50	mL	50	mL	05/21/07	SXJ1
635859	635858	SW846 3005A	50	mL	50	mL	05/21/07	SXJ1

LEVEL V

**Semi-Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186359S  
Lab Sample ID: 186359006  
Client Sample: EH VOC  
Client ID: BLBS0051S01  
Batch ID: 635765  
Run Date: 05/22/2007 04:07  
Data File: s8e2147.d  
Prep Batch: 635764  
Prep Date: 05/21/2007 10:30

Client: SSFL001  
Date Collected: 05/17/2007 12:30  
Date Received: 05/18/2007 10:30  
Method: SW846 8270C  
Analyst: NAG1  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD8.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: .5 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	17.4	ug/kg	3.47	17.4	20.0
83-32-9	Acenaphthene	U	17.4	ug/kg	5.80	17.4	20.0
129-00-0	Pyrene	U	17.4	ug/kg	5.45	17.4	20.0
91-20-3	Naphthalene	U	17.4	ug/kg	5.21	17.4	20.0
91-57-6	2-Methylnaphthalene	U	17.4	ug/kg	3.47	17.4	20.0
90-12-0	1-Methylnaphthalene	U	17.4	ug/kg	5.21	17.4	20.0
131-11-3	Dimethyl phthalate <i>Dimethylphthalate</i>	U	17.4	ug/kg	5.21	17.4	20.0
208-96-8	Acenaphthylene	U	17.4	ug/kg	5.21	17.4	20.0
84-66-2	Diethyl phthalate <i>Diethylphthalate</i>	U	17.4	ug/kg	5.21	17.4	20.0
86-73-7	Fluorene	U	17.4	ug/kg	5.21	17.4	20.0
85-01-8	Phenanthrene	U	17.4	ug/kg	5.21	17.4	20.0
120-12-7	Anthracene	U	17.4	ug/kg	3.47	17.4	20.0
84-74-2	Di-n-butyl phthalate <i>Di-n-butylphthalate</i>	J	19.5	ug/kg	5.21	17.4	20.0
206-44-0	Fluoranthene	U	17.4	ug/kg	5.21	17.4	20.0
85-68-7	Butyl benzyl phthalate <i>Butylbenzylphthalate</i>	U	17.4	ug/kg	5.21	17.4	20.0
56-55-3	Benzo(a)anthracene	U	17.4	ug/kg	5.21	17.4	20.0
218-01-9	Chrysene	U	17.4	ug/kg	5.21	17.4	20.0
117-81-7	Bis(2-ethylhexyl)phthalate <i>bis(2-Ethylhexyl)phthalate</i>	B	72.4	ug/kg	3.47	17.4	20.0
117-84-0	Di-n-octyl phthalate <i>Di-n-octylphthalate</i>	U	17.4	ug/kg	5.21	17.4	20.0
205-99-2	Benzo(b)fluoranthene	U	17.4	ug/kg	5.21	17.4	20.0
207-08-9	Benzo(k)fluoranthene	U	17.4	ug/kg	5.21	17.4	20.0
50-32-8	Benzo(a)pyrene	U	17.4	ug/kg	5.21	17.4	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	17.4	ug/kg	5.21	17.4	20.0
53-70-3	Dibenzo(a,h)anthracene	U	17.4	ug/kg	5.21	17.4	20.0
191-24-2	Benzo(ghi)perylene	U	17.4	ug/kg	5.21	17.4	20.0

**Surrogate/Tracer recovery**

	Result	Nominal	Units	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	1300	1740	ug/kg	75	(45%-97%)
2-Fluorophenol	1260	1740	ug/kg	73	(35%-98%)
Phenol-d5	1250	1740	ug/kg	72	(45%-95%)
2-Fluorobiphenyl	646	868	ug/kg	74	(45%-101%)
Nitrobenzene-d5	643	868	ug/kg	74	(45%-101%)
p-Terphenyl-d14	834	868	ug/kg	96	(41%-114%)

**Comments:**

- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.  
J Value is estimated  
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

level #



Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359007  
Client Sample: EH VOC  
Client ID: BLBS0049S01  
Batch ID: 635765  
Run Date: 05/22/2007 04:30  
Data File: s8e2148.d  
Prep Batch: 635764  
Prep Date: 05/21/2007 10:30

Client: SSFL001  
Date Collected: 05/17/2007 12:50  
Date Received: 05/18/2007 10:30  
Method: SW846 8270C  
Analyst: NAG1  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.8  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD8.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: .5 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	17.2	ug/kg	3.43	17.2	20.0
83-32-9	Acenaphthene	U	17.2	ug/kg	5.73	17.2	20.0
129-00-0	Pyrene	U	17.2	ug/kg	5.39	17.2	20.0
91-20-3	Naphthalene	U	17.2	ug/kg	5.15	17.2	20.0
91-57-6	2-Methylnaphthalene	U	17.2	ug/kg	3.43	17.2	20.0
90-12-0	1-Methylnaphthalene	U	17.2	ug/kg	5.15	17.2	20.0
131-11-3	Dimethyl phthalate <i>Dimethylphthalate</i>	U	17.2	ug/kg	5.15	17.2	20.0
208-96-8	Acenaphthylene	U	17.2	ug/kg	5.15	17.2	20.0
84-66-2	Diethyl phthalate <i>Diethylphthalate</i>	U	17.2	ug/kg	5.15	17.2	20.0
86-73-7	Fluorene	U	17.2	ug/kg	5.15	17.2	20.0
85-01-8	Phenanthrene	U	17.2	ug/kg	5.15	17.2	20.0
120-12-7	Anthracene	U	17.2	ug/kg	3.43	17.2	20.0
84-74-2	Di-n-butyl phthalate <i>Di-n-butylphthalate</i>	U	17.2	ug/kg	5.15	17.2	20.0
206-44-0	Fluoranthene	U	17.2	ug/kg	5.15	17.2	20.0
85-68-7	Butyl benzyl phthalate <i>Butylbenzylphthalate</i>	U	17.2	ug/kg	5.15	17.2	20.0
56-55-3	Benzo(a)anthracene	U	17.2	ug/kg	5.15	17.2	20.0
218-01-9	Chrysene	U	17.2	ug/kg	5.15	17.2	20.0
117-81-7	Bis(2-ethylhexyl)phthalate <i>bis(2-Ethylhexyl)phthalate</i>	U	17.2	ug/kg	3.43	17.2	20.0
117-84-0	Di-n-octyl phthalate <i>Di-n-octylphthalate</i>	U	17.2	ug/kg	5.15	17.2	20.0
205-99-2	Benzo(b)fluoranthene	U	17.2	ug/kg	5.15	17.2	20.0
207-08-9	Benzo(k)fluoranthene	U	17.2	ug/kg	5.15	17.2	20.0
50-32-8	Benzo(a)pyrene	U	17.2	ug/kg	5.15	17.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	17.2	ug/kg	5.15	17.2	20.0
53-70-3	Dibenzo(a,h)anthracene	U	17.2	ug/kg	5.15	17.2	20.0
191-24-2	Benzo(ghi)perylene	U	17.2	ug/kg	5.15	17.2	20.0

## Surrogate/Tracer recovery

	Result	Nominal	Units	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	977	1720	ug/kg	57	(45%-97%)
2-Fluorophenol	1050	1720	ug/kg	61	(35%-98%)
Phenol-d5	1010	1720	ug/kg	59	(45%-95%)
2-Fluorobiphenyl	536	858	ug/kg	62	(45%-101%)
Nitrobenzene-d5	550	858	ug/kg	64	(45%-101%)
p-Terphenyl-d14	605	858	ug/kg	71	(41%-114%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

**Semi-Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186359S  
Lab Sample ID: 186359008  
Client Sample: EH VOC  
Client ID: BLBS0050D01  
Batch ID: 635765  
Run Date: 05/22/2007 04:53  
Data File: s8e2149.d  
Prep Batch: 635764  
Prep Date: 05/21/2007 10:30

Client: SSFL001  
Date Collected: 05/17/2007 13:15  
Date Received: 05/18/2007 10:30  
Method: SW846 8270C  
Analyst: NAG1  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.5  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD8.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: .5 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	17.1	ug/kg	3.42	17.1	20.0
83-32-9	Acenaphthene	U	17.1	ug/kg	5.71	17.1	20.0
129-00-0	Pyrene	U	17.1	ug/kg	5.37	17.1	20.0
91-20-3	Naphthalene	U	17.1	ug/kg	5.13	17.1	20.0
91-57-6	2-Methylnaphthalene	U	17.1	ug/kg	3.42	17.1	20.0
90-12-0	1-Methylnaphthalene	U	17.1	ug/kg	5.13	17.1	20.0
131-11-3	Dimethyl phthalate <i>Dimethylphthalate</i>	U	17.1	ug/kg	5.13	17.1	20.0
208-96-8	Acenaphthylene	U	17.1	ug/kg	5.13	17.1	20.0
84-66-2	Diethyl phthalate <i>Diethylphthalate</i>	U	17.1	ug/kg	5.13	17.1	20.0
86-73-7	Fluorene	U	17.1	ug/kg	5.13	17.1	20.0
85-01-8	Phenanthrene	U	17.1	ug/kg	5.13	17.1	20.0
120-12-7	Anthracene	U	17.1	ug/kg	3.42	17.1	20.0
84-74-2	Di-n-butyl phthalate <i>Di-n-butylphthalate</i>	J	6.54	ug/kg	5.13	17.1	20.0
206-44-0	Fluoranthene	U	17.1	ug/kg	5.13	17.1	20.0
85-68-7	Butyl benzyl phthalate <i>Butylbenzylphthalate</i>	U	17.1	ug/kg	5.13	17.1	20.0
56-55-3	Benzo(a)anthracene	U	17.1	ug/kg	5.13	17.1	20.0
218-01-9	Chrysene	U	17.1	ug/kg	5.13	17.1	20.0
117-81-7	Bis(2-ethylhexyl)phthalate <i>bis(2-Ethylhexyl)phthalate</i>	BJ	19.3	ug/kg	3.42	17.1	20.0
117-84-0	Di-n-octyl phthalate <i>Di-n-octylphthalate</i>	U	17.1	ug/kg	5.13	17.1	20.0
205-99-2	Benzo(b)fluoranthene	U	17.1	ug/kg	5.13	17.1	20.0
207-08-9	Benzo(k)fluoranthene	U	17.1	ug/kg	5.13	17.1	20.0
50-32-8	Benzo(a)pyrene	U	17.1	ug/kg	5.13	17.1	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	17.1	ug/kg	5.13	17.1	20.0
53-70-3	Dibenzo(a,h)anthracene	U	17.1	ug/kg	5.13	17.1	20.0
191-24-2	Benzo(ghi)perylene	U	17.1	ug/kg	5.13	17.1	20.0

## Surrogate/Tracer recovery

	Result	Nominal	Units	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	1370	1710	ug/kg	80	(45%-97%)
2-Fluorophenol	1180	1710	ug/kg	69	(35%-98%)
Phenol-d5	1180	1710	ug/kg	69	(45%-95%)
2-Fluorobiphenyl	614	855	ug/kg	72	(45%-101%)
Nitrobenzene-d5	627	855	ug/kg	73	(45%-101%)
p-Terphenyl-d14	717	855	ug/kg	84	(41%-114%)

## Comments:

- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.  
J Value is estimated  
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level II

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359009  
Client Sample: EH VOC  
Client ID: BLBS0050S01  
Batch ID: 635765  
Run Date: 05/22/2007 05:16  
Data File: s8e2150.d  
Prep Batch: 635764  
Prep Date: 05/21/2007 10:30

Client: SSFL001  
Date Collected: 05/17/2007 13:15  
Date Received: 05/18/2007 10:30  
Method: SW846 8270C  
Analyst: NAG1  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.1  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD8.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: .5 mL

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	U	17.0	ug/kg	3.41	17.0
83-32-9	Acenaphthene	U	U	17.0	ug/kg	5.69	17.0
129-00-0	Pyrene	U	U	17.0	ug/kg	5.35	17.0
91-20-3	Naphthalene	U	U	17.0	ug/kg	5.11	17.0
91-57-6	2-Methylnaphthalene	U	U	17.0	ug/kg	3.41	17.0
90-12-0	1-Methylnaphthalene	U	U	17.0	ug/kg	5.11	17.0
131-11-3	Dimethyl phthalate <i>Dimethylphthalate</i>	U	U	17.0	ug/kg	5.11	17.0
208-96-8	Acenaphthylene	U	U	17.0	ug/kg	5.11	17.0
84-66-2	Diethyl phthalate <i>Diethylphthalate</i>	U	U	17.0	ug/kg	5.11	17.0
86-73-7	Fluorene	U	U	17.0	ug/kg	5.11	17.0
85-01-8	Phenanthrene	U	U	17.0	ug/kg	5.11	17.0
120-12-7	Anthracene	U	U	17.0	ug/kg	3.41	17.0
84-74-2	Di-n-butyl phthalate <i>Di-n-butylphthalate</i>	J	J	8.60	ug/kg	5.11	17.0
206-44-0	Fluoranthene	U	U	17.0	ug/kg	5.11	17.0
85-68-7	Butyl benzyl phthalate <i>Butylbenzylphthalate</i>	U	U	17.0	ug/kg	5.11	17.0
56-55-3	Benzo(a)anthracene	U	U	17.0	ug/kg	5.11	17.0
218-01-9	Chrysene	U	U	17.0	ug/kg	5.11	17.0
117-81-7	Bis(2-ethylhexyl)phthalate <i>bis(2-Ethylhexyl)phthalate</i>	B	U/B	20.0	ug/kg	3.41	17.0
117-84-0	Di-n-octyl phthalate <i>Di-n-octylphthalate</i>	U	U	17.0	ug/kg	5.11	17.0
205-99-2	Benzo(b)fluoranthene	U	U	17.0	ug/kg	5.11	17.0
207-08-9	Benzo(k)fluoranthene	U	U	17.0	ug/kg	5.11	17.0
50-32-8	Benzo(a)pyrene	U	U	17.0	ug/kg	5.11	17.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	U	17.0	ug/kg	5.11	17.0
53-70-3	Dibenzo(a,h)anthracene	U	U	17.0	ug/kg	5.11	17.0
191-24-2	Benzo(ghi)perylene	U	U	17.0	ug/kg	5.11	17.0

## Surrogate/Tracer recovery

	Result	Nominal	Units	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	1260	1700	ug/kg	74	(45%-97%)
2-Fluorophenol	1160	1700	ug/kg	68	(35%-98%)
Phenol-d5	1160	1700	ug/kg	68	(45%-95%)
2-Fluorobiphenyl	594	851	ug/kg	70	(45%-101%)
Nitrobenzene-d5	614	851	ug/kg	72	(45%-101%)
p-Terphenyl-d14	892	851	ug/kg	105	(41%-114%)

## Comments:

- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.  
J Value is estimated  
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level II

**Flame Ionization Detector  
Certificate of Analysis  
Sample Summary**

Page 1 of 1

SDG Number: 186359S  
Lab Sample ID: 186359001

Client: SSFL001  
Date Collected: 05/17/2007 08:00  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0062D01  
Batch ID: 635778  
Run Date: 05/22/2007 17:04  
Data File: 043b4301.d  
Prep Batch: 635777  
Prep Date: 05/21/2007 10:30

Method: SW846 8015A/B SVOC  
Analyst: JAOC  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ
92-06-8	m-Terphenyl	U	0.171	mg/kg	0.171	0.171
84-15-1	o-Terphenyl	U	0.171	mg/kg	0.171	0.171
92-94-4	p-Terphenyl	U	0.171	mg/kg	0.171	0.171

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
5-alpha-Androstane	1.47	1.71	mg/kg	86	(50%-150%)

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

*Level I*



**Flame Ionization Detector  
Certificate of Analysis  
Sample Summary**

Page 1 of 1

SDG Number: 186359S  
Lab Sample ID: 186359002

Client: SSFL001  
Date Collected: 05/17/2007 08:00  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0062S01  
Batch ID: 635778  
Run Date: 05/22/2007 17:42  
Data File: 044b4401.d  
Prep Batch: 635777  
Prep Date: 05/21/2007 10:30

Method: SW846 8015A/B SVOC  
Analyst: JAOC  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ
92-06-8	m-Terphenyl <i>u</i>	U	0.171	mg/kg	0.171	0.171
84-15-1	o-Terphenyl	U	0.171	mg/kg	0.171	0.171
92-94-4	p-Terphenyl <i>u</i>	U	0.171	mg/kg	0.171	0.171

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
5-alpha-Androstane	1.41	1.71	mg/kg	82	(50%-150%)

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

*Level II*

Flame Ionization Detector  
Certificate of Analysis  
Sample Summary

Page 1 of 1

SDG Number: 186359S  
Lab Sample ID: 186359003Client: SSFL001  
Date Collected: 05/17/2007 08:45  
Date Received: 05/18/2007 10:30Project: SSFL00507  
Matrix: SOIL  
%Moisture: 4.6  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mLClient ID: BLBS0063S01  
Batch ID: 635778  
Run Date: 05/22/2007 18:57  
Data File: 046b4601.d  
Prep Batch: 635777  
Prep Date: 05/21/2007 10:30Method: SW846 8015A/B SVOC  
Analyst: JAOC  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parinname	Qual	Result	Units	MDL/LOD	PQL/LOQ
92-06-8	m-Terphenyl	U	0.175	mg/kg	0.175	0.175
84-15-1	o-Terphenyl	U	0.175	mg/kg	0.175	0.175
92-94-4	p-Terphenyl	U	0.175	mg/kg	0.175	0.175

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
5-alpha-Androstane	1.45	1.75	mg/kg	83	(50%-150%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

level I

## Flame Ionization Detector

Page 1 of 1

## Certificate of Analysis

## Sample Summary

SDG Number: 1863598  
Lab Sample ID: 186359004

Client: SSFL001  
Date Collected: 05/17/2007 09:15  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 5.4

Client ID: BLBS0056S01  
Batch ID: 635778  
Run Date: 05/22/2007 18:20  
Data File: 045b4501.d  
Prep Batch: 635777  
Prep Date: 05/21/2007 10:30

Method: SW846 8015A/B SVOC  
Analyst: JAOC

Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ
92-06-8	m-Terphenyl	U	0.176	mg/kg	0.176	0.176
84-15-1	o-Terphenyl	U	0.176	mg/kg	0.176	0.176
92-94-4	p-Terphenyl	U	0.176	mg/kg	0.176	0.176

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
5-alpha-Androstane	1.32	1.76	mg/kg	75	(50%-150%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

level I

## Flame Ionization Detector

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## Certificate of Analysis

## Sample Summary

SDG Number: 1863598  
Lab Sample ID: 186359005

Client: SSFL001  
Date Collected: 05/17/2007 09:30  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 5.2

Client ID: BLBS0056S02  
Batch ID: 635778  
Run Date: 05/22/2007 14:32  
Data File: 039b3901.d  
Prep Batch: 635777  
Prep Date: 05/21/2007 10:30

Method: SW846 8015A/B SVOC  
Analyst: JAOC  
Prep Method: SW846 3550B  
Allquot: 30 g

Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ
92-06-8	m-Terphenyl <i>u</i>	U	0.176	mg/kg	0.176	0.176
84-15-1	o-Terphenyl	U	0.176	mg/kg	0.176	0.176
92-94-4	p-Terphenyl <i>↓</i>	U	0.176	mg/kg	0.176	0.176

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
5-alpha-Androstane	1.25	1.76	mg/kg	71	(50%-150%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

*Level I*

**Flame Ionization Detector  
Certificate of Analysis  
Sample Summary**

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SDG Number: 1863598  
Lab Sample ID: 186359006  
Client Sample: EH VOC  
Client ID: BLBS0051S01  
Batch ID: 635783  
Run Date: 05/21/2007 21:05  
Data File: 009b0901.d  
Prep Batch: 635782  
Prep Date: 05/21/2007 11:00

Client: SSFL001  
Date Collected: 05/17/2007 12:30  
Date Received: 05/18/2007 10:30  
Method: SW846 8015A/B SVOC  
Analyst: JAOC  
Prep Method: SW846 3550B  
Aliquot: 30 g

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
BFHD (C12-C14)	EFH C12-C14 <i>EFH (&gt;C11 - C14)</i> u	U	3.47	mg/kg	1.15	3.47	5.00
BFHD (C15-C20)	EFH C15-C20 <i>EFH (&gt;C14 - C20)</i> u	U	3.47	mg/kg	1.15	3.47	5.00
BFHD (C21-C30)	EFH C21-C30 <i>EFH (&gt;C20 - C30)</i>		11.1	mg/kg	1.15	3.47	5.00
BFHD (C8-C11)	EFH C8-C11 <i>EFH (C8 - C11)</i> u/B	BJ	1.54	mg/kg	1.15	3.47	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
o-Terphenyl	0.511	0.695	mg/kg	74	(43%-136%)

**Comments:**

- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.  
J Value is estimated  
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

*level I*

**Flame Ionization Detector  
Certificate of Analysis  
Sample Summary**

Page 1 of 1

SDG Number: 186359S	Client: SSFL001	Project: SSFL00507
Lab Sample ID: 186359007	Date Collected: 05/17/2007 12:50	Matrix: SOIL
Client Sample: EH VOC	Date Received: 05/18/2007 10:30	%Moisture: 2.8
Client ID: BLBS0049S01		Prep Basis: Dry Weight
Batch ID: 635783	Method: SW846 8015A/B SVOC	SOP Ref: GL-OA-E-003
Run Date: 05/21/2007 21:43	Analyst: JAOC	Instrument: FID4A.I
Data File: 010b1001.d		Dilution: 1
Prep Batch: 635782	Prep Method: SW846 3550B	Prep SOP Ref: GL-OA-E-010
Prep Date: 05/21/2007 11:00	Aliquot: 30 g	Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
EFHD (C12-C14)	EFH C12-C14 <i>EFH (&gt;C11 - C14) U</i>	U	3.43	mg/kg	1.13	3.43	5.00
EFHD (C15-C20)	EFH C15-C20 <i>EFH (&gt;C14 - C20) JIS</i>		16.5	mg/kg	1.13	3.43	5.00
EFHD (C21-C30)	EFH C21-C30 <i>EFH (&gt;C20 - C30) JIS</i>		107	mg/kg	1.13	3.43	5.00
EFHD (C8-C11)	EFH C8-C11 <i>EFH (C8 - C11) U/B</i>	BJ	2.04	mg/kg	1.13	3.43	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
o-Terphenyl	1.05	0.686	mg/kg	154 *	(43%-136%)

## Comments:

- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.  
 J Value is estimated  
 U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

*Level II*

**Flame Ionization Detector  
Certificate of Analysis  
Sample Summary**

Page 1 of 1

SDG Number: 186359S  
Lab Sample ID: 186359008  
Client Sample: EH VOC  
Client ID: BLBS0050D01  
Batch ID: 635783  
Run Date: 05/21/2007 19:48  
Data File: 007b0701.d  
Prep Batch: 635782  
Prep Date: 05/21/2007 11:00

Client: SSFL001  
Date Collected: 05/17/2007 13:15  
Date Received: 05/18/2007 10:30  
Method: SW846 8015A/B SVOC  
Analyst: JAOC  
Prep Method: SW846 3550B  
Aliquot: 30 g

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.5  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
EFHD (C12-C14)	EFH C12-C14 EFH (>C11 - C14) 4	U	3.42	mg/kg	1.13	3.42	5.00
EFHD (C15-C20)	EFH C15-C20 EFH (>C14 - C20) J	J	2.42	mg/kg	1.13	3.42	5.00
EFHD (C21-C30)	EFH C21-C30 EFH (>C20 - C30) J	J	2.02	mg/kg	1.13	3.42	5.00
EFHD (C8-C11)	EFH C8-C11 EFH (C8 - C11) 4B	BJ	1.63	mg/kg	1.13	3.42	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
o-Terphenyl	0.520	0.684	mg/kg	76	(43%-136%)

**Comments:**

- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.  
J Value is estimated  
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

level I

**Flame Ionization Detector  
Certificate of Analysis  
Sample Summary**

Page 1 of 1

SDG Number: 186359S  
Lab Sample ID: 186359009  
Client Sample: EII VOC  
Client ID: BLBS0050S01  
Batch ID: 635783  
Run Date: 05/21/2007 20:26  
Data File: 008b0801.d  
Prep Batch: 635782  
Prep Date: 05/21/2007 11:00

Client: SSFL001  
Date Collected: 05/17/2007 13:15  
Date Received: 05/18/2007 10:30  
Method: SW846 8015A/B SVOC  
Analyst: JAOC  
Prep Method: SW846 3550B  
Aliquot: 30 g

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.1  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
EFHD (C12-C14)	EFH C12-C14 <i>EFH (&gt;C11 - C14)</i> <i>u</i>	U	3.41	mg/kg	1.12	3.41	5.00
EFHD (C15-C20)	EFH C15-C20 <i>EFH (&gt;C14 - C20)</i> <i>u</i>	U	3.41	mg/kg	1.12	3.41	5.00
EFHD (C21-C30)	EFH C21-C30 <i>EFH (&gt;C20 - C30)</i> <i>J</i>	J	1.41	mg/kg	1.12	3.41	5.00
EFHD (C8-C11)	EFH C8-C11 <i>EFH (C8 - C11)</i> <i>u/B</i>	BJ	1.63	mg/kg	1.12	3.41	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
p-Terphenyl	0.468	0.681	mg/kg	69	(43%-136%)

**Comments:**

B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

*Level II*



Flame Ionization Detector  
Certificate of Analysis  
Sample Summary

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SDG Number: 186359W  
Lab Sample ID: 186361001  
Client Sample: EH VOC  
Client ID: BLQW0019E01  
Batch ID: 635941  
Run Date: 05/22/2007 23:38  
Data File: 055b5501.d  
Prep Batch: 635940  
Prep Date: 05/21/2007 21:25

Client: SSFL001  
Date Collected: 05/17/2007 13:00  
Date Received: 05/18/2007 10:30  
Method: SW846 8015A/B SVOC  
Analyst: JAOC  
Aliquot: 1060 mL  
Prep Method: SW846 3510C  
Aliquot: 1060 mL

Project: SSFL00507  
Matrix: WATER  
Prep Basis: As Received  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-013  
Final Volume: 1 mL

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
EFHD (C12-C14)	EFH C12-C14 <i>EFH (&gt;C11 - C14)</i>	U	0.0943	mg/L	0.0311	0.0943	0.500
EFHD (C15-C20)	EFH C15-C20 <i>EFH (&gt;C14 - C20)</i>	U	0.0943	mg/L	0.0311	0.0943	0.500
EFHD (C21-C30)	EFH C21-C30 <i>EFH (&gt;C20 - C30)</i>	U	0.0943	mg/L	0.0311	0.0943	0.500
EFHD (C8-C11)	EFH C8-C11 <i>EFH (C8 - C11)</i>	U	0.0943	mg/L	0.0311	0.0943	0.500
92-06-8	m-Terphenyl	U	0.00472	mg/L	0.00472	0.00472	
84-15-1	o-Terphenyl	U	0.00472	mg/L	0.00472	0.00472	
92-94-4	p-Terphenyl	U	0.00472	mg/L	0.00472	0.00472	

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery %	Acceptable Limits
5-alpha-Androstane	0.0315	0.0472	mg/L	67	(50%-150%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

*Level II*

**PCB**  
**Certificate of Analysis**  
**Sample Summary**

SDG Number: 186359S	Client: SSFL001	Project: SSFL00507
Lab Sample ID: 186359006	Date Collected: 05/17/2007 12:30	Matrix: SOIL
Client Sample: EH VOC	Date Received: 05/18/2007 10:30	%Moisture: 4
Client ID: BLBS0051S01		Prep Basis: Dry Weight
Batch ID: 635757	Method: SW846 8082	SOP Ref: GL-OA-E-040
Run Date: 05/22/2007 18:33	Analyst: RAW2	Instrument: ECD1A.I
Data File: Dual Column	Inj. Vol: 1 uL	Dilution: 1
Prep Batch: 635756	Prep Method: SW846 3550B	Prep SOP Ref: GL-OA-E-010
Prep Date: 05/21/2007 10:45	Aliquot: 30 g	Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL	Data File
12674-11-2	Aroclor-1016	U	3.47	ug/kg	1.16	3.47	50.0	042f4201.d
11104-28-2	Aroclor-1221	U	3.47	ug/kg	1.16	3.47	50.0	042f4201.d
11141-16-5	Aroclor-1232	U	3.47	ug/kg	1.16	3.47	50.0	042f4201.d
53469-21-9	Aroclor-1242	U	3.47	ug/kg	1.16	3.47	50.0	042f4201.d
12672-29-6	Aroclor-1248	P	111	ug/kg	1.16	3.47	50.0	042f4201.d
11097-69-1	Aroclor-1254		52.4	ug/kg	1.16	3.47	50.0	042b4201.d
11096-82-5	Aroclor-1260		32.7	ug/kg	1.16	3.47	50.0	042b4201.d

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits	Data File
4cmx	6.61	6.95	ug/kg	95	(41%-112%)	042b4201.d
Decachlorobiphenyl	5.16	6.95	ug/kg	74	(40%-109%)	042b4201.d

**Comments:**

**P** Organics—The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%

**U** Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level IV

**PCB**  
**Certificate of Analysis**  
**Sample Summary**

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SDG Number: 186359S	Client: SSFL001	Project: SSFL00507
Lab Sample ID: 186359007	Date Collected: 05/17/2007 12:50	Matrix: SOIL
Client Sample: EH VOC	Date Received: 05/18/2007 10:30	%Moisture: 2.8
Client ID: BLBS0049S01		Prep Basis: Dry Weight
Batch ID: 635757	Method: SW846 8082	SOP Ref: GL-OA-E-040
Run Date: 05/22/2007 18:44	Analyst: RAW2	Instrument: ECD1A.I
Data File: Dual Column	Inj. Vol: 1 uL	Dilution: 1
Prep Batch: 635756	Prep Method: SW846 3550B	Prep SOP Ref: GL-OA-E-010
Prep Date: 05/21/2007 10:45	Aliquot: 30 g	Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL	Data File
12674-11-2	Aroclor-1016	U	3.43	ug/kg	1.14	3.43	50.0	043f4301.d
11104-28-2	Aroclor-1221	U	3.43	ug/kg	1.14	3.43	50.0	043f4301.d
11141-16-5	Aroclor-1232	U	3.43	ug/kg	1.14	3.43	50.0	043f4301.d
53469-21-9	Aroclor-1242	U	3.43	ug/kg	1.14	3.43	50.0	043f4301.d
12672-29-6	Aroclor-1248	U	3.43	ug/kg	1.14	3.43	50.0	043f4301.d
11097-69-1	Aroclor-1254	U	3.43	ug/kg	1.14	3.43	50.0	043f4301.d
11096-82-5	Aroclor-1260	U	3.43	ug/kg	1.14	3.43	50.0	043f4301.d

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits	Data File
Decachlorobiphenyl	6.05	6.86	ug/kg	88	(40%–109%)	043b4301.d
4cmx	4.14	6.86	ug/kg	60	(41%–112%)	043f4301.d

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level II

**PCB**  
**Certificate of Analysis**  
**Sample Summary**

SDG Number: 186359S	Client: SSFL001	Project: SSFL00507
Lab Sample ID: 186359008	Date Collected: 05/17/2007 13:15	Matrix: SOIL
Client Sample: EH VOC	Date Received: 05/18/2007 10:30	%Moisture: 2.5
Client ID: BLBS0050D01		Prep Basis: Dry Weight
Batch ID: 635757	Method: SW846 8082	SOP Ref: GL-OA-E-040
Run Date: 05/23/2007 10:48	Analyst: RAW2	Instrument: ECD1A.I
Data File: Dual Column	Inj. Vol: 1 uL	Dilution: 10
Prep Batch: 635756	Prep Method: SW846 3550B	Prep SOP Ref: GL-OA-E-010
Prep Date: 05/21/2007 10:45	Aliquot: 30 g	Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL	Data File
12674-11-2	Aroclor-1016	U	34.2	ug/kg	11.4	34.2	50.0	011f1101.d
11104-28-2	Aroclor-1221	U	34.2	ug/kg	11.4	34.2	50.0	011f1101.d
11141-16-5	Aroclor-1232	U	34.2	ug/kg	11.4	34.2	50.0	011f1101.d
53469-21-9	Aroclor-1242	U	34.2	ug/kg	11.4	34.2	50.0	011f1101.d
12672-29-6	Aroclor-1248		246	ug/kg	11.4	34.2	50.0	011f1101.d
11097-69-1	Aroclor-1254		134	ug/kg	11.4	34.2	50.0	011b1101.d
11096-82-5	Aroclor-1260	U	34.2	ug/kg	11.4	34.2	50.0	011f1101.d

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits	Data File
4cmx	5.49	6.84	ug/kg	80	(41%-112%)	011f1101.d
Decachlorobiphenyl	5.95	6.84	ug/kg	87	(40%-109%)	011f1101.d

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level I

**PCB**  
**Certificate of Analysis**  
**Sample Summary**

SDG Number: 186359S	Client: SSFL001	Project: SSFL00507
Lab Sample ID: 186359009	Date Collected: 05/17/2007 13:15	Matrix: SOIL
Client Sample: EH VOC	Date Received: 05/18/2007 10:30	% Moisture: 2.1
Client ID: BLBS0050S01		Prep Basis: Dry Weight
Batch ID: 635757	Method: SW846 8082	SOP Ref: GL-OA-E-040
Run Date: 05/23/2007 10:59	Analyst: RAW2	Instrument: ECD1A.I
Data File: Dual Column	Inj. Vol: 1 uL	Dilution: 10
Prep Batch: 635756	Prep Method: SW846 3550B	Prep SOP Ref: GL-OA-E-010
Prep Date: 05/21/2007 10:45	Aliquot: 30 g	Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL	Data File
12674-11-2	Aroclor-1016	U	34.1	ug/kg	11.3	34.1	50.0	012f1201.d
11104-28-2	Aroclor-1221	U	34.1	ug/kg	11.3	34.1	50.0	012f1201.d
11141-16-5	Aroclor-1232	U	34.1	ug/kg	11.3	34.1	50.0	012f1201.d
53469-21-9	Aroclor-1242	U	34.1	ug/kg	11.3	34.1	50.0	012f1201.d
12672-29-6	Aroclor-1248		200	ug/kg	11.3	34.1	50.0	012f1201.d
11097-69-1	Aroclor-1254		99.8	ug/kg	11.3	34.1	50.0	012b1201.d
11096-82-5	Aroclor-1260	U	34.1	ug/kg	11.3	34.1	50.0	012f1201.d

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery %	Acceptable Limits	Data File
4cmx	5.82	6.81	ug/kg	85	(41%-112%)	012f1201.d
Decachlorobiphenyl	6.88	6.81	ug/kg	101	(40%-109%)	012f1201.d

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level II

**PCB**  
**Certificate of Analysis**  
**Sample Summary**

SDG Number: 186359W  
 Lab Sample ID: 186361001  
 Client Sample: EH VOC  
 Client ID: BLQW0019E01  
 Batch ID: 635738  
 Run Date: 05/21/2007 11:15  
 Data File: Dual Column  
 Prep Batch: 635737  
 Prep Date: 05/18/2007 17:25

Client: SSFL001  
 Date Collected: 05/17/2007 13:00  
 Date Received: 05/18/2007 10:30  
 Method: SW846 8082  
 Analyst: RAW2  
 Inj. Vol: 1 uL  
 Prep Method: SW846 3510C  
 Aliquot: 1140 mL

Project: SSFL00507  
 Matrix: WATER  
 Prep Basis: As Received  
 SOP Ref: GL-OA-E-040  
 Instrument: ECD1A.I  
 Dilution: 1  
 Prep SOP Ref: GL-OA-E-013  
 Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL	Data File
12674-11-2	Aroclor-1016	U	0.0877	ug/L	0.0292	0.0877	1.00	015f1501.d
11104-28-2	Aroclor-1221	U	0.0877	ug/L	0.0292	0.0877	1.00	015f1501.d
11141-16-5	Aroclor-1232	U	0.0877	ug/L	0.0292	0.0877	1.00	015f1501.d
53469-21-9	Aroclor-1242	U	0.0877	ug/L	0.0292	0.0877	1.00	015f1501.d
12672-29-6	Aroclor-1248	U	0.0877	ug/L	0.0292	0.0877	1.00	015f1501.d
11097-69-1	Aroclor-1254	U	0.0877	ug/L	0.0292	0.0877	1.00	015f1501.d
11096-82-5	Aroclor-1260	U	0.0877	ug/L	0.0292	0.0877	1.00	015f1501.d

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits	Data File
4cmx	0.114	0.175	ug/L	65	(42%–107%)	015b1501.d
Decachlorobiphenyl	0.0979	0.175	ug/L	56	(37%–115%)	015b1501.d

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

*Level V*

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359001

Client: SSFL001  
Date Collected: 05/17/2007 08:00  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1:1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0062D01  
Batch ID: 635762  
Run Date: 05/22/2007 01:45  
Data File: s1e2152.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	342	ug/kg	68.3	342	330
108-95-2	Phenol	U	342	ug/kg	68.3	342	330
95-57-8	2-Chlorophenol	U	342	ug/kg	68.3	342	330
106-46-7	1,4-Dichlorobenzene	U	342	ug/kg	68.3	342	330
621-64-7	N-Nitrosodi-n-propylamine <i>N-Nitrosodipropylamine</i>	U	342	ug/kg	68.3	342	250
59-50-7	4-Chloro-3-methylphenol	U	342	ug/kg	34.2	342	330
83-32-9	Acenaphthene	U	34.2	ug/kg	11.4	34.2	330
121-14-2	2,4-Dinitrotoluene	U	342	ug/kg	34.2	342	330
100-02-7	4-Nitrophenol	U	342	ug/kg	68.3	342	830
87-86-5	Pentachlorophenol	U	342	ug/kg	68.3	342	830
129-00-0	Pyrene	U	34.2	ug/kg	10.7	34.2	330
62-53-3	Aniline	U	342	ug/kg	120	342	420
111-44-4	Bis(2-chloroethyl)ether <i>bis(2-Chloroethyl) ether</i>	U	342	ug/kg	68.3	342	330
541-73-1	1,3-Dichlorobenzene	U	342	ug/kg	68.3	342	330
100-51-6	Benzyl alcohol	U	342	ug/kg	103	342	330
95-50-1	1,2-Dichlorobenzene	U	342	ug/kg	68.3	342	330
108-60-1	Bis(2-chloroisopropyl)ether <i>bis(2-Chloroisopropyl) ether</i>	U	342	ug/kg	68.3	342	330
95-48-7	2-Methylphenol <i>o-Cresol</i>	U	342	ug/kg	68.3	342	330
65794-96-9	4-Methylphenol <i>m,p-Cresols</i>	U	342	ug/kg	137	342	330
67-72-1	Hexachloroethane	U	342	ug/kg	68.3	342	330
98-95-3	Nitrobenzene	U	342	ug/kg	68.3	342	330
78-59-1	Isophorone	U	342	ug/kg	68.3	342	330
88-75-5	2-Nitrophenol	U	342	ug/kg	34.2	342	330
105-67-9	2,4-Dimethylphenol	U	342	ug/kg	68.3	342	330
111-91-1	Bis(2-chloroethoxy)methane <i>bis(2-Chloroethoxy)methane</i>	U	342	ug/kg	68.3	342	330
65-85-0	Benzoic acid	U	683	ug/kg	171	683	830
91-20-3	Naphthalene	U	34.2	ug/kg	10.3	34.2	330
106-47-8	4-Chloroaniline	U	342	ug/kg	68.3	342	330
87-68-3	Hexachlorobutadiene	U	342	ug/kg	68.3	342	330
91-57-6	2-Methylnaphthalene	U	34.2	ug/kg	6.83	34.2	330
77-47-4	Hexachlorocyclopentadiene	U	342	ug/kg	68.3	342	830
88-06-2	2,4,6-Trichlorophenol	U	342	ug/kg	68.3	342	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.



Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359001

Client: SSFL001  
Date Collected: 05/17/2007 08:00  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0062D01  
Batch ID: 635762  
Run Date: 05/22/2007 01:45  
Data File: s1e2152.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
95-95-4	2,4,5-Trichlorophenol	U	342	ug/kg	68.3	342	330
91-58-7	2-Chloronaphthalene	U	34.2	ug/kg	12.0	34.2	330
88-74-4	2-Nitroaniline	U	342	ug/kg	68.3	342	330
	<i>o</i> -Nitroaniline						
99-09-2	3-Nitroaniline	U	342	ug/kg	68.3	342	330
	<i>m</i> -Nitroaniline						
131-11-3	Dimethyl phthalate	U	342	ug/kg	68.3	342	330
	<i>Dimethylphthalate</i>						
606-20-2	2,6-Dinitrotoluene	U	342	ug/kg	34.2	342	330
208-96-8	Accnaphthylene	U	34.2	ug/kg	10.3	34.2	330
51-28-5	2,4-Dinitrophenol	U	683	ug/kg	130	683	660
132-64-9	Dibenzofuran	U	342	ug/kg	68.3	342	330
84-66-2	Diethyl phthalate	U	342	ug/kg	68.3	342	330
	<i>Diethylphthalate</i>						
86-73-7	Fluorene	U	34.2	ug/kg	10.3	34.2	330
7005-72-3	4-Chlorophenyl phenyl ether	U	342	ug/kg	34.2	342	330
	<i>4-Chlorophenylphenylether</i>						
534-52-1	4,6-Dinitro-2-methylphenol	U	342	ug/kg	68.3	342	420
	<i>2-Methyl-4,6-dinitrophenol</i>						
100-01-6	4-Nitroaniline	U	342	ug/kg	68.3	342	830
	<i>p</i> -Nitroaniline						
122-39-4	Diphenylamine	U	342	ug/kg	68.3	342	330
122-66-7	1,2-Diphenylhydrazine/Azobenzene	U	342	ug/kg	68.3	342	330
	<i>1,2-Diphenylhydrazine</i>						
101-55-3	4-Bromophenyl phenyl ether	U	342	ug/kg	34.2	342	330
	<i>4-Bromophenylphenylether</i>						
118-74-1	Hexachlorobenzene	U	342	ug/kg	68.3	342	330
85-01-8	Phenanthrene	U	34.2	ug/kg	10.3	34.2	330
120-12-7	Anthracene	U	34.2	ug/kg	6.83	34.2	330
84-74-2	Di-n-butyl phthalate	U	342	ug/kg	34.2	342	330
	<i>Di-n-butylphthalate</i>						
206-44-0	Fluoranthene	U	34.2	ug/kg	10.3	34.2	330
92-87-5	Benzidine	U	342	ug/kg	342	342	660
85-68-7	Butyl benzyl phthalate	U	342	ug/kg	68.3	342	330
	<i>Butylbenzylphthalate</i>						
56-55-3	Benzo(a)anthracene	U	34.2	ug/kg	10.3	34.2	330
91-94-1	3,3'-Dichlorobenzidine	U	342	ug/kg	103	342	830
218-01-9	Chrysene	U	34.2	ug/kg	10.3	34.2	330
117-81-7	Bis(2-ethylhexyl)phthalate	U	171	ug/kg	68.3	171	330
	<i>bis(2-Ethylhexyl)phthalate</i>						
117-84-0	Di-n-octyl phthalate	U	342	ug/kg	68.3	342	330
	<i>Di-n-octylphthalate</i>						
205-99-2	Benzo(b)fluoranthene	U	34.2	ug/kg	10.3	34.2	330
207-08-9	Benzo(k)fluoranthene	U	34.2	ug/kg	10.3	34.2	330
50-32-8	Benzo(a)pyrene	U	34.2	ug/kg	10.3	34.2	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.



**Semi-Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186359S  
Lab Sample ID: 186359001

Client: SSFL001  
Date Collected: 05/17/2007 08:00  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0062D01  
Batch ID: 635762  
Run Date: 05/22/2007 01:45  
Data File: s1e2152.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.2	ug/kg	10.3	34.2	330
53-70-3	Dibenzo(a,h)anthracene	U	34.2	ug/kg	10.3	34.2	420
191-24-2	Benzo(ghi)perylene	U	34.2	ug/kg	10.3	34.2	330
87-65-0	2,6-Dichlorophenol	U	342	ug/kg	68.3	342	330
120-82-1	1,2,4-Trichlorobenzene	U	342	ug/kg	68.3	342	330

**Surrogate/Tracer recovery**

	Result	Nominal	Units	Recovery%	Acceptable Limits
2-Fluorobiphenyl	1250	1710	ug/kg	73	(45%-101%)
Nitrobenzene-d5	1290	1710	ug/kg	76	(45%-101%)
p-Terphenyl-d14	1140	1710	ug/kg	67	(41%-114%)
2,4,6-Tribromophenol	2770	3420	ug/kg	81	(45%-97%)
2-Fluorophenol	2530	3420	ug/kg	74	(35%-98%)
Phenol-d5	2500	3420	ug/kg	73	(45%-95%)

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Tentatively Identified Compound  
Sample Summary

Page 1 of 1

SDG Number: 186359S  
Lab Sample ID: 186359001Date Collected: 05/17/2007 08:00  
Date Received: 05/18/2007 10:30  
Client: SSFL001Matrix: SOIL  
%Moisture: 2.4  
Project: SSFL00507Client ID: BLBS0062D01  
Batch ID: 635762  
Run Date: 05/22/2007 01:45  
Prep Date: 05/21/2007 11:00Method: SW846 8270C  
Inst: MSD1.I  
Analyst: CAK  
Aliquot: 30 gSOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown	10.81	1270	ug/kg		J
1000194-64-2	4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a	11.39	189	ug/kg	93	NJ
	Unknown	11.61	143	ug/kg		J
	Unknown	12.37	236	ug/kg		J
	Unknown Aldol Condensate	2.74	1080	ug/kg		J
	Unknown Hydrocarbon	3.17	190	ug/kg		J
4291-79-6	Cyclohexane, 1-methyl-2-propyl-	3.34	168	ug/kg	90	NJ
593-45-3	Octadecane	8.59	326	ug/kg	95	NJ
629-92-5	Nonadecane	8.82	154	ug/kg	95	NJ
13475-75-7	Pentadecane, 8-hexyl-	9.07	868	ug/kg	93	NJ
	Unknown	9.22	155	ug/kg		J
7098-21-7	Tritetracontane	9.73	609	ug/kg	91	NJ

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359002

Client: SSFL001  
Date Collected: 05/17/2007 08:00  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0062S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:06  
Data File: sle2153.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	342	ug/kg	68.3	342	330
108-95-2	Phenol	U	342	ug/kg	68.3	342	330
95-57-8	2-Chlorophenol	U	342	ug/kg	68.3	342	330
106-46-7	1,4-Dichlorobenzene	U	342	ug/kg	68.3	342	330
621-64-7	N-Nitrosodi-n-propylamine <i>N-Nitrosodipropylamine</i>	U	342	ug/kg	68.3	342	250
59-50-7	4-Chloro-3-methylphenol	U	342	ug/kg	34.2	342	330
83-32-9	Acenaphthene	U	34.2	ug/kg	11.4	34.2	330
121-14-2	2,4-Dinitrotoluene	U	342	ug/kg	34.2	342	330
100-02-7	4-Nitrophenol	U	342	ug/kg	68.3	342	830
87-86-5	Pentachlorophenol	U	342	ug/kg	68.3	342	830
129-00-0	Pyrene	U	34.2	ug/kg	10.7	34.2	330
62-53-3	Aniline	U	342	ug/kg	120	342	420
111-44-4	Bis(2-chloroethyl)ether <i>bis(2-Chloroethyl) ether</i>	U	342	ug/kg	68.3	342	330
541-73-1	1,3-Dichlorobenzene	U	342	ug/kg	68.3	342	330
100-51-6	Benzyl alcohol	U	342	ug/kg	102	342	330
95-50-1	1,2-Dichlorobenzene	U	342	ug/kg	68.3	342	330
108-60-1	Bis(2-chloroisopropyl)ether <i>bis(2-Chloroisopropyl)ether</i>	U	342	ug/kg	68.3	342	330
95-48-7	2-Methylphenol <i>o-Cresol</i>	U	342	ug/kg	68.3	342	330
65794-96-9	4-Methylphenol <i>m,p-Cresols</i>	U	342	ug/kg	137	342	330
67-72-1	Hexachloroethane	U	342	ug/kg	68.3	342	330
98-95-3	Nitrobenzene	U	342	ug/kg	68.3	342	330
78-59-1	Isophorone	U	342	ug/kg	68.3	342	330
88-75-5	2-Nitrophenol	U	342	ug/kg	34.2	342	330
105-67-9	2,4-Dimethylphenol	U	342	ug/kg	68.3	342	330
111-91-1	Bis(2-chloroethoxy)methane <i>bis(2-Chloroethoxy)methane</i>	U	342	ug/kg	68.3	342	330
65-85-0	Benzoic acid	U	683	ug/kg	171	683	830
91-20-3	Naphthalene	U	34.2	ug/kg	10.2	34.2	330
106-47-8	4-Chloroaniline	U	342	ug/kg	68.3	342	330
87-68-3	Hexachlorobutadiene	U	342	ug/kg	68.3	342	330
91-57-6	2-Methylnaphthalene	U	34.2	ug/kg	6.83	34.2	330
77-47-4	Hexachlorocyclopentadiene	U	342	ug/kg	68.3	342	830
88-06-2	2,4,6-Trichlorophenol	U	342	ug/kg	68.3	342	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359002

Client: SSFL001  
Date Collected: 05/17/2007 08:00  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0062S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:06  
Data File: s1e2153.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
95-95-4	2,4,5-Trichlorophenol	U	342	ug/kg	68.3	342	330
91-58-7	2-Chloronaphthalene	U	34.2	ug/kg	12.0	34.2	330
88-74-4	2-Nitroaniline	U	342	ug/kg	68.3	342	330
99-09-2	<i>o</i> -Nitroaniline						
99-09-2	3-Nitroaniline	U	342	ug/kg	68.3	342	330
131-11-3	<i>m</i> -Nitroaniline						
131-11-3	Dimethyl phthalate	U	342	ug/kg	68.3	342	330
606-20-2	<i>Dimethylphthalate</i>						
606-20-2	2,6-Dinitrotoluene	U	342	ug/kg	34.2	342	330
208-96-8	Acenaphthylene	U	34.2	ug/kg	10.2	34.2	330
51-28-5	2,4-Dinitrophenol	U	683	ug/kg	130	683	660
132-64-9	Dibenzofuran	U	342	ug/kg	68.3	342	330
84-66-2	Diethyl phthalate	U	342	ug/kg	68.3	342	330
86-73-7	<i>Diethylphthalate</i>						
86-73-7	Fluorene	U	34.2	ug/kg	10.2	34.2	330
7005-72-3	4-Chlorophenyl phenyl ether	U	342	ug/kg	34.2	342	330
534-52-1	<i>4-Chlorophenylphenylether</i>						
534-52-1	4,6-Dinitro-2-methylphenol	U	342	ug/kg	68.3	342	420
100-01-6	<i>2-Methyl-4,6-dinitrophenol</i>						
100-01-6	4-Nitroaniline	U	342	ug/kg	68.3	342	830
122-39-4	<i>p</i> -Nitroaniline						
122-39-4	Diphenylamine	U	342	ug/kg	68.3	342	330
122-66-7	1,2-Diphenylhydrazine/Azobenzene	U	342	ug/kg	68.3	342	330
101-55-3	<i>1,2-Diphenylhydrazine</i>						
101-55-3	4-Bromophenyl phenyl ether	U	342	ug/kg	34.2	342	330
118-74-1	<i>4-Bromophenylphenylether</i>						
118-74-1	Hexachlorobenzene	U	342	ug/kg	68.3	342	330
85-01-8	Phenanthrene	U	34.2	ug/kg	10.2	34.2	330
120-12-7	Anthracene	U	34.2	ug/kg	6.83	34.2	330
84-74-2	Di- <i>n</i> -butyl phthalate	U	342	ug/kg	34.2	342	330
206-44-0	<i>Di-n-butylphthalate</i>						
206-44-0	Fluoranthene	U	34.2	ug/kg	10.2	34.2	330
92-87-5	Benzidine	U	342	ug/kg	342	342	660
85-68-7	Butyl benzyl phthalate	U	342	ug/kg	68.3	342	330
56-55-3	<i>Butylbenzylphthalate</i>						
91-94-1	Benzo(a)anthracene	U	34.2	ug/kg	10.2	34.2	330
218-01-9	3,3'-Dichlorobenzidine	U	342	ug/kg	102	342	830
117-81-7	Chrysene	U	34.2	ug/kg	10.2	34.2	330
117-81-7	Bis(2-ethylhexyl)phthalate	U	171	ug/kg	68.3	171	330
117-84-0	<i>bis(2-Ethylhexyl)phthalate</i>						
205-99-2	Di- <i>n</i> -octyl phthalate	U	342	ug/kg	68.3	342	330
205-99-2	<i>Di-n-octylphthalate</i>						
207-08-9	Benzo(b)fluoranthene	U	34.2	ug/kg	10.2	34.2	330
50-32-8	Benzo(k)fluoranthene	U	34.2	ug/kg	10.2	34.2	330
50-32-8	Benzo(a)pyrene	U	34.2	ug/kg	10.2	34.2	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359002

Client: SSFL001  
Date Collected: 05/17/2007 08:00  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0062S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:06  
Data File: s1e2153.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.2	ug/kg	10.2	34.2	330
53-70-3	Dibenzo(a,h)anthracene	U	34.2	ug/kg	10.2	34.2	420
191-24-2	Benzo(ghi)perylene	U	34.2	ug/kg	10.2	34.2	330
87-65-0	2,6-Dichlorophenol	U	342	ug/kg	68.3	342	330
120-82-1	1,2,4-Trichlorobenzene	U	342	ug/kg	68.3	342	330

## Surrogate/Tracer recovery

	Result	Nominal	Units	Recovery%	Acceptable Limits
2-Fluorobiphenyl	1180	1710	ug/kg	69	(45%-101%)
Nitrobenzene-d5	1160	1710	ug/kg	68	(45%-101%)
p-Terphenyl-d14	1180	1710	ug/kg	69	(41%-114%)
2,4,6-Tribromophenol	2860	3420	ug/kg	84	(45%-97%)
2-Fluorophenol	2240	3420	ug/kg	65	(35%-98%)
Phenol-d5	2260	3420	ug/kg	66	(45%-95%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Tentatively Identified Compound  
Sample SummarySDG Number: 186359S  
Lab Sample ID: 186359002Date Collected: 05/17/2007 08:00  
Date Received: 05/18/2007 10:30  
Client: SSFL001Matrix: SOIL  
%Moisture: 2.4  
Project: SSFL00507Client ID: BLBS0062S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:06  
Prep Date: 05/21/2007 11:00Method: SW846 8270C  
Inst: MSD1.I  
Analyst: CAK  
Aliquot: 30 gSOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown Hydrocarbon	10.8	363	ug/kg		J
	Unknown Aldol Condensate	2.74	1010	ug/kg		JA
	Unknown	3.17	206	ug/kg		J
4291-79-6	Cyclohexane, 1-methyl-2-propyl-	3.34	157	ug/kg	90	NJ
	Unknown Sulfur	8.22	161	ug/kg		J
1000130-81-0	11,13-Dimethyl-12-tetradecen-1-ol acetat	8.64	159	ug/kg	87	NJ
	Unknown Amide	8.82	246	ug/kg		J
	Unknown	8.89	171	ug/kg		J
	Unknown	8.93	161	ug/kg		J
	Unknown Hydrocarbon	8.97	155	ug/kg		J
7098-21-7	Tritetracontane	9.07	783	ug/kg	91	NJ
112-95-8	Eicosane	9.73	483	ug/kg	95	NJ

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359003

Client: SSFL001  
Date Collected: 05/17/2007 08:45  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
% Moisture: 4.6

Client ID: BLBS0063S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:28  
Data File: s1e2154.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	350	ug/kg	69.9	350	330
108-95-2	Phenol	U	350	ug/kg	69.9	350	330
95-57-8	2-Chlorophenol	U	350	ug/kg	69.9	350	330
106-46-7	1,4-Dichlorobenzene	U	350	ug/kg	69.9	350	330
621-64-7	N-Nitrosodi-n-propylamine <i>N-Nitrosodipropylamine</i>	U	350	ug/kg	69.9	350	250
59-50-7	4-Chloro-3-methylphenol	U	350	ug/kg	35.0	350	330
83-32-9	Acenaphthene	U	35.0	ug/kg	11.7	35.0	330
121-14-2	2,4-Dinitrotoluene	U	350	ug/kg	35.0	350	330
100-02-7	4-Nitrophenol	U	350	ug/kg	69.9	350	830
87-86-5	Pentachlorophenol	U	350	ug/kg	69.9	350	830
129-00-0	Pyrene	J	35.6	ug/kg	11.0	35.0	330
62-53-3	Aniline	U	350	ug/kg	122	350	420
111-44-4	Bis(2-chloroethyl)ether <i>bis(2-Chloroethyl) ether</i>	U	350	ug/kg	69.9	350	330
541-73-1	1,3-Dichlorobenzene	U	350	ug/kg	69.9	350	330
100-51-6	Benzyl alcohol	U	350	ug/kg	105	350	330
95-50-1	1,2-Dichlorobenzene	U	350	ug/kg	69.9	350	330
108-60-1	Bis(2-chloroisopropyl)ether <i>bis(2-Chloroisopropyl) ether</i>	U	350	ug/kg	69.9	350	330
95-48-7	2-Methylphenol <i>o-Cresol</i>	U	350	ug/kg	69.9	350	330
65794-96-9	4-Methylphenol <i>m,p-Cresols</i>	U	350	ug/kg	140	350	330
67-72-1	Hexachloroethane	U	350	ug/kg	69.9	350	330
98-95-3	Nitrobenzene	U	350	ug/kg	69.9	350	330
78-59-1	Isophorone	U	350	ug/kg	69.9	350	330
88-75-5	2-Nitrophenol	U	350	ug/kg	35.0	350	330
105-67-9	2,4-Dimethylphenol	U	350	ug/kg	69.9	350	330
111-91-1	Bis(2-chloroethoxy)methane <i>bis(2-Chloroethoxy)methane</i>	U	350	ug/kg	69.9	350	330
65-85-0	Benzoic acid	U	699	ug/kg	175	699	830
91-20-3	Naphthalene	U	35.0	ug/kg	10.5	35.0	330
106-47-8	4-Chloroaniline	U	350	ug/kg	69.9	350	330
87-68-3	Hexachlorobutadiene	U	350	ug/kg	69.9	350	330
91-57-6	2-Methylnaphthalene	U	35.0	ug/kg	6.99	35.0	330
77-47-4	Hexachlorocyclopentadiene	U	350	ug/kg	69.9	350	830
88-06-2	2,4,6-Trichlorophenol	U	350	ug/kg	69.9	350	330

## Comments:

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

pm 6/5/07



Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359003

Client: SSFL001  
Date Collected: 05/17/2007 08:45  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 4.6  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0063S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:28  
Data File: s1e2154.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
95-95-4	2,4,5-Trichlorophenol	U	350	ug/kg	69.9	350	330
91-58-7	2-Chloronaphthalene	U	35.0	ug/kg	12.2	35.0	330
88-74-4	2-Nitroaniline	U	350	ug/kg	69.9	350	330
	<i>o</i> -Nitroaniline						
99-09-2	3-Nitroaniline	U	350	ug/kg	69.9	350	330
	<i>m</i> -Nitroaniline						
131-11-3	Dimethyl phthalate	U	350	ug/kg	69.9	350	330
	<i>Dimethylphthalate</i>						
606-20-2	2,6-Dinitrotoluene	U	350	ug/kg	35.0	350	330
208-96-8	Acenaphthylene	U	35.0	ug/kg	10.5	35.0	330
51-28-5	2,4-Dinitrophenol	U	699	ug/kg	133	699	660
132-64-9	Dibenzofuran	U	350	ug/kg	69.9	350	330
84-66-2	Diethyl phthalate	U	350	ug/kg	69.9	350	330
	<i>Diethylphthalate</i>						
86-73-7	Fluorene	U	35.0	ug/kg	10.5	35.0	330
7005-72-3	4-Chlorophenyl phenyl ether	U	350	ug/kg	35.0	350	330
	<i>4-Chlorophenylphenylether</i>						
534-52-1	4,6-Dinitro-2-methylphenol	U	350	ug/kg	69.9	350	420
	<i>2-Methyl-4,6-dinitrophenol</i>						
100-01-6	4-Nitroaniline	U	350	ug/kg	69.9	350	830
	<i>p</i> -Nitroaniline						
122-39-4	Diphenylamine	U	350	ug/kg	69.9	350	330
122-66-7	1,2-Diphenylhydrazine/Azobenzene	U	350	ug/kg	69.9	350	330
	<i>1,2-Diphenylhydrazine</i>						
101-55-3	4-Bromophenyl phenyl ether	U	350	ug/kg	35.0	350	330
	<i>4-Bromophenylphenylether</i>						
118-74-1	Hexachlorobenzene	U	350	ug/kg	69.9	350	330
85-01-8	Phenanthrene	J	17.6	ug/kg	10.5	35.0	330
120-12-7	Anthracene	U	35.0	ug/kg	6.99	35.0	330
84-74-2	Di-n-butyl phthalate	U	350	ug/kg	35.0	350	330
	<i>Di-n-butylphthalate</i>						
206-44-0	Fluoranthene	J	39.0	ug/kg	10.5	35.0	330
92-87-5	Benzidine	U	350	ug/kg	350	350	660
85-68-7	Butyl benzyl phthalate	U	350	ug/kg	69.9	350	330
	<i>Butylbenzylphthalate</i>						
56-55-3	Benzo(a)anthracene	U	35.0	ug/kg	10.5	35.0	330
91-94-1	3,3'-Dichlorobenzidine	U	350	ug/kg	105	350	830
218-01-9	Chrysene	J	24.9	ug/kg	10.5	35.0	330
117-81-7	Bis(2-ethylhexyl)phthalate	U	175	ug/kg	69.9	175	330
	<i>bis(2-Ethylhexyl)phthalate</i>						
117-84-0	Di-n-octyl phthalate	U	350	ug/kg	69.9	350	330
	<i>Di-n-octylphthalate</i>						
205-99-2	Benzo(b)fluoranthene	J	21.7	ug/kg	10.5	35.0	330
207-08-9	Benzo(k)fluoranthene	U	35.0	ug/kg	10.5	35.0	330
50-32-8	Benzo(a)pyrene	J	16.5	ug/kg	10.5	35.0	330

## Comments:

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

55 Level IV



Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359003

Client: SSFL001  
Date Collected: 05/17/2007 08:45  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 4.6  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0063S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:28  
Data File: s1e2154.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.0	ug/kg	10.5	35.0	330
53-70-3	Dibenzo(a,h)anthracene	U	35.0	ug/kg	10.5	35.0	420
191-24-2	Benzo(ghi)perylene	U	35.0	ug/kg	10.5	35.0	330
87-65-0	2,6-Dichlorophenol	U	350	ug/kg	69.9	350	330
120-82-1	1,2,4-Trichlorobenzene	U	350	ug/kg	69.9	350	330

## Surrogate/Tracer recovery

	Result	Nominal	Units	Recovery %	Acceptable Limits
2-Fluorobiphenyl	1200	1750	ug/kg	69	(45%-101%)
Nitrobenzene-d5	1230	1750	ug/kg	70	(45%-101%)
p-Terphenyl-d14	1120	1750	ug/kg	64	(41%-114%)
2,4,6-Tribromophenol	2610	3500	ug/kg	75	(45%-97%)
2-Fluorophenol	2360	3500	ug/kg	68	(35%-98%)
Phenol-d5	2350	3500	ug/kg	67	(45%-95%)

## Comments:

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Tentatively Identified Compound  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359003

Date Collected: 05/17/2007 08:45  
Date Received: 05/18/2007 10:30  
Client: SSFL001

Matrix: SOIL  
%Moisture: 4.6  
Project: SSFL00507

Client ID: BLBS0063S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:28  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Inst: MSD1.I  
Analyst: CAK  
Aliquot: 30 g

SOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
601-53-6	Cholestan-3-one, (5.beta.)-	10.18	792	ug/kg	92	J
	Unknown	11.2	1360	ug/kg		J
1000194-64-2	4,4,6a,6b,8a,11,12,14b-Octamethyl-1,4,4a	11.39	1150	ug/kg	93	NJ
	Unknown	11.43	742	ug/kg		J
	Unknown	11.63	869	ug/kg		J
	Unknown	11.69	870	ug/kg		J
1058-61-3	Stigmast-4-en-3-one	12.07	593	ug/kg	96	NJ
	Unknown Aldol Condensate	2.74	1160	ug/kg		JA
57-10-3	n-Hexadecanoic acid	7.1	503	ug/kg	98	NJ
1786-12-5	Cyclotetradecane, 1,7,11-trimethyl-4-(1-	7.62	316	ug/kg	87	NJ
1000259-58-5	Pentadec-7-ene, 7-bromomethyl-	7.79	395	ug/kg	87	NJ
638-67-5	Tricosane	7.82	351	ug/kg	89	NJ
	Unknown Hydrocarbon	7.9	348	ug/kg		J
61639-11-0	1-Bromo-4-bromomethyldecane	8.02	584	ug/kg	91	NJ
	Unknown	8.1	399	ug/kg		J
19780-11-1	2-Dodecen-1-yl(-)succinic anhydride	8.16	298	ug/kg	83	NJ
	Unknown	8.19	363	ug/kg		J
112-95-8	Eicosane	8.22	497	ug/kg	97	NJ
	Unknown	8.32	386	ug/kg		J
7225-64-1	Heptadecane, 9-octyl-	8.6	704	ug/kg	96	NJ
	Unknown Amide	8.89	370	ug/kg		J

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Level IV

Semi-Volatile  
Tentatively Identified Compound  
Sample SummarySDG Number: 186359S  
Lab Sample ID: 186359003Date Collected: 05/17/2007 08:45  
Date Received: 05/18/2007 10:30  
Client: SSFL001Matrix: SOIL  
%Moisture: 4.6  
Project: SSFL00507Client ID: BLBS0063S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:28  
Prep Date: 05/21/2007 11:00Method: SW846 8270C  
Inst: MSD1.I  
Analyst: CAK  
Aliquot: 30 gSOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown	9.01	623	ug/kg		J
	Unknown	9.23	650	ug/kg		J
	Unknown	9.32	623	ug/kg		J
629-94-7	Heneicosane	9.73	1280	ug/kg	97	NJ

**Semi-Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186359S  
Lab Sample ID: 186359004

Client: SSFL001  
Date Collected: 05/17/2007 09:15  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 5.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0056S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:49  
Data File: s1e2155.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	352	ug/kg	70.5	352	330
108-95-2	Phenol	U	352	ug/kg	70.5	352	330
95-57-8	2-Chlorophenol	U	352	ug/kg	70.5	352	330
106-46-7	1,4-Dichlorobenzene	U	352	ug/kg	70.5	352	330
621-64-7	N-Nitrosodi-n-propylamine <i>N-Nitrosodipropylamine</i>	U	352	ug/kg	70.5	352	250
59-50-7	4-Chloro-3-methylphenol	U	352	ug/kg	35.2	352	330
83-32-9	Acenaphthene	U	35.2	ug/kg	11.8	35.2	330
121-14-2	2,4-Dinitrotoluene	U	352	ug/kg	35.2	352	330
100-02-7	4-Nitrophenol	U	352	ug/kg	70.5	352	830
87-86-5	Pentachlorophenol	U	352	ug/kg	70.5	352	830
129-00-0	Pyrene	U	35.2	ug/kg	11.1	35.2	330
62-53-3	Aniline	U	352	ug/kg	123	352	420
111-44-4	Bis(2-chloroethyl)ether <i>bis(2-Chloroethyl) ether</i>	U	352	ug/kg	70.5	352	330
541-73-1	1,3-Dichlorobenzene	U	352	ug/kg	70.5	352	330
100-51-6	Benzyl alcohol	U	352	ug/kg	106	352	330
95-50-1	1,2-Dichlorobenzene	U	352	ug/kg	70.5	352	330
108-60-1	Bis(2-chloroisopropyl)ether <i>bis(2-Chloroisopropyl) ether</i>	U	352	ug/kg	70.5	352	330
95-48-7	2-Methylphenol <i>o-Cresol</i>	U	352	ug/kg	70.5	352	330
65794-96-9	4-Methylphenol <i>m,p-Cresols</i>	U	352	ug/kg	141	352	330
67-72-1	Hexachlorocyclohexane	U	352	ug/kg	70.5	352	330
98-95-3	Nitrobenzene	U	352	ug/kg	70.5	352	330
78-59-1	Isophorone	U	352	ug/kg	70.5	352	330
88-75-5	2-Nitrophenol	U	352	ug/kg	35.2	352	330
105-67-9	2,4-Dimethylphenol	U	352	ug/kg	70.5	352	330
111-91-1	Bis(2-chloroethoxy)methane <i>bis(2-Chloroethoxy)methane</i>	U	352	ug/kg	70.5	352	330
65-85-0	Benzoic acid	U	705	ug/kg	176	705	830
91-20-3	Naphthalene	U	35.2	ug/kg	10.6	35.2	330
106-47-8	4-Chloroaniline	U	352	ug/kg	70.5	352	330
87-68-3	Hexachlorobutadiene	U	352	ug/kg	70.5	352	330
91-57-6	2-Methylnaphthalene	U	35.2	ug/kg	7.05	35.2	330
77-47-4	Hexachlorocyclopentadiene	U	352	ug/kg	70.5	352	830
88-06-2	2,4,6-Trichlorophenol	U	352	ug/kg	70.5	352	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359004

Client: SSFL001  
Date Collected: 05/17/2007 09:15  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 5.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0056S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:49  
Data File: s1e2155.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: 5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
95-95-4	2,4,5-Trichlorophenol	U	352	ug/kg	70.5	352	330
91-58-7	2-Chloronaphthalene	U	35.2	ug/kg	12.3	35.2	330
88-74-4	2-Nitroaniline <i>o-Nitroaniline</i>	U	352	ug/kg	70.5	352	330
99-09-2	3-Nitroaniline <i>m-Nitroaniline</i>	U	352	ug/kg	70.5	352	330
131-11-3	Dimethyl phthalate <i>Dimethylphthalate</i>	U	352	ug/kg	70.5	352	330
606-20-2	2,6-Dinitrotoluene	U	352	ug/kg	35.2	352	330
208-96-8	Acenaphthylene	U	35.2	ug/kg	10.6	35.2	330
51-28-5	2,4-Dinitrophenol	U	705	ug/kg	134	705	660
132-64-9	Dibenzofuran	U	352	ug/kg	70.5	352	330
84-66-2	Diethyl phthalate <i>Diethylphthalate</i>	U	352	ug/kg	70.5	352	330
86-73-7	Fluorene	U	35.2	ug/kg	10.6	35.2	330
7005-72-3	4-Chlorophenyl phenyl ether <i>4-Chlorophenylphenylether</i>	U	352	ug/kg	35.2	352	330
534-52-1	4,6-Dinitro-2-methylphenol <i>2-Methyl-4,6-dinitrophenol</i>	U	352	ug/kg	70.5	352	420
100-01-6	4-Nitroaniline <i>p-Nitroaniline</i>	U	352	ug/kg	70.5	352	830
122-39-4	Diphenylamine	U	352	ug/kg	70.5	352	330
122-66-7	1,2-Diphenylhydrazine/Azobenzene <i>1,2-Diphenylhydrazine</i>	U	352	ug/kg	70.5	352	330
101-55-3	4-Bromophenyl phenyl ether <i>4-Bromophenylphenylether</i>	U	352	ug/kg	35.2	352	330
118-74-1	Hexachlorobenzene	U	352	ug/kg	70.5	352	330
85-01-8	Phenanthrene	U	35.2	ug/kg	10.6	35.2	330
120-12-7	Anthracene	U	35.2	ug/kg	7.05	35.2	330
84-74-2	Di-n-butyl phthalate <i>Di-n-butylphthalate</i>	U	352	ug/kg	35.2	352	330
206-44-0	Fluoranthene	U	35.2	ug/kg	10.6	35.2	330
92-87-5	Benzidine	U	352	ug/kg	352	352	660
85-68-7	Butyl benzyl phthalate <i>Butylbenzylphthalate</i>	U	352	ug/kg	70.5	352	330
56-55-3	Benzo(a)anthracene	U	35.2	ug/kg	10.6	35.2	330
91-94-1	3,3'-Dichlorobenzidine	U	352	ug/kg	106	352	830
218-01-9	Chrysene	U	35.2	ug/kg	10.6	35.2	330
117-81-7	Bis(2-ethylhexyl)phthalate <i>bis(2-Ethylhexyl)phthalate</i>	U	176	ug/kg	70.5	176	330
117-84-0	Di-n-octyl phthalate <i>Di-n-octylphthalate</i>	U	352	ug/kg	70.5	352	330
205-99-2	Benzo(b)fluoranthene	U	35.2	ug/kg	10.6	35.2	330
207-08-9	Benzo(k)fluoranthene	U	35.2	ug/kg	10.6	35.2	330
50-32-8	Benzo(a)pyrene	U	35.2	ug/kg	10.6	35.2	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359004

Client: SSFL001  
Date Collected: 05/17/2007 09:15  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 5.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0056S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:49  
Data File: s1e2155.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.2	ug/kg	10.6	35.2	330
53-70-3	Dibenzo(a,h)anthracene	U	35.2	ug/kg	10.6	35.2	420
191-24-2	Benzo(ghi)perylene	U	35.2	ug/kg	10.6	35.2	330
87-65-0	2,6-Dichlorophenol	U	352	ug/kg	70.5	352	330
120-82-1	1,2,4-Trichlorobenzene	U	352	ug/kg	70.5	352	330

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
2-Fluorobiphenyl	1330	1760	ug/kg	76	(45%-101%)
Nitrobenzene-d5	1380	1760	ug/kg	79	(45%-101%)
p-Terphenyl-d14	1200	1760	ug/kg	68	(41%-114%)
2,4,6-Tribromophenol	3190	3520	ug/kg	90	(45%-97%)
2-Fluorophenol	2630	3520	ug/kg	75	(35%-98%)
Phenol-d5	2530	3520	ug/kg	72	(45%-95%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Tentatively Identified Compound  
Sample SummarySDG Number: 186359S  
Lab Sample ID: 186359004Date Collected: 05/17/2007 09:15  
Date Received: 05/18/2007 10:30  
Client: SSFL001Matrix: SOIL  
%Moisture: 5.4  
Project: SSFL00507Client ID: BLBS0056S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:49  
Prep Date: 05/21/2007 11:00Method: SW846 8270C  
Inst: MSD1.I  
Analyst: CAK  
Aliquot: 30 gSOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown NJ	10.04	278	ug/kg		J
	Unknown Hydrocarbon	10.09	160	ug/kg		J
	Unknown Hydrocarbon	10.16	172	ug/kg		J
	Unknown	10.41	173	ug/kg		J
	Unknown	10.83	163	ug/kg		J
	Unknown	11.35	181	ug/kg		J
83-46-5	.beta.-Sitosterol	11.37	193	ug/kg	94	NJ
	Unknown	11.5	187	ug/kg		J
	Unknown	11.68	216	ug/kg		J
1058-61-3	Stigmast-4-en-3-one	12.07	333	ug/kg	89	NJ
	Unknown Aldol Condensate R/B	2.74	1140	ug/kg		JA
	Unknown Hydrocarbon R/B	3.17	237	ug/kg		J
629-78-7	Heptadecane NJ	8.22	177	ug/kg	95	NJ
	Unknown	8.36	246	ug/kg		J
1000309-38-2	Oxalic acid, isobutyl heptadecyl ester	8.76	392	ug/kg	83	NJ
112-95-8	Eicosane	8.82	449	ug/kg	92	NJ
111-02-4	2,6,10,14,18,22-Tetracosahexaene, 2,6,10	8.88	219	ug/kg	81	NJ
	Unknown	8.97	160	ug/kg		J
54833-23-7	Eicosane, 10-methyl-	9.07	3550	ug/kg	93	NJ
	Unknown	9.21	178	ug/kg		J
	Unknown	9.55	241	ug/kg		J



Semi-Volatile  
Tentatively Identified Compound  
Sample SummarySDG Number: 186359S  
Lab Sample ID: 186359004Date Collected: 05/17/2007 09:15  
Date Received: 05/18/2007 10:30  
Client: SSFL001Matrix: SOIL  
%Moisture: 5.4  
Project: SSFL00507Client ID: BLBS0056S01  
Batch ID: 635762  
Run Date: 05/22/2007 02:49  
Prep Date: 05/21/2007 11:00Method: SW846 8270C  
Inst: MSD1.I  
Analyst: CAK  
Aliquot: 30 gSOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
1560-92-5	Hexadecane, 2-methyl- <i>NJ</i>	9.73	960	ug/kg	93	NJ
	Unknown <i>↓</i>	9.84	282	ug/kg		J
	Unknown Amide	9.94	153	ug/kg		J



Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359005

Client: SSFL001  
Date Collected: 05/17/2007 09:30  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 5.2  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0056S02  
Batch ID: 635762  
Run Date: 05/22/2007 03:11  
Data File: s1e2156.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	u 352	ug/kg	70.3	352	330
108-95-2	Phenol	U	352	ug/kg	70.3	352	330
95-57-8	2-Chlorophenol	U	352	ug/kg	70.3	352	330
106-46-7	1,4-Dichlorobenzene	U	352	ug/kg	70.3	352	330
621-64-7	N-Nitrosodi-n-propylamine <i>N-Nitrosodipropylamine</i>	U	352	ug/kg	70.3	352	250
59-50-7	4-Chloro-3-methylphenol	U	352	ug/kg	35.2	352	330
83-32-9	Acenaphthene	U	35.2	ug/kg	11.7	35.2	330
121-14-2	2,4-Dinitrotoluene	U	352	ug/kg	35.2	352	330
100-02-7	4-Nitrophenol	U	352	ug/kg	70.3	352	830
87-86-5	Pentachlorophenol	U	352	ug/kg	70.3	352	830
129-00-0	Pyrene	U	35.2	ug/kg	11.0	35.2	330
62-53-3	Aniline	U	352	ug/kg	123	352	420
111-44-4	Bis(2-chloroethyl)ether <i>bis(2-Chloroethyl) ether</i>	U	352	ug/kg	70.3	352	330
541-73-1	1,3-Dichlorobenzene	U	352	ug/kg	70.3	352	330
100-51-6	Benzyl alcohol	U	352	ug/kg	106	352	330
95-50-1	1,2-Dichlorobenzene	U	352	ug/kg	70.3	352	330
108-60-1	Bis(2-chloroisopropyl)ether <i>bis(2-Chloroisopropyl) ether</i>	U	352	ug/kg	70.3	352	330
95-48-7	2-Methylphenol <i>o-Cresol</i>	U	352	ug/kg	70.3	352	330
65794-96-9	4-Methylphenol <i>m,p-Cresols</i>	U	352	ug/kg	141	352	330
67-72-1	Hexachloroethane	U	352	ug/kg	70.3	352	330
98-95-3	Nitrobenzene	U	352	ug/kg	70.3	352	330
78-59-1	Isophorone	U	352	ug/kg	70.3	352	330
88-75-5	2-Nitrophenol	U	352	ug/kg	35.2	352	330
105-67-9	2,4-Dimethylphenol	U	352	ug/kg	70.3	352	330
111-91-1	Bis(2-chloroethoxy)methane <i>bis(2-Chloroethoxy)methane</i>	U	352	ug/kg	70.3	352	330
65-85-0	Benzoic acid	U	703	ug/kg	176	703	830
91-20-3	Naphthalene	U	35.2	ug/kg	10.6	35.2	330
106-47-8	4-Chloroaniline	U	352	ug/kg	70.3	352	330
87-68-3	Hexachlorobutadiene	U	352	ug/kg	70.3	352	330
91-57-6	2-Methylnaphthalene	U	35.2	ug/kg	7.03	35.2	330
77-47-4	Hexachlorocyclopentadiene	U	352	ug/kg	70.3	352	830
88-06-2	2,4,6-Trichlorophenol	U	352	ug/kg	70.3	352	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359005

Client: SSFL001  
Date Collected: 05/17/2007 09:30  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 5.2

Client ID: BLBS0056S02  
Batch ID: 635762  
Run Date: 05/22/2007 03:11  
Data File: s1e2156.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
95-95-4	2,4,5-Trichlorophenol	U	352	ug/kg	70.3	352	330
91-58-7	2-Chloronaphthalene	U	35.2	ug/kg	12.3	35.2	330
88-74-4	2-Nitroaniline	U	352	ug/kg	70.3	352	330
99-09-2	3-Nitroaniline	U	352	ug/kg	70.3	352	330
131-11-3	Dimethyl phthalate	U	352	ug/kg	70.3	352	330
606-20-2	2,6-Dinitrotoluene	U	352	ug/kg	35.2	352	330
208-96-8	Acenaphthylene	U	35.2	ug/kg	10.6	35.2	330
51-28-5	2,4-Dinitrophenol	U	703	ug/kg	134	703	660
132-64-9	Dibenzofuran	U	352	ug/kg	70.3	352	330
84-66-2	Diethyl phthalate	U	352	ug/kg	70.3	352	330
86-73-7	Fluorene	U	35.2	ug/kg	10.6	35.2	330
7005-72-3	4-Chlorophenyl phenyl ether	U	352	ug/kg	35.2	352	330
534-52-1	4,6-Dinitro-2-methylphenol	U	352	ug/kg	70.3	352	420
100-01-6	4-Nitroaniline	U	352	ug/kg	70.3	352	830
122-39-4	Diphenylamine	U	352	ug/kg	70.3	352	330
122-66-7	1,2-Diphenylhydrazine/Azobenzene	U	352	ug/kg	70.3	352	330
101-55-3	4-Bromophenyl phenyl ether	U	352	ug/kg	35.2	352	330
118-74-1	Hexachlorobenzene	U	352	ug/kg	70.3	352	330
85-01-8	Phenanthrene	U	35.2	ug/kg	10.6	35.2	330
120-12-7	Anthracene	U	35.2	ug/kg	7.03	35.2	330
84-74-2	Di-n-butyl phthalate	U	352	ug/kg	35.2	352	330
206-44-0	Fluoranthene	U	35.2	ug/kg	10.6	35.2	330
92-87-5	Benzidine	U	352	ug/kg	352	352	660
85-68-7	Butyl benzyl phthalate	U	352	ug/kg	70.3	352	330
56-55-3	Benzo(a)anthracene	U	35.2	ug/kg	10.6	35.2	330
91-94-1	3,3'-Dichlorobenzidine	U	352	ug/kg	106	352	830
218-01-9	Chrysene	U	35.2	ug/kg	10.6	35.2	330
117-81-7	Bis(2-ethylhexyl)phthalate	U	176	ug/kg	70.3	176	330
117-84-0	Di-n-octyl phthalate	U	352	ug/kg	70.3	352	330
205-99-2	Benzo(b)fluoranthene	U	35.2	ug/kg	10.6	35.2	330
207-08-9	Benzo(k)fluoranthene	U	35.2	ug/kg	10.6	35.2	330
50-32-8	Benzo(a)pyrene	U	35.2	ug/kg	10.6	35.2	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359S  
Lab Sample ID: 186359005

Client: SSFL001  
Date Collected: 05/17/2007 09:30  
Date Received: 05/18/2007 10:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 5.2

Client ID: BLBS0056S02  
Batch ID: 635762  
Run Date: 05/22/2007 03:11  
Data File: s1e2156.d  
Prep Batch: 635761  
Prep Date: 05/21/2007 11:00

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.2	ug/kg	10.6	35.2	330
53-70-3	Dibenzo(a,h)anthracene	U	35.2	ug/kg	10.6	35.2	420
191-24-2	Benzo(ghi)perylene	U	35.2	ug/kg	10.6	35.2	330
87-65-0	2,6-Dichlorophenol	U	352	ug/kg	70.3	352	330
120-82-1	1,2,4-Trichlorobenzene	U	352	ug/kg	70.3	352	330

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery %	Acceptable Limits
2-Fluorobiphenyl	1080	1760	ug/kg	61	(45%-101%)
Nitrobenzene-d5	1020	1760	ug/kg	58	(45%-101%)
p-Terphenyl-d14	1400	1760	ug/kg	79	(41%-114%)
2,4,6-Tribromophenol	2850	3520	ug/kg	81	(45%-97%)
2-Fluorophenol	2030	3520	ug/kg	58	(35%-98%)
Phenol-d5	2020	3520	ug/kg	58	(45%-95%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Tentatively Identified Compound  
Sample SummarySDG Number: 186359S  
Lab Sample ID: 186359005Date Collected: 05/17/2007 09:30  
Date Received: 05/18/2007 10:30  
Client: SSFL001Matrix: SOIL  
%Moisture: 5.2  
Project: SSFL00507Client ID: BLBS0056S02  
Batch ID: 635762  
Run Date: 05/22/2007 03:11  
Prep Date: 05/21/2007 11:00Method: SW846 8270C  
Inst: MSD1.I  
Analyst: CAK  
Aliquot: 30 gSOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown Aldol Condensate	2.74	853	ug/kg		JA
112-95-8	Eicosane	9.07	239	ug/kg	92	NJ

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359W  
Lab Sample ID: 186361001  
Client Sample: EH VOC  
Client ID: BLQW0019E01  
Batch ID: 635749  
Run Date: 05/20/2007 20:01  
Data File: s2e2113.d  
Prep Batch: 635748  
Prep Date: 05/19/2007 15:59

Client: SSFL001  
Date Collected: 05/17/2007 13:00  
Date Received: 05/18/2007 10:30  
Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3510C  
Aliquot: 1120 mL

Project: SSFL00507  
Matrix: WATER  
Prep Basis: As Received  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-013  
Final Volume: 1 mL

CAS No.	Parmaame	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	8.93	ug/L	1.79	8.93	20.0
108-95-2	Phenol	U	8.93	ug/L	0.893	8.93	10.0
95-57-8	2-Chlorophenol	U	8.93	ug/L	1.79	8.93	10.0
106-46-7	1,4-Dichlorobenzene	U	8.93	ug/L	1.79	8.93	10.0
621-64-7	N-Nitrosodi-n-propylamine <i>N-Nitrosodipropylamine</i>	U	8.93	ug/L	1.79	8.93	10.0
59-50-7	4-Chloro-3-methylphenol	U	8.93	ug/L	1.79	8.93	20.0
83-32-9	Acenaphthene	U	0.893	ug/L	0.277	0.893	10.0
121-14-2	2,4-Dinitrotoluene	U	8.93	ug/L	1.79	8.93	10.0
100-02-7	4-Nitrophenol	U	8.93	ug/L	1.79	8.93	20.0
87-86-5	Pentachlorophenol	U	8.93	ug/L	1.79	8.93	20.0
129-00-0	Pyrene	U	0.893	ug/L	0.268	0.893	10.0
62-53-3	Aniline	U	8.93	ug/L	2.23	8.93	10.0
111-44-4	Bis(2-chloroethyl)ether <i>bis(2-Chloroethyl) ether</i>	U	8.93	ug/L	1.79	8.93	10.0
541-73-1	1,3-Dichlorobenzene	U	8.93	ug/L	1.79	8.93	10.0
100-51-6	Benzyl alcohol	U	8.93	ug/L	1.79	8.93	20.0
95-50-1	1,2-Dichlorobenzene	U	8.93	ug/L	1.79	8.93	10.0
108-60-1	Bis(2-chloroisopropyl)ether <i>bis(2-Chloroisopropyl) ether</i>	U	8.93	ug/L	1.79	8.93	10.0
95-48-7	2-Methylphenol <i>o-Cresol</i>	U	8.93	ug/L	1.79	8.93	10.0
65794-96-9	4-Methylphenol <i>m,p-Cresols</i>	U	8.93	ug/L	2.68	8.93	10.0
67-72-1	Hexachloroethane	U	8.93	ug/L	1.79	8.93	10.0
98-95-3	Nitrobenzene	U	8.93	ug/L	2.68	8.93	20.0
78-59-1	Isophorone	U	8.93	ug/L	1.79	8.93	10.0
88-75-5	2-Nitrophenol	U	8.93	ug/L	1.79	8.93	10.0
105-67-9	2,4-Dimethylphenol	U	8.93	ug/L	1.79	8.93	20.0
111-91-1	Bis(2-chloroethoxy)methane <i>bis(2-Chloroethoxy)methane</i>	U	8.93	ug/L	2.68	8.93	10.0
120-83-2	2,4-Dichlorophenol	U	8.93	ug/L	1.79	8.93	10.0
65-85-0	Benzoic acid	U	17.9	ug/L	5.36	17.9	20.0
91-20-3	Naphthalene	U	0.893	ug/L	0.268	0.893	10.0
106-47-8	4-Chloroaniline	U	8.93	ug/L	1.79	8.93	10.0
87-68-3	Hexachlorobutadiene	U	8.93	ug/L	1.79	8.93	10.0
91-57-6	2-Methylnaphthalene	U	0.893	ug/L	0.268	0.893	10.0
77-47-4	Hexachlorocyclopentadiene	U	8.93	ug/L	1.79	8.93	20.0

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.



Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359W  
Lab Sample ID: 186361001  
Client Sample: EH VOC  
Client ID: BLQW0019E01  
Batch ID: 635749  
Run Date: 05/20/2007 20:01  
Data File: s2e2113.d  
Prep Batch: 635748  
Prep Date: 05/19/2007 15:59

Client: SSFL001  
Date Collected: 05/17/2007 13:00  
Date Received: 05/18/2007 10:30  
Method: SW846 8270C  
Analyst: JMB3.  
Inj. Vol: .5 uL  
Prep Method: SW846 3510C  
Aliquot: 1120 mL

Project: SSFL00507  
Matrix: WATER  
Prep Basis: As Received  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-013  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
88-06-2	2,4,6-Trichlorophenol	U	8.93	ug/L	1.79	8.93	20.0
95-95-4	2,4,5-Trichlorophenol	U	8.93	ug/L	0.893	8.93	20.0
91-58-7	2-Chloronaphthalene	U	0.893	ug/L	0.313	0.893	10.0
88-74-4	2-Nitroaniline	U	8.93	ug/L	1.79	8.93	20.0
99-09-2	3-Nitroaniline	U	8.93	ug/L	1.79	8.93	20.0
131-11-3	Dimethyl phthalate	U	8.93	ug/L	1.79	8.93	10.0
606-20-2	2,6-Dinitrotoluene	U	8.93	ug/L	1.79	8.93	10.0
208-96-8	Acenaphthylene	U	0.893	ug/L	0.179	0.893	10.0
51-28-5	2,4-Dinitrophenol	U	17.9	ug/L	8.93	17.9	20.0
132-64-9	Dibenzofuran	U	8.93	ug/L	1.79	8.93	10.0
84-66-2	Diethyl phthalate	U	8.93	ug/L	1.79	8.93	10.0
86-73-7	Fluorene	U	0.893	ug/L	0.179	0.893	10.0
7005-72-3	4-Chlorophenyl phenyl ether	U	8.93	ug/L	1.79	8.93	10.0
534-52-1	4,6-Dinitro-2-methylphenol	U	8.93	ug/L	2.68	8.93	20.0
100-01-6	4-Nitroaniline	U	8.93	ug/L	2.68	8.93	20.0
122-39-4	Diphenylamine	U	8.93	ug/L	2.68	8.93	10.0
122-66-7	1,2-Diphenylhydrazine/Azobenzene	U	8.93	ug/L	1.79	8.93	20.0
101-55-3	4-Bromophenyl phenyl ether	U	8.93	ug/L	1.79	8.93	10.0
118-74-1	Hexachlorobenzene	U	8.93	ug/L	1.79	8.93	10.0
85-01-8	Phenanthrene	U	0.893	ug/L	0.179	0.893	10.0
120-12-7	Anthracene	U	0.893	ug/L	0.179	0.893	10.0
84-74-2	Di-n-butyl phthalate	U	8.93	ug/L	1.79	8.93	20.0
206-44-0	Fluoranthene	U	0.893	ug/L	0.179	0.893	10.0
92-87-5	Benzidine	U	8.93	ug/L	1.79	8.93	20.0
85-68-7	Butyl benzyl phthalate	U	8.93	ug/L	1.79	8.93	20.0
56-55-3	Benzo(a)anthracene	U	0.893	ug/L	0.179	0.893	10.0
91-94-1	3,3'-Dichlorobenzidine	U	8.93	ug/L	0.893	8.93	20.0
218-01-9	Chrysene	U	0.893	ug/L	0.179	0.893	10.0
117-81-7	Bis(2-ethylhexyl)phthalate	U	8.93	ug/L	1.79	8.93	50.0
117-84-0	Di-n-octyl phthalate	U	8.93	ug/L	2.68	8.93	20.0
205-99-2	Benzo(b)fluoranthene	U	0.893	ug/L	0.179	0.893	10.0
207-08-9	Benzo(k)fluoranthene	U	0.893	ug/L	0.179	0.893	10.0

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186359W

Lab Sample ID: 186361001

Client Sample: EH VOC

Client ID: BLQW0019E01

Batch ID: 635749

Run Date: 05/20/2007 20:01

Data File: s2e2113.d

Prep Batch: 635748

Prep Date: 05/19/2007 15:59

Client: SSFL001

Date Collected: 05/17/2007 13:00

Date Received: 05/18/2007 10:30

Method: SW846 8270C

Analyst: JMB3

Inj. Vol: .5 uL

Prep Method: SW846 3510C

Aliquot: 1120 mL

Project: SSFL00507

Matrix: WATER

Prep Basis: As Received

SOP Ref: GL-OA-E-009

Instrument: MSD2.I

Dilution: 1

Prep SOP Ref: GL-OA-E-013

Final Volume: 1 mL

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
50-32-8	Benzo(a)pyrene	U	0.893	ug/L	0.179	0.893	10.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	0.893	ug/L	0.179	0.893	20.0
53-70-3	Dibenzo(a,h)anthracene	U	0.893	ug/L	0.179	0.893	20.0
191-24-2	Benzo(ghi)perylene	U	0.893	ug/L	0.179	0.893	10.0
120-82-1	1,2,4-Trichlorobenzene	U	8.93	ug/L	1.79	8.93	10.0

## Surrogate/Tracer recovery

	Result	Nominal	Units	Recovery%	Acceptable Limits
2-Fluorobiphenyl	34.1	44.6	ug/L	76	(41%-99%)
Nitrobenzene-d5	35.3	44.6	ug/L	79	(39%-99%)
p-Terphenyl-d14	33.9	44.6	ug/L	76	(41%-115%)
2,4,6-Tribromophenol	61.5	89.3	ug/L	69	(35%-107%)
2-Fluorophenol	33.4	89.3	ug/L	37	(15%-67%)
Phenol-d5	19.4	89.3	ug/L	22	(10%-53%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Tentatively Identified Compound  
Sample Summary

SDG Number: 186359W

Lab Sample ID: 186361001

Client Sample: EH VOC

Date Collected: 05/17/2007 13:00

Date Received: 05/18/2007 10:30

Client: SSFL001

Matrix: WATER

Project: SSFL00507

Client ID: BLQW0019E01

Batch ID: 635749

Run Date: 05/20/2007 20:01

Prep Date: 05/19/2007 15:59

Method: SW846 8270C

Inst: MSD2.I

Analyst: JMB3

Aliquot: 1120 mL

SOP Ref: GL-OA-E-009

Dilution: 1

Inj. Vol: .5 uL

Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual	
	Unknown	2.13	11.6	ug/L		J	K/B ↓ ↓
	Unknown	3.23	7.3	ug/L		J	
	Unknown	3.42	17.9	ug/L		J	
	Unknown	3.5	7.77	ug/L		J	
	Unknown	3.57	7.36	ug/L		J	
4291-79-6	Cyclohexane, 1-methyl-2-propyl-	3.59	13	ug/L	86	NJ	↓ ↓



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : MECx, LLC  
Address : 12269 East Vassar Drive  
Aurora, Colorado 80014

Contact: Ms. Elizabeth Wessling, MECx  
Project: SSFL Group 8 Hastings Data Gap Sampling

Report Date: May 22, 2007

Client Sample ID: BLBS0062D01  
Sample ID: 186359001  
Matrix: SOIL  
Collect Date: 17-MAY-07 08:00  
Receive Date: 18-MAY-07  
Collector: Client  
Moisture: 2.44%

Project: SSFL00507  
Client ID: SSFL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>											
EPA300.0 Fluoride in Soil											
Fluoride	J	1.08	0.298	5.00	mg/kg	1	RXM1	05/21/07	1940	635930	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	RXM1	05/21/07	0735	635929

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 300.0	

LEVEL V

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : MECx, LLC  
Address : 12269 East Vassar Drive  
Aurora, Colorado 80014

Contact: Ms. Elizabeth Wessling, MECx  
Project: SSFL Group 8 Hastings Data Gap Sampling

Report Date: May 22, 2007

Client Sample ID: BLBS0062S01  
Sample ID: 186359002  
Matrix: SOIL  
Collect Date: 17-MAY-07 08:00  
Receive Date: 18-MAY-07  
Collector: Client  
Moisture: 2.44%

Project: SSFL00507  
Client ID: SSFL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>											
EPA300.0 Fluoride in Soil											
Fluoride	J	0.907	0.302	5.00	mg/kg	1	RXM1	05/21/07	2000	635930	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	RXM1	05/21/07	0735	635929

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 300.0	

LEVEL V

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : MECx, LLC  
Address : 12269 East Vassar Drive  
Aurora, Colorado 80014

Contact: Ms. Elizabeth Wessling, MECx  
Project: SSFL Group 8 Hastings Data Gap Sampling

Report Date: May 22, 2007

Client Sample ID: BLBS0063S01  
Sample ID: 186359003  
Matrix: SOIL  
Collect Date: 17-MAY-07 08:45  
Receive Date: 18-MAY-07  
Collector: Client  
Moisture: 4.64%

Project: SSFL00507  
Client ID: SSFL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>											
EPA300.0 Fluoride in Soil Fluoride	J	1.99	0.311	5.00	mg/kg	1	RXM1	05/21/07	2021	635930	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	RXM1	05/21/07	0735	635929

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 300.0	

LEVEL V

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : MECx, LLC  
Address : 12269 East Vassar Drive  
Aurora, Colorado 80014

Contact: Ms. Elizabeth Wessling, MECx  
Project: SSFL Group 8 Hastings Data Gap Sampling

Report Date: May 22, 2007

Client Sample ID: BLBS0056S01  
Sample ID: 186359004  
Matrix: SOIL  
Collect Date: 17-MAY-07 09:15  
Receive Date: 18-MAY-07  
Collector: Client  
Moisture: 5.42%

Project: SSFL00507  
Client ID: SSFL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>											
EPA300.0 Fluoride in Soil Fluoride	J	1.60	0.308	5.00	mg/kg	1	RXM1	05/21/07	2041	635930	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	RXM1	05/21/07	0735	635929

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 300.0	

LEVEL V

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : MECx, LLC  
Address : 12269 East Vassar Drive  
Aurora, Colorado 80014

Contact: Ms. Elizabeth Wessling, MECx  
Project: SSFL Group 8 Hastings Data Gap Sampling

Report Date: May 22, 2007

Client Sample ID: BLBS0056S02  
Sample ID: 186359005  
Matrix: SOIL  
Collect Date: 17-MAY-07 09:30  
Receive Date: 18-MAY-07  
Collector: Client  
Moisture: 5.22%

Project: SSFL00507  
Client ID: SSFL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>											
EPA300.0 Fluoride in Soil Fluoride	J	2.21	0.302	5.00	mg/kg	1	RXM1	05/21/07	2101	635930	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	RXM1	05/21/07	0735	635929

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 300.0	

LEVEL V

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : MECx, LLC  
Address : 12269 East Vassar Drive  
Aurora, Colorado 80014

Report Date: May 22, 2007

Contact: Ms. Elizabeth Wessling, MECx  
Project: SSFL Group 8 Hastings Data Gap Sampling

Client Sample ID: BLQW0019E01  
Sample ID: 186361001  
Matrix: WATER  
Collect Date: 17-MAY-07 13:00  
Receive Date: 18-MAY-07  
Collector: Client

Project: SSFL00507  
Client ID: SSFL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography Federal</b>											
EPA300.0 Fluoride in Liquid Fluoride	U	0.00	0.033	0.500	mg/L	1	RXM1	05/19/07	1154	635705	1

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 300.0	

LEVEL V



# DATA VALIDATION REPORT

Boeing SSFL RFI Group 8 Data Gap

SAMPLE DELIVERY GROUP: 186235

Prepared by

MEC<sup>X</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

**I. INTRODUCTION**

Task Order Title: Boeing SSFL RFI Group 8 Data Gap  
 Contract Task Order: 1261.500D.08.002  
 Sample Delivery Group: 186235  
 Project Manager: Dixie Hambrick  
 Matrix: water/soil  
 QC Level: V  
 No. of Samples: 7  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: GEL

**Table 1. Sample Identification**

Sample Name	Lab Name	Sample Name	Sub-Lab Sample Name	Matrix	Collection	Method
BLBS0052S01	186235003	N/A		Soil	5/16/2007 10:05:00 AM	300.0, 8015B, 8270C
BLBS0053S01	186235006	N/A		Soil	5/16/2007 11:45:00 AM	300.0, 8015B, 8270C
BLBS0057S01	186235004	N/A		Soil	5/16/2007 10:25:00 AM	300.0, 8015B, 8270C
BLBS0058S01	186235002	N/A		Soil	5/16/2007 9:45:00 AM	300.0, 8015B, 8270C
BLBS0060S01	186235005	N/A		Soil	5/16/2007 11:00:00 AM	300.0, 8015B, 8270C
BLQW0019F01	186237001	N/A		Water	5/16/2007 1:45:00 PM	300.0, 6010B, 6020, 8015B, 8082, 8260B, 8270C
BLQW0019F01	G341-287-1C	N/A		Water	5/16/2007 1:45:00 PM	1613B
BLQW0019T01	186237002	N/A		Water	5/16/2007 2:00:00 PM	8260B

**II. Sample Management**

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Sample custody seals were intact. If necessary, the client ID was added to the sample result summary by the reviewer.



**Data Qualifier Reference Table**

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

**Qualification Code Reference Table**

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 or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

**Qualification Code Reference Table Cont.**

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.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: K. Shadowlight

Date Reviewed: June 2, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review (8/02)*.

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: There were numerous detects reported in the method blank; however, no detects were reported in the associated sample.
- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Sample BLQW0019F01 was identified as a field blank and as such was not evaluated by other field QC. There were no target compounds detected in the field blank.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: Internal standard recoveries are not routinely evaluated at a Level V validation; however, the recoveries were reported on the sample result summary. The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.

- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. The laboratory calculated and reported compound-specific detection limits. Reported nondetects are valid to the estimated detection limit (EDL).

## **B. EPA METHODS 6010B, 6020, 7470A/7471A—Metals and Mercury**

Reviewed By: P. Meeks

Date Reviewed: June 1, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 6010B, 6020, 7470A/7471A*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.
- Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Silver and zirconium were detected in the method blank at 0.279 and 0.00070 µg/L, respectively; therefore, silver and zirconium detected in BLQW0019F01 were qualified as estimated nondetects, "UJ."
- Interference Check Samples: Review is not applicable at a Level V validation.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: Laboratory duplicate analyses were performed on BLQW0019F01; however, as the sample was identified as a field QC sample, the results were not assessed.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on BLQW0019F01; however, as the sample was identified as a field QC sample, the results were not assessed.
- Serial Dilution: Serial dilution analyses were performed on BLQW0019F01; however, as the sample was identified as a field QC sample, the results were not assessed.
- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. All CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.

- Sample Result Verification: Review is not applicable at a Level V validation. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This sample in this SDG was identified as a field blank. Thallium was detected in the field blank at 0.440 µg/L.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

### C. EPA METHOD 8082—PCBs

Reviewed By: K. Shadowlight

Date Reviewed: June 2, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 0)*, *EPA Method 8082*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted within seven days of collection and analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed for a sample in this SDG. Evaluation of method accuracy was based on blank spike results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: The sample in this SDG was identified as a blank, and as such was not evaluated by other field QC. There were no target compounds detected in field blank BLQW001901.

- Field Duplicates: There were no field duplicate samples identified for this SDG.
- Compound Identification: Review is not applicable at a Level V validation.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Reported nondetects are valid to the reporting limit.

#### **D. EPA METHOD 8270C — Semivolatile Organic Compounds (SVOC)**

Reviewed By: E. Wessling  
Date Reviewed: June 3, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 8270C*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and the water sample was extracted within 7 days of collection. All samples were analyzed within 40 days of extraction.
- GC/MS Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blanks had no target compound detects above the MDL. Both method blanks had TICs detects; therefore, similar detects in the field blank were qualified as estimated nondetects, "UJ."
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample BLBS0061S01. All percent recoveries and RPDs were within laboratory-established control limits.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: No target compounds were detected in field blank BLQW0019F01. The site soil samples in this SDG had no associated equipment rinsate samples.

- Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: Review is not applicable at a Level V validation.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for SVOC compounds by Method 8270C. Any reported TICs in the samples of this SDG were qualified as tentatively identified, "N."
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were reported by the laboratory for this SDG. Any reported TICs in the samples of this SDG were qualified as estimated, "J." System contaminant TICs were rejected, "R."
- System performance: System performance is not evaluated at a Level V validation.

#### **E. EPA METHOD 8015B—Extractable Total Fuel Hydrocarbons (EFHs)**

Reviewed By: K. Shadowlight

Date Reviewed: June 2, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Total Fuel Hydrocarbons (DVP-8, Rev. 0)*, *EPA Method 8015B*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and the water sample was extracted within seven days of collection. All samples were analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blanks had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed for a sample in this SDG. Evaluation of method accuracy was based on blank spike results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC



data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: There were no target compounds detected in the field blank, BLQW0019F01 or equipment rinsate, BLQW0019E01 (186359).
- Field Duplicates: There were no field duplicates identified for this SDG.
- Compound Identification: Review is not applicable at a Level V validation. Four EFH hydrocarbon ranges were reported: C8-C11, C12-C14, C15-C20, and C21-C30. In addition the laboratory reported m-terphenyl, o-terphenyl, and p-terphenyl. For a selection of samples only terphenyls were reported.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. According to the case narrative for this SDG, samples BLBS0052S01, BLBS0057S01, and BLBS0058S01 were analyzed at 10× dilutions due to a thick oily matrix. Reported nondetects are valid to the reporting limit.

## F. EPA METHOD 8260B—Volatile Organic Compounds (VOCs)

Reviewed By: E. Wessling

Date Reviewed: June 3, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 8260B*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Analytical holding times were met. The water samples were analyzed within 14 days of collection.
- GC/MS Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had a detect for naphthalene; however, no qualifications were required as naphthalene was not detected in samples in this SDG. No other target compounds were detected above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a sample from this SDG. Evaluation of method accuracy was based on the blank spike results.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Trip Blanks: Trip blank BLQW0019T01 had no target compound detects.
  - Field Blanks and Equipment Rinsates: Field blank BLQW0019F01 had a detect for 2-butanone at 3.09 µg/L.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: Review is not applicable at a Level V validation.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for volatile target compounds by Method 8260B.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: The laboratory performed a TIC search for the samples; however, there were no reportable TICs detected in the samples of this SDG.
- System Performance: Review is not applicable at a Level V validation.

## **G. EPA METHOD 300.0—General Minerals**

Reviewed By: P. Meeks

Date Reviewed: May 30, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Method 300.0*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The analytical holding time, 28 days from collection for fluoride, was met.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks and CCBs had no detects.
- Blank Spikes and Laboratory Control Samples: The recovery was within laboratory-established QC limits.

- Laboratory Duplicates: As the laboratory duplicate analyses were performed on a field QC sample, the results were not assessed.
- Matrix Spike/Matrix Spike Duplicate: As the MS/MSD analyses were performed on a field QC sample, the results were not assessed.
- Sample Result Verification: Review is not applicable at a Level V validation. Reported nondetects are valid to the reporting limit.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Fluoride was not detected in field blank BLQW0019F01 or equipment rinsate BLQW0019E01 (186359).
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

Method 1613--Boeing

186237001

General Engineering Labs

BLQW0019F01

## Analytical Data Summary Sheet

Analyte	Amount (ng/L)	EDL (ng/L)	Adj. RL (ng/L)	RT (min.)	Ratio	Qualifier
2,3,7,8-TCDD	ND	0.00577	0.00951			
1,2,3,7,8-PeCDD	ND	0.00333	0.0475			
1,2,3,4,7,8-HxCDD	ND	0.00392	0.0475			
1,2,3,6,7,8-HxCDD	ND	0.00405	0.0475			
1,2,3,7,8,9-HxCDD	ND	0.00395	0.0475			
1,2,3,4,6,7,8-HpCDD	ND	0.00698	0.0475			
OCDD	ND	0.0132	0.0951			
2,3,7,8-TCDF	ND	0.00459	0.00951			
1,2,3,7,8-PeCDF	ND	0.00249	0.0475			
2,3,4,7,8-PeCDF	ND	0.00254	0.0475			
1,2,3,4,7,8-HxCDF	ND	0.00310	0.0475			
1,2,3,6,7,8-HxCDF	ND	0.00294	0.0475			
2,3,4,6,7,8-HxCDF	ND	0.00300	0.0475			
1,2,3,7,8,9-HxCDF	ND	0.00430	0.0475			
1,2,3,4,6,7,8-HpCDF	ND	0.00539	0.0475			
1,2,3,4,7,8,9-HpCDF	ND	0.00816	0.0475			
OCDF	ND	0.0138	0.0951			
Total TCDDs	ND	0.00577	0.00951			
Total PeCDDs	ND	0.00333	0.0475			
Total HxCDDs	ND	0.00397	0.0475			
Total HpCDDs	ND	0.00698	0.0475			
Total TCDFs	ND	0.00459	0.00951			
Total PeCDFs	ND	0.00252	0.0475			
Total HxCDFs	ND	0.00329	0.0475			
Total HpCDFs	ND	0.00661	0.0475			
WHO-2005 TEQ (ND=0)	0.000					
WHO-2005 TEQ (ND=1/2)	0.0131					

Client Information

Project Name:

Sample ID: 186237001

Sample Information

Matrix: Water  
 Weight / Volume: 1052 mL  
 Solids / Lipids: NA %  
 Original pH : 5  
 Batch ID: WG14262

Laboratory Information

Project ID: G341-287  
 Sample ID: G341-287-1C  
 Collection Date/Time: 16-May-07 13:45  
 Receipt Date: 17-May-07 9:50  
 Extraction Date: 20-May-07  
 Analysis Date: 21-May-07 19:24  
 Filename: a21may07a-5  
 Retchk: a21may07a-1  
 Begin ConCal: a21may07a-1  
 Initial Cal: ml1613-071006e

Level II

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 186235W

CONTRACT: SSFL00507

METHOD TYPE: SW846

SAMPLE ID: 186237001

BASIS: As Received

DATE COLLECTED 16-MAY-07

CLIENT ID: BLQW0019F01

LEVEL: Low

DATE RECEIVED 17-MAY-07

MATRIX: WATER

%SOLIDS:

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum U	0.068	mg/L	U	0.068	.2	0.05	1	P	JWJ	05/18/07 22:08	051807-1	635263
7440-36-0	Antimony	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	05/19/07 01:12	070518-3	635499
7440-38-2	Arsenic	1.5	ug/L	U	1.5	5	1	1	MS	BAJ	05/19/07 01:12	070518-3	635499
7440-39-3	Barium	0.50	ug/L	U	0.5	2	1	1	MS	BAJ	05/19/07 01:12	070518-3	635499
7440-41-7	Beryllium	0.10	ug/L	U	0.1	.5	0.5	1	MS	BAJ	05/21/07 12:57	070521-4	635499
7440-42-8	Boron	0.010	mg/L	U	0.01	.05	0.05	1	P	JWJ	05/18/07 22:08	051807-1	635263
7440-43-9	Cadmium	0.10	ug/L	U	0.1	1	1	1	MS	BAJ	05/19/07 01:12	070518-3	635499
7440-47-3	Chromium	1	ug/L	U	1	3	2	1	MS	BAJ	05/21/07 12:57	070521-4	635499
7440-48-4	Cobalt	0.10	ug/L	U	0.1	1	1	1	MS	BAJ	05/21/07 12:57	070521-4	635499
7440-50-8	Copper	0.20	ug/L	U	0.2	1	2	1	MS	BAJ	05/21/07 12:57	070521-4	635499
7439-92-1	Lead	0.50	ug/L	U	0.5	2	1	1	MS	BAJ	05/21/07 12:57	070521-4	635499
7439-93-2	Lithium	0.002	mg/L	U	0.002	.01	0.05	1	MS	BAJ	05/21/07 12:57	070521-4	635499
7439-98-7	Molybdenum	0.10	ug/L	U	0.1	.5	2	1	MS	BAJ	05/21/07 15:22	070521-6	635499
7440-02-0	Nickel	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	05/21/07 12:57	070521-4	635499
7440-09-7	Potassium	0.080	mg/L	U	0.08	.3	0.5	1	MS	BAJ	05/21/07 15:22	070521-6	635499
7782-49-2	Selenium	2.5	ug/L	U	2.5	5	2	1	MS	BAJ	05/19/07 01:12	070518-3	635499
7440-22-4	Silver UJ/B	0.280	ug/L	J	0.2	1	1	1	MS	BAJ	05/19/07 01:12	070518-3	635499
7440-23-5	Sodium U	0.080	mg/L	U	0.08	.25	0.5	1	MS	BAJ	05/21/07 12:57	070521-4	635499
7440-28-0	Thallium	0.440	ug/L	J	0.4	1	1	1	MS	BAJ	05/19/07 01:12	070518-3	635499
7440-62-2	Vanadium U	10	ug/L	U	10	30	2	1	MS	BAJ	05/21/07 12:57	070521-4	635499
7440-66-6	Zinc U	2	ug/L	U	2	10	20	1	MS	BAJ	05/19/07 01:12	070518-3	635499
7440-67-7	Zirconium UJ/B	0.00069	mg/L	J	0.0005	.002	0.2	1	MS	PRB	05/22/07 02:15	070521-2	635499

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
635263	635262	SW846 3005A	50	mL	50	mL	05/18/07	LXH2
635499	635498	SW846 3005A	50	mL	50	mL	05/18/07	LXH2

LEVEL V

PCB  
Certificate of Analysis  
Sample Summary

SDG Number: 186235W  
Lab Sample ID: 186237001

Client: SSFL001  
Date Collected: 05/16/2007 13:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: WATER

Client ID: BLQW0019F01  
Batch ID: 635738  
Run Date: 05/21/2007 10:54  
Data File: Dual Column  
Prep Batch: 635737  
Prep Date: 05/18/2007 17:25

Method: SW846 8082  
Analyst: RAW2  
Inj. Vol: 1 uL  
Prep Method: SW846 3510C  
Aliquot: 1170 mL

Prep Basis: As Received  
SOP Ref: GL-OA-E-040  
Instrument: ECD1A.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-013  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL	Data File
12674-11-2	Aroclor-1016	U	0.0855	ug/L	0.0285	0.0855	1.00	013f1301.d
11104-28-2	Aroclor-1221	U	0.0855	ug/L	0.0285	0.0855	1.00	013f1301.d
11141-16-5	Aroclor-1232	U	0.0855	ug/L	0.0285	0.0855	1.00	013f1301.d
53469-21-9	Aroclor-1242	U	0.0855	ug/L	0.0285	0.0855	1.00	013f1301.d
12672-29-6	Aroclor-1248	U	0.0855	ug/L	0.0285	0.0855	1.00	013f1301.d
11097-69-1	Aroclor-1254	U	0.0855	ug/L	0.0285	0.0855	1.00	013f1301.d
11096-82-5	Aroclor-1260	U	0.0855	ug/L	0.0285	0.0855	1.00	013f1301.d

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits	Data File
4cmx	0.112	0.171	ug/L	66	(42%-107%)	013b1301.d
Decachlorobiphenyl	0.0692	0.171	ug/L	40	(37%-115%)	013b1301.d

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level V

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235002

Client: SSFL001  
Date Collected: 05/16/2007 09:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.1

Client ID: BLBS0058S01  
Batch ID: 636303  
Run Date: 05/22/2007 13:32  
Data File: s2e2212.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	340	ug/kg	68.1	340	330
108-95-2	Phenol	U	340	ug/kg	68.1	340	330
95-57-8	2-Chlorophenol	U	340	ug/kg	68.1	340	330
106-46-7	1,4-Dichlorobenzene	U	340	ug/kg	68.1	340	330
621-64-7	N-Nitrosodi-n-propylamine <i>N-Nitrosodipropylamine</i>	U	340	ug/kg	68.1	340	250
59-50-7	4-Chloro-3-methylphenol	U	340	ug/kg	34.0	340	330
83-32-9	Acenaphthene	U	34.0	ug/kg	11.4	34.0	330
121-14-2	2,4-Dinitrotoluene	U	340	ug/kg	34.0	340	330
100-02-7	4-Nitrophenol	U	340	ug/kg	68.1	340	830
87-86-5	Pentachlorophenol	U	340	ug/kg	68.1	340	830
129-00-0	Pyrene	U	34.0	ug/kg	10.7	34.0	330
62-53-3	Aniline	U	340	ug/kg	119	340	420
111-44-4	Bis(2-chloroethyl)ether <i>bis(2-Chloroethyl) ether</i>	U	340	ug/kg	68.1	340	330
541-73-1	1,3-Dichlorobenzene	U	340	ug/kg	68.1	340	330
100-51-6	Benzyl alcohol	U	340	ug/kg	102	340	330
95-50-1	1,2-Dichlorobenzene	U	340	ug/kg	68.1	340	330
108-60-1	Bis(2-chloroisopropyl)ether <i>bis(2-Chloroisopropyl) ether</i>	U	340	ug/kg	68.1	340	330
95-48-7	2-Methylphenol <i>o-Cresol</i>	U	340	ug/kg	68.1	340	330
65794-96-9	4-Methylphenol <i>m,p-Cresols</i>	U	340	ug/kg	136	340	330
67-72-1	Hexachloroethane	U	340	ug/kg	68.1	340	330
98-95-3	Nitrobenzene	U	340	ug/kg	68.1	340	330
78-59-1	Isophorone	U	340	ug/kg	68.1	340	330
88-75-5	2-Nitrophenol	U	340	ug/kg	34.0	340	330
105-67-9	2,4-Dimethylphenol	U	340	ug/kg	68.1	340	330
111-91-1	Bis(2-chloroethoxy)methane <i>bis(2-Chloroethoxy)methane</i>	U	340	ug/kg	68.1	340	330
65-85-0	Benzoic acid	U	681	ug/kg	170	681	830
91-20-3	Naphthalene	U	34.0	ug/kg	10.2	34.0	330
106-47-8	4-Chloroaniline	U	340	ug/kg	68.1	340	330
87-68-3	Hexachlorobutadiene	U	340	ug/kg	68.1	340	330
91-57-6	2-Methylnaphthalene	U	34.0	ug/kg	6.81	34.0	330
77-47-4	Hexachlorocyclopentadiene	U	340	ug/kg	68.1	340	830
88-06-2	2,4,6-Trichlorophenol	U	340	ug/kg	68.1	340	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.



Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235002

Client: SSFL001  
Date Collected: 05/16/2007 09:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.1  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0058S01  
Batch ID: 636303  
Run Date: 05/22/2007 13:32  
Data File: s2e2212.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
95-95-4	2,4,5-Trichlorophenol	U	340	ug/kg	68.1	340	330
91-58-7	2-Chloronaphthalene	U	34.0	ug/kg	11.9	34.0	330
88-74-4	2-Nitroaniline	U	340	ug/kg	68.1	340	330
	<i>o</i> -Nitroaniline						
99-09-2	3-Nitroaniline	U	340	ug/kg	68.1	340	330
	<i>m</i> -Nitroaniline						
131-11-3	Dimethyl phthalate	U	340	ug/kg	68.1	340	330
	<i>Dimethylphthalate</i>						
606-20-2	2,6-Dinitrotoluene	U	340	ug/kg	34.0	340	330
208-96-8	Acenaphthylene	U	34.0	ug/kg	10.2	34.0	330
51-28-5	2,4-Dinitrophenol	U	681	ug/kg	129	681	660
132-64-9	Dibenzofuran	U	340	ug/kg	68.1	340	330
84-66-2	Diethyl phthalate	U	340	ug/kg	68.1	340	330
	<i>Diethylphthalate</i>						
86-73-7	Fluorene	U	34.0	ug/kg	10.2	34.0	330
7005-72-3	4-Chlorophenyl phenyl ether	U	340	ug/kg	34.0	340	330
	<i>4-Chlorophenylphenylether</i>						
534-52-1	4,6-Dinitro-2-methylphenol	U	340	ug/kg	68.1	340	420
	<i>2-Methyl-4,6-dinitrophenol</i>						
100-01-6	4-Nitroaniline	U	340	ug/kg	68.1	340	830
	<i>p</i> -Nitroaniline						
122-39-4	Diphenylamine	U	340	ug/kg	68.1	340	330
122-66-7	1,2-Diphenylhydrazine/Azobenzene	U	340	ug/kg	68.1	340	330
	<i>1,2-Diphenylhydrazine</i>						
101-55-3	4-Bromophenyl phenyl ether	U	340	ug/kg	34.0	340	330
	<i>4-Bromophenylphenylether</i>						
118-74-1	Hexachlorobenzene	U	340	ug/kg	68.1	340	330
85-01-8	Phenanthrene	U	34.0	ug/kg	10.2	34.0	330
120-12-7	Anthracene	U	34.0	ug/kg	6.81	34.0	330
84-74-2	Di-n-butyl phthalate	U	340	ug/kg	34.0	340	330
	<i>Di-n-butylphthalate</i>						
206-44-0	Fluoranthene	U	34.0	ug/kg	10.2	34.0	330
92-87-5	Benzidine	U	340	ug/kg	340	340	660
85-68-7	Butyl benzyl phthalate	U	340	ug/kg	68.1	340	330
	<i>Butylbenzylphthalate</i>						
56-55-3	Benzo(a)anthracene	U	34.0	ug/kg	10.2	34.0	330
91-94-1	3,3'-Dichlorobenzidine	U	340	ug/kg	102	340	830
218-01-9	Chrysene	U	34.0	ug/kg	10.2	34.0	330
117-81-7	Bis(2-ethylhexyl)phthalate	U	170	ug/kg	68.1	170	330
	<i>bis(2-Ethylhexyl)phthalate</i>						
117-84-0	Di-n-octyl phthalate	U	340	ug/kg	68.1	340	330
	<i>Di-n-octylphthalate</i>						
205-99-2	Benzo(b)fluoranthene	U	34.0	ug/kg	10.2	34.0	330
207-08-9	Benzo(k)fluoranthene	U	34.0	ug/kg	10.2	34.0	330
50-32-8	Benzo(a)pyrene	U	34.0	ug/kg	10.2	34.0	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.



**Semi-Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186235S  
Lab Sample ID: 186235002

Client: SSFL001  
Date Collected: 05/16/2007 09:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.1  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0058S01  
Batch ID: 636303  
Run Date: 05/22/2007 13:32  
Data File: s2e2212.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.0	ug/kg	10.2	34.0	330
53-70-3	Dibenzo(a,h)anthracene	U	34.0	ug/kg	10.2	34.0	420
191-24-2	Benzo(ghi)perylene	U	34.0	ug/kg	10.2	34.0	330
87-65-0	2,6-Dichlorophenol	U	340	ug/kg	68.1	340	330
120-82-1	1,2,4-Trichlorobenzene	U	340	ug/kg	68.1	340	330

**Surrogate/Tracer recovery**

	Result	Nominal	Units	Recovery%	Acceptable Limits
2-Fluorobiphenyl	1250	1700	ug/kg	74	(45%-101%)
Nitrobenzene-d5	1160	1700	ug/kg	68	(45%-101%)
p-Terphenyl-d14	1420	1700	ug/kg	84	(41%-114%)
2,4,6-Tribromophenol	2090	3400	ug/kg	61	(45%-97%)
2-Fluorophenol	2160	3400	ug/kg	63	(35%-98%)
Phenol-d5	2040	3400	ug/kg	60	(45%-95%)

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Tentatively Identified Compound  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235002

Date Collected: 05/16/2007 09:45  
Date Received: 05/17/2007 09:30  
Client: SSFL001

Matrix: SOIL  
%Moisture: 2.1  
Project: SSFL00507

Client ID: BLBS0058S01  
Batch ID: 636303  
Run Date: 05/22/2007 13:32  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Inst: MSD2.I  
Analyst: JMB3  
Aliquot: 30 g

SOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
15076-93-4	5.alpha.-Cholest-22-ene, (Z)-	10.02	496	ug/kg	86	NJ
1000144-54-1	Methyl 5-methyl-2-ethenyl-cyclohexane-1-	10.05	457	ug/kg	83	NJ
	Unknown	10.11	825	ug/kg		J
	Unknown	10.14	711	ug/kg		J
	Unknown	10.2	589	ug/kg		J
	Unknown	10.27	571	ug/kg		J
34315-85-0	Naphthalene, decahydro-1,6-dimethyl-4-(1	10.35	836	ug/kg	91	NJ
86917-79-5	6-Isopropenyl-4,8a-dimethyl-4a,5,6,7,8,8	10.53	508	ug/kg	93	NJ
	Unknown	10.56	424	ug/kg		J
	Unknown	10.62	478	ug/kg		J
	Unknown	10.66	553	ug/kg		J
	Unknown	10.73	684	ug/kg		J
112-95-8	Eicosane	10.79	801	ug/kg	93	NJ
	Unknown	10.92	858	ug/kg		J
	Unknown Aldol Condensate	2.99	406	ug/kg		J
1000190-22-7	7-(1,3-Dimethylbuta-1,3-dienyl)-1,6,6-tr	9.18	503	ug/kg	91	NJ
	Unknown	9.3	378	ug/kg		J
593-49-7	Heptacosane	9.37	742	ug/kg	97	NJ
55044-33-2	1H-Indene, 2-butyl-5-hexyloctahydro-	9.4	386	ug/kg	70	NJ
	Unknown	9.46	749	ug/kg		J
	Unknown	9.5	405	ug/kg		J

Semi-Volatile  
Tentatively Identified Compound  
Sample SummarySDG Number: 186235S  
Lab Sample ID: 186235002Date Collected: 05/16/2007 09:45  
Date Received: 05/17/2007 09:30  
Client: SSFL001Matrix: SOIL  
%Moisture: 2.1  
Project: SSFL00507Client ID: BLBS0058S01  
Batch ID: 636303  
Run Date: 05/22/2007 13:32  
Prep Date: 05/21/2007 15:00Method: SW846 8270C  
Inst: MSD2.I  
Analyst: JMB3  
Aliquot: 30 gSOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
1000303-05-9	Pyridine, 4-[5-(2-methoxyphenyl)-[1,3,4]	9.54	958	ug/kg	91	NJ
	Unknown	9.6	716	ug/kg		J
54482-31-4	D-Homoandrostane, (5.alpha.,13.alpha.)-	9.65	810	ug/kg	95	NJ
288246-53-7	Pyridine-3-carboxamide, oxime, N-(2-trif	9.73	1040	ug/kg	91	NJ
55044-36-5	1H-Indene, 5-butyl-6-hexyloctahydro-	9.77	638	ug/kg	91	NJ
1000195-85-4	1-Isopropenyl-4,5-dimethylbicyclo[4.3.0]	9.84	834	ug/kg	87	NJ
	Unknown	9.88	395	ug/kg		J
	Unknown	9.89	657	ug/kg		J
112-04-9	Silane, trichlorooctadecyl-	9.98	1730	ug/kg	97	NJ

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235003

Client: SSFL001  
Date Collected: 05/16/2007 10:05  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2

Client ID: BLBS0052S01  
Batch ID: 636303  
Run Date: 05/23/2007 00:18  
Data File: s2e2242.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.I  
Dilution: 4  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	1360	ug/kg	272	1360	330
108-95-2	Phenol	U	1360	ug/kg	272	1360	330
95-57-8	2-Chlorophenol	U	1360	ug/kg	272	1360	330
106-46-7	1,4-Dichlorobenzene	U	1360	ug/kg	272	1360	330
621-64-7	N-Nitrosodi-n-propylamine <i>N-Nitrosodipropylamine</i>	U	1360	ug/kg	272	1360	250
59-50-7	4-Chloro-3-methylphenol	U	1360	ug/kg	136	1360	330
83-32-9	Acenaphthene	U	136	ug/kg	45.4	136	330
121-14-2	2,4-Dinitrotoluene	U	1360	ug/kg	136	1360	330
100-02-7	4-Nitrophenol	U	1360	ug/kg	272	1360	830
87-86-5	Pentachlorophenol	U	1360	ug/kg	272	1360	830
129-00-0	Pyrene	U	136	ug/kg	42.7	136	330
62-53-3	Aniline	U	1360	ug/kg	476	1360	420
111-44-4	Bis(2-chloroethyl)ether <i>bis(2-Chloroethyl) ether</i>	U	1360	ug/kg	272	1360	330
541-73-1	1,3-Dichlorobenzene	U	1360	ug/kg	272	1360	330
100-51-6	Benzyl alcohol	U	1360	ug/kg	408	1360	330
95-50-1	1,2-Dichlorobenzene	U	1360	ug/kg	272	1360	330
108-60-1	Bis(2-chloroisopropyl)ether <i>bis(2-Chloroisopropyl) ether</i>	U	1360	ug/kg	272	1360	330
95-48-7	2-Methylphenol <i>o-Cresol</i>	U	1360	ug/kg	272	1360	330
65794-96-9	4-Methylphenol <i>m,p-Cresols</i>	U	1360	ug/kg	544	1360	330
67-72-1	Hexachloroethane	U	1360	ug/kg	272	1360	330
98-95-3	Nitrobenzene	U	1360	ug/kg	272	1360	330
78-59-1	Isophorone	U	1360	ug/kg	272	1360	330
88-75-5	2-Nitrophenol	U	1360	ug/kg	136	1360	330
105-67-9	2,4-Dimethylphenol	U	1360	ug/kg	272	1360	330
111-91-1	Bis(2-chloroethoxy)methane <i>bis(2-Chloroethoxy)methane</i>	U	1360	ug/kg	272	1360	330
65-85-0	Benzoic acid	U	2720	ug/kg	680	2720	830
91-20-3	Naphthalene	U	136	ug/kg	40.8	136	330
106-47-8	4-Chloroaniline	U	1360	ug/kg	272	1360	330
87-68-3	Hexachlorobutadiene	U	1360	ug/kg	272	1360	330
91-57-6	2-Methylnaphthalene	U	136	ug/kg	27.2	136	330
77-47-4	Hexachlorocyclopentadiene	U	1360	ug/kg	272	1360	830
88-06-2	2,4,6-Trichlorophenol	U	1360	ug/kg	272	1360	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235003

Client: SSFL001  
Date Collected: 05/16/2007 10:05  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.I  
Dilution: 4  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0052S01  
Batch ID: 636303  
Run Date: 05/23/2007 00:18  
Data File: s2e2242.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
95-95-4	2,4,5-Trichlorophenol	U	1360	ug/kg	272	1360	330
91-58-7	2-Chloronaphthalene	U	136	ug/kg	47.6	136	330
88-74-4	2-Nitroaniline	U	1360	ug/kg	272	1360	330
99-09-2	3-Nitroaniline	U	1360	ug/kg	272	1360	330
131-11-3	Dimethyl phthalate	U	1360	ug/kg	272	1360	330
606-20-2	2,6-Dinitrotoluene	U	1360	ug/kg	136	1360	330
208-96-8	Acenaphthylene	U	136	ug/kg	40.8	136	330
51-28-5	2,4-Dinitrophenol	U	2720	ug/kg	517	2720	660
132-64-9	Dibenzofuran	U	1360	ug/kg	272	1360	330
84-66-2	Diethyl phthalate	U	1360	ug/kg	272	1360	330
86-73-7	Fluorene	U	136	ug/kg	40.8	136	330
7005-72-3	4-Chlorophenyl phenyl ether	U	1360	ug/kg	136	1360	330
534-52-1	4,6-Dinitro-2-methylphenol	U	1360	ug/kg	272	1360	420
100-01-6	4-Nitroaniline	U	1360	ug/kg	272	1360	830
122-39-4	Diphenylamine	U	1360	ug/kg	272	1360	330
122-66-7	1,2-Diphenylhydrazine/Azobenzene	U	1360	ug/kg	272	1360	330
101-55-3	4-Bromophenyl phenyl ether	U	1360	ug/kg	136	1360	330
118-74-1	Hexachlorobenzene	U	1360	ug/kg	272	1360	330
85-01-8	Phenanthrene	U	136	ug/kg	40.8	136	330
120-12-7	Anthracene	U	136	ug/kg	27.2	136	330
84-74-2	Di-n-butyl phthalate	U	1360	ug/kg	136	1360	330
206-44-0	Fluoranthene	U	136	ug/kg	40.8	136	330
92-87-5	Benzidine	U	1360	ug/kg	1360	1360	660
85-68-7	Butyl benzyl phthalate	U	1360	ug/kg	272	1360	330
56-55-3	Benzo(a)anthracene	U	136	ug/kg	40.8	136	330
91-94-1	3,3'-Dichlorobenzidine	U	1360	ug/kg	408	1360	830
218-01-9	Chrysene	U	136	ug/kg	40.8	136	330
117-81-7	Bis(2-ethylhexyl)phthalate	U	680	ug/kg	272	680	330
117-84-0	Di-n-octyl phthalate	U	1360	ug/kg	272	1360	330
205-99-2	Benzo(b)fluoranthene	U	136	ug/kg	40.8	136	330
207-08-9	Benzo(k)fluoranthene	U	136	ug/kg	40.8	136	330
50-32-8	Benzo(a)pyrene	U	136	ug/kg	40.8	136	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235003

Client: SSFL001  
Date Collected: 05/16/2007 10:05  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
% Moisture: 2  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 4  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0052S01  
Batch ID: 636303  
Run Date: 05/23/2007 00:18  
Data File: s2e2242.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
193-39-5	Indeno(1,2,3-cd)pyrene	U	136	ug/kg	40.8	136	330
53-70-3	Dibenzo(a,h)anthracene	U	136	ug/kg	40.8	136	420
191-24-2	Benzo(ghi)perylene	U	136	ug/kg	40.8	136	330
87-65-0	2,6-Dichlorophenol	U	1360	ug/kg	272	1360	330
120-82-1	1,2,4-Trichlorobenzene	U	1360	ug/kg	272	1360	330

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
2-Fluorobiphenyl	1050	1700	ug/kg	62	(45%-101%)
Nitrobenzene-d5	1050	1700	ug/kg	62	(45%-101%)
p-Terphenyl-d14	1090	1700	ug/kg	64	(41%-114%)
2,4,6-Tribromophenol	1690	3400	ug/kg	50	(45%-97%)
2-Fluorophenol	1890	3400	ug/kg	56	(35%-98%)
Phenol-d5	1770	3400	ug/kg	52	(45%-95%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Tentatively Identified Compound  
Sample SummarySDG Number: 186235S  
Lab Sample ID: 186235003Date Collected: 05/16/2007 10:05  
Date Received: 05/17/2007 09:30  
Client: SSFL001Matrix: SOIL  
%Moisture: 2  
Project: SSFL00507Client ID: BLBS0052S01  
Batch ID: 636303  
Run Date: 05/23/2007 00:18  
Prep Date: 05/21/2007 15:00Method: SW846 8270C  
Inst: MSD2.1  
Analyst: JMB3  
Aliquot: 30 gSOP Ref: GL-OA-E-009  
Dilution: 4  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown	10.01	1720	ug/kg		J
	Unknown	10.1	2310	ug/kg		J
	Unknown	10.14	1930	ug/kg		J
	Unknown	10.18	2240	ug/kg		J
	Unknown	10.32	1550	ug/kg		J
	Unknown	10.35	1860	ug/kg		J
	Unknown	10.51	2660	ug/kg		J
	Unknown	10.64	2050	ug/kg		J
	Unknown	10.89	2030	ug/kg		J
	Unknown	8.61	1580	ug/kg		J
	Unknown	8.64	1550	ug/kg		J
331416-19-4	Cyclopropane carboxamide, 2-cyclopropyl- N)	8.71	1290	ug/kg	91	NJ
	Unknown	8.8	1470	ug/kg		J
24887-75-0	Androstane	8.84	1520	ug/kg	90	NJ
438-23-3	Androstane, (5.beta.)-	8.88	1580	ug/kg	91	NJ
	Unknown	8.93	1600	ug/kg		J
	Unknown	8.98	1430	ug/kg		J
	Unknown	9.13	1790	ug/kg		J
	Unknown	9.18	1850	ug/kg		J
	Unknown	9.23	1850	ug/kg		J
	Unknown	9.3	2060	ug/kg		J

Semi-Volatile  
Tentatively Identified Compound  
Sample Summary

SDG Number: 186235S

Date Collected: 05/16/2007 10:05

Matrix: SOIL

Lab Sample ID: 186235003

Date Received: 05/17/2007 09:30

%Moisture: 2

Client: SSFL001

Project: SSFL00507

Client ID: BLBS0052S01

Method: SW846 8270C

SOP Ref: GL-OA-E-009

Batch ID: 636303

Inst: MSD2.I

Dilution: 4

Run Date: 05/23/2007 00:18

Analyst: JMB3

Inj. Vol: .5 uL

Prep Date: 05/21/2007 15:00

Aliquot: 30 g

Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown	9.45	3040	ug/kg		J
	Unknown	9.53	1420	ug/kg		J
	Unknown	9.59	1600	ug/kg		J
54482-31-4	D-Homoandrostane, (5.alpha.,13.alpha.)-	9.64	2290	ug/kg	94	NJ
	Unknown	9.72	2030	ug/kg		J
55044-36-5	1H-Indene, 5-butyl-6-hexyloctahydro-	9.75	1580	ug/kg	97	NJ
	Unknown	9.83	1850	ug/kg		J
	Unknown	9.88	1490	ug/kg		J
	Unknown	9.95	3260	ug/kg		J



**Semi-Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186235S  
Lab Sample ID: 186235004

Client: SSFL001  
Date Collected: 05/16/2007 10:25  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 1.6  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0057S01  
Batch ID: 636303  
Run Date: 05/23/2007 00:38  
Data File: s2e2243.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	339	ug/kg	67.7	339	330
108-95-2	Phenol	U	339	ug/kg	67.7	339	330
95-57-8	2-Chlorophenol	U	339	ug/kg	67.7	339	330
106-46-7	1,4-Dichlorobenzene	U	339	ug/kg	67.7	339	330
621-64-7	N-Nitrosodi-n-propylamine <i>N-Nitrosodipropylamine</i>	U	339	ug/kg	67.7	339	250
59-50-7	4-Chloro-3-methylphenol	U	339	ug/kg	33.9	339	330
83-32-9	Acenaphthene	U	33.9	ug/kg	11.3	33.9	330
121-14-2	2,4-Dinitrotoluene	U	339	ug/kg	33.9	339	330
100-02-7	4-Nitrophenol	U	339	ug/kg	67.7	339	830
87-86-5	Pentachlorophenol	U	339	ug/kg	67.7	339	830
129-00-0	Pyrene	U	33.9	ug/kg	10.6	33.9	330
62-53-3	Aniline	U	339	ug/kg	119	339	420
111-44-4	Bis(2-chloroethyl)ether <i>bis(2-Chloroethyl) ether</i>	U	339	ug/kg	67.7	339	330
541-73-1	1,3-Dichlorobenzene	U	339	ug/kg	67.7	339	330
100-51-6	Benzyl alcohol	U	339	ug/kg	102	339	330
95-50-1	1,2-Dichlorobenzene	U	339	ug/kg	67.7	339	330
108-60-1	Bis(2-chloroisopropyl)ether <i>bis(2-Chloroisopropyl) ether</i>	U	339	ug/kg	67.7	339	330
95-48-7	2-Methylphenol <i>o-Cresol</i>	U	339	ug/kg	67.7	339	330
65794-96-9	4-Methylphenol <i>m,p-Cresols</i>	U	339	ug/kg	135	339	330
67-72-1	Hexachloroethane	U	339	ug/kg	67.7	339	330
98-95-3	Nitrobenzene	U	339	ug/kg	67.7	339	330
78-59-1	Isophorone	U	339	ug/kg	67.7	339	330
88-75-5	2-Nitrophenol	U	339	ug/kg	33.9	339	330
105-67-9	2,4-Dimethylphenol	U	339	ug/kg	67.7	339	330
111-91-1	Bis(2-chloroethoxy)methane <i>bis(2-Chloroethoxy)methane</i>	U	339	ug/kg	67.7	339	330
65-85-0	Benzoic acid	U	677	ug/kg	169	677	830
91-20-3	Naphthalene	U	33.9	ug/kg	10.2	33.9	330
106-47-8	4-Chloroaniline	U	339	ug/kg	67.7	339	330
87-68-3	Hexachlorobutadiene	U	339	ug/kg	67.7	339	330
91-57-6	2-Methylnaphthalene	U	33.9	ug/kg	6.77	33.9	330
77-47-4	Hexachlorocyclopentadiene	U	339	ug/kg	67.7	339	830
88-06-2	2,4,6-Trichlorophenol	U	339	ug/kg	67.7	339	330

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

**Semi-Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186235S  
Lab Sample ID: 186235004

Client: SSFL001  
Date Collected: 05/16/2007 10:25  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 1.6  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0057S01  
Batch ID: 636303  
Run Date: 05/23/2007 00:38  
Data File: s2e2243.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
95-95-4	2,4,5-Trichlorophenol	U	339	ug/kg	67.7	339	330
91-58-7	2-Chloronaphthalene	U	33.9	ug/kg	11.9	33.9	330
88-74-4	2-Nitroaniline	U	339	ug/kg	67.7	339	330
99-09-2	<i>o</i> -Nitroaniline	U	339	ug/kg	67.7	339	330
131-11-3	<i>m</i> -Nitroaniline	U	339	ug/kg	67.7	339	330
606-20-2	Dimethyl phthalate	U	339	ug/kg	67.7	339	330
208-96-8	<i>Dimethylphthalate</i>	U	339	ug/kg	33.9	339	330
51-28-5	2,6-Dinitrotoluene	U	33.9	ug/kg	10.2	33.9	330
132-64-9	Acenaphthylene	U	677	ug/kg	129	677	660
84-66-2	2,4-Dinitrophenol	U	339	ug/kg	67.7	339	330
86-73-7	Dibenzofuran	U	339	ug/kg	67.7	339	330
7005-72-3	Diethyl phthalate	U	33.9	ug/kg	10.2	33.9	330
534-52-1	<i>Diethylphthalate</i>	U	339	ug/kg	33.9	339	330
100-01-6	Fluorene	U	339	ug/kg	67.7	339	830
122-39-4	4-Chlorophenyl phenyl ether	U	339	ug/kg	67.7	339	330
122-66-7	<i>4-Chlorophenylphenylether</i>	U	339	ug/kg	67.7	339	330
101-55-3	4,6-Dinitro-2-methylphenol	U	339	ug/kg	67.7	339	420
118-74-1	<i>2-Methyl-4,6-dinitrophenol</i>	U	339	ug/kg	67.7	339	830
85-01-8	4-Nitroaniline	U	339	ug/kg	67.7	339	330
120-12-7	<i>p</i> -Nitroaniline	U	339	ug/kg	67.7	339	330
84-74-2	Diphenylamine	U	339	ug/kg	67.7	339	330
206-44-0	1,2-Diphenylhydrazine/Azobenzene	U	339	ug/kg	67.7	339	330
92-87-5	<i>1,2-Diphenylhydrazine</i>	U	339	ug/kg	33.9	339	330
56-55-3	4-Bromophenyl phenyl ether	U	339	ug/kg	67.7	339	330
91-94-1	<i>4-Bromophenylphenylether</i>	U	339	ug/kg	10.2	33.9	330
218-01-9	Hexachlorobenzene	U	33.9	ug/kg	10.2	33.9	330
117-81-7	Phenanthrene	U	33.9	ug/kg	6.77	33.9	330
117-84-0	Anthracene	U	339	ug/kg	33.9	339	330
205-99-2	Di-n-butyl phthalate	U	33.9	ug/kg	10.2	33.9	330
207-08-9	<i>Di-n-butylphthalate</i>	U	339	ug/kg	67.7	339	330
50-32-8	Fluoranthene	U	33.9	ug/kg	10.2	33.9	330
	Benzidine	U	339	ug/kg	67.7	339	660
	Butyl benzyl phthalate	U	339	ug/kg	67.7	339	330
	<i>Butylbenzylphthalate</i>	U	33.9	ug/kg	10.2	33.9	330
	Benzo(a)anthracene	U	339	ug/kg	102	339	830
	3,3'-Dichlorobenzidine	U	33.9	ug/kg	10.2	33.9	330
	Chrysene	U	33.9	ug/kg	10.2	33.9	330
	Bis(2-ethylhexyl)phthalate	U	475	ug/kg	67.7	169	330
	<i>bis(2-Ethylhexylphthalate</i>	U	339	ug/kg	67.7	339	330
	Di-n-octyl phthalate	U	33.9	ug/kg	10.2	33.9	330
	<i>Di-n-octylphthalate</i>	U	33.9	ug/kg	10.2	33.9	330
	Benzo(b)fluoranthene	U	33.9	ug/kg	10.2	33.9	330
	Benzo(k)fluoranthene	U	33.9	ug/kg	10.2	33.9	330
	Benzo(a)pyrene	U	33.9	ug/kg	10.2	33.9	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

pm 6/5/07

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Level IV

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235004

Client: SSFL001  
Date Collected: 05/16/2007 10:25  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 1.6  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0057S01  
Batch ID: 636303  
Run Date: 05/23/2007 00:38  
Data File: s2e2243.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.9	ug/kg	10.2	33.9	330
53-70-3	Dibenzo(a,h)anthracene	U	33.9	ug/kg	10.2	33.9	420
191-24-2	Benzo(ghi)perylene	U	33.9	ug/kg	10.2	33.9	330
87-65-0	2,6-Dichlorophenol	U	339	ug/kg	67.7	339	330
120-82-1	1,2,4-Trichlorobenzene	U	339	ug/kg	67.7	339	330

## Surrogate/Tracer recovery

	Result	Nominal	Units	Recovery%	Acceptable Limits
2-Fluorobiphenyl	885	1690	ug/kg	52	(45%-101%)
Nitrobenzene-d5	860	1690	ug/kg	51	(45%-101%)
p-Terphenyl-d14	947	1690	ug/kg	56	(41%-114%)
2,4,6-Tribromophenol	1590	3390	ug/kg	47	(45%-97%)
2-Fluorophenol	1550	3390	ug/kg	46	(35%-98%)
Phenol-d5	1480	3390	ug/kg	44 *	(45%-95%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Tentatively Identified Compound  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235004

Date Collected: 05/16/2007 10:25  
Date Received: 05/17/2007 09:30  
Client: SSFL001

Matrix: SOIL  
% Moisture: 1.6  
Project: SSFL00507

Client ID: BLBS0057S01  
Batch ID: 636303  
Run Date: 05/23/2007 00:38  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Inst: MSD2.I  
Analyst: JMB3  
Aliquot: 30 g

SOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown	10.05	467	ug/kg		J
	Unknown	10.08	505	ug/kg		J
	Unknown	10.12	352	ug/kg		J
	Unknown	10.16	317	ug/kg		J
	Unknown	10.33	464	ug/kg		J
	Unknown	10.59	317	ug/kg		J
	Unknown	10.76	503	ug/kg		J
	Unknown	10.89	431	ug/kg		J
	Unknown	8.45	301	ug/kg		J
	Unknown	8.58	308	ug/kg		J
	Unknown	8.62	313	ug/kg		J
	Unknown	8.64	276	ug/kg		J
55044-33-2	1H-Indene, 2-butyl-5-hexyloctahydro-	8.71	425	ug/kg	91	NJ
19780-11-1	2-Dodecen-1-yl(-)succinic anhydride	8.79	284	ug/kg	91	NJ
3386-33-2	Octadecane, 1-chloro-	8.86	428	ug/kg	83	NJ
19780-11-1	2-Dodecen-1-yl(-)succinic anhydride	9.01	415	ug/kg	91	NJ
	Unknown	9.09	303	ug/kg		J
288246-53-7	Pyridine-3-carboxamide, oxime, N-(2-trif	9.18	693	ug/kg	91	NJ
54482-31-4	D-Homoandrostane, (5.alpha.,13.alpha.)-	9.22	442	ug/kg	92	NJ
	Unknown	9.28	358	ug/kg		J
112-95-8	Eicosane	9.34	536	ug/kg	95	NJ

Semi-Volatile  
Tentatively Identified Compound  
Sample SummarySDG Number: 186235S  
Lab Sample ID: 186235004Date Collected: 05/16/2007 10:25  
Date Received: 05/17/2007 09:30  
Client: SSFL001Matrix: SOIL  
%Moisture: 1.6  
Project: SSFL00507Client ID: BLBS0057S01  
Batch ID: 636303  
Run Date: 05/23/2007 00:38  
Prep Date: 05/21/2007 15:00Method: SW846 8270C  
Inst: MSD2.1  
Analyst: JMB3  
Aliquot: 30 gSOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown	9.4	343	ug/kg		J
	Unknown	9.49	345	ug/kg		J
	Unknown	9.51	441	ug/kg		J
	Unknown	9.62	448	ug/kg		J
	Unknown	9.71	530	ug/kg		J
	Unknown	9.76	311	ug/kg		J
	Unknown	9.81	589	ug/kg		J
	Unknown	9.87	359	ug/kg		J
629-93-6	Octadecane, 1-iodo-	9.95	1090	ug/kg	98	NJ

**Semi-Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 1862355  
Lab Sample ID: 186235005

Client: SSFL001  
Date Collected: 05/16/2007 11:00  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 3.4

Client ID: BLBS0060S01  
Batch ID: 636303  
Run Date: 05/22/2007 14:32  
Data File: s2e2215.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	345	ug/kg	69.0	345	330
108-95-2	Phenol	U	345	ug/kg	69.0	345	330
95-57-8	2-Chlorophenol	U	345	ug/kg	69.0	345	330
106-46-7	1,4-Dichlorobenzene	U	345	ug/kg	69.0	345	330
621-64-7	N-Nitrosodi-n-propylamine <i>N-Nitrosodipropylamine</i>	U	345	ug/kg	69.0	345	250
59-50-7	4-Chloro-3-methylphenol	U	345	ug/kg	34.5	345	330
83-32-9	Acenaphthene	U	34.5	ug/kg	11.5	34.5	330
121-14-2	2,4-Dinitrotoluene	U	345	ug/kg	34.5	345	330
100-02-7	4-Nitrophenol	U	345	ug/kg	69.0	345	830
87-86-5	Pentachlorophenol	U	345	ug/kg	69.0	345	830
129-00-0	Pyrene	U	34.5	ug/kg	10.8	34.5	330
62-53-3	Aniline	U	345	ug/kg	121	345	420
111-44-4	Bis(2-chloroethyl)ether <i>bis(2-Chloroethyl) ether</i>	U	345	ug/kg	69.0	345	330
541-73-1	1,3-Dichlorobenzene	U	345	ug/kg	69.0	345	330
100-51-6	Benzyl alcohol	U	345	ug/kg	104	345	330
95-50-1	1,2-Dichlorobenzene	U	345	ug/kg	69.0	345	330
108-60-1	Bis(2-chloroisopropyl)ether <i>bis(2-Chloroisopropyl) ether</i>	U	345	ug/kg	69.0	345	330
95-48-7	2-Methylphenol <i>o-Cresol</i>	U	345	ug/kg	69.0	345	330
65794-96-9	4-Methylphenol <i>m,p-Cresols</i>	U	345	ug/kg	138	345	330
67-72-1	Hexachloroethane	U	345	ug/kg	69.0	345	330
98-95-3	Nitrobenzene	U	345	ug/kg	69.0	345	330
78-59-1	Isophorone	U	345	ug/kg	69.0	345	330
88-75-5	2-Nitrophenol	U	345	ug/kg	34.5	345	330
105-67-9	2,4-Dimethylphenol	U	345	ug/kg	69.0	345	330
111-91-1	Bis(2-chloroethoxy)methane <i>bis(2-Chloroethoxy)methane</i>	U	345	ug/kg	69.0	345	330
65-85-0	Benzoic acid	U	690	ug/kg	173	690	830
91-20-3	Naphthalene	U	34.5	ug/kg	10.4	34.5	330
106-47-8	4-Chloroaniline	U	345	ug/kg	69.0	345	330
87-68-3	Hexachlorobutadiene	U	345	ug/kg	69.0	345	330
91-57-6	2-Methylnaphthalene	U	34.5	ug/kg	6.90	34.5	330
77-47-4	Hexachlorocyclopentadiene	U	345	ug/kg	69.0	345	830
88-06-2	2,4,6-Trichlorophenol	U	345	ug/kg	69.0	345	330

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235005

Client: SSFL001  
Date Collected: 05/16/2007 11:00  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 3.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0060S01  
Batch ID: 636303  
Run Date: 05/22/2007 14:32  
Data File: s2e2215.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parinname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
95-95-4	2,4,5-Trichlorophenol	U	345	ug/kg	69.0	345	330
91-58-7	2-Chloronaphthalene	U	34.5	ug/kg	12.1	34.5	330
88-74-4	2-Nitroaniline	U	345	ug/kg	69.0	345	330
99-09-2	<i>o</i> -Nitroaniline	U	345	ug/kg	69.0	345	330
131-11-3	3-Nitroaniline	U	345	ug/kg	69.0	345	330
606-20-2	<i>m</i> -Nitroaniline	U	345	ug/kg	69.0	345	330
131-11-3	Dimethyl phthalate	U	345	ug/kg	69.0	345	330
606-20-2	<i>Dimethylphthalate</i>	U	345	ug/kg	34.5	345	330
208-96-8	2,6-Dinitrotoluene	U	34.5	ug/kg	10.4	34.5	330
51-28-5	Acenaphthylene	U	690	ug/kg	131	690	660
132-64-9	2,4-Dinitrophenol	U	345	ug/kg	69.0	345	330
84-66-2	Dibenzofuran	U	345	ug/kg	69.0	345	330
86-73-7	Diethyl phthalate	U	345	ug/kg	69.0	345	330
7005-72-3	<i>Diethylphthalate</i>	U	34.5	ug/kg	10.4	34.5	330
534-52-1	Fluorene	U	345	ug/kg	34.5	345	330
100-01-6	4-Chlorophenyl phenyl ether	U	345	ug/kg	69.0	345	830
122-39-4	<i>4-Chlorophenylphenylether</i>	U	345	ug/kg	69.0	345	420
122-66-7	4,6-Dinitro-2-methylphenol	U	345	ug/kg	69.0	345	830
101-55-3	<i>2-Methyl-4,6-dinitrophenol</i>	U	345	ug/kg	69.0	345	830
118-74-1	4-Nitroaniline	U	345	ug/kg	69.0	345	830
85-01-8	<i>p</i> -Nitroaniline	U	345	ug/kg	69.0	345	330
120-12-7	Diphenylamine	U	345	ug/kg	69.0	345	330
84-74-2	1,2-Diphenylhydrazine/Azobenzene	U	345	ug/kg	69.0	345	330
206-44-0	<i>1,2-Diphenylhydrazine</i>	U	345	ug/kg	34.5	345	330
92-87-5	4-Bromophenyl phenyl ether	U	345	ug/kg	69.0	345	330
85-68-7	<i>4-Bromophenylphenylether</i>	U	345	ug/kg	10.4	34.5	330
56-55-3	Hexachlorobenzene	U	34.5	ug/kg	10.4	34.5	330
91-94-1	Phenanthrene	U	34.5	ug/kg	6.90	34.5	330
218-01-9	Anthracene	U	34.5	ug/kg	34.5	345	330
117-81-7	Di-n-butyl phthalate	U	345	ug/kg	34.5	345	330
117-84-0	<i>Di-n-butylphthalate</i>	U	34.5	ug/kg	10.4	34.5	330
205-99-2	Fluoranthene	U	34.5	ug/kg	10.4	34.5	330
207-08-9	Benzidine	U	345	ug/kg	345	345	660
50-32-8	Butyl benzyl phthalate	U	345	ug/kg	69.0	345	330
	<i>Butylbenzylphthalate</i>	U	34.5	ug/kg	10.4	34.5	330
	Benzo(a)anthracene	U	345	ug/kg	104	345	830
	3,3'-Dichlorobenzidine	U	34.5	ug/kg	10.4	34.5	330
	Chrysene	U	173	ug/kg	69.0	173	330
	Bis(2-ethylhexyl)phthalate	U	345	ug/kg	69.0	345	330
	<i>bis(2-Ethylhexyl)phthalate</i>	U	34.5	ug/kg	10.4	34.5	330
	Di-n-octyl phthalate	U	34.5	ug/kg	10.4	34.5	330
	<i>Di-n-octylphthalate</i>	U	34.5	ug/kg	10.4	34.5	330
	Benzo(b)fluoranthene	U	34.5	ug/kg	10.4	34.5	330
	Benzo(k)fluoranthene	U	34.5	ug/kg	10.4	34.5	330
	Benzo(a)pyrene	U	34.5	ug/kg	10.4	34.5	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

**Semi-Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186235S  
Lab Sample ID: 186235005

Client: SSFL001  
Date Collected: 05/16/2007 11:00  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 3.4  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0060S01  
Batch ID: 636303  
Run Date: 05/22/2007 14:32  
Data File: s2e2215.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.5	ug/kg	10.4	34.5	330
53-70-3	Dibenzo(a,h)anthracene	U	34.5	ug/kg	10.4	34.5	420
191-24-2	Benzo(ghi)perylene	U	34.5	ug/kg	10.4	34.5	330
87-65-0	2,6-Dichlorophenol	U	345	ug/kg	69.0	345	330
120-82-1	1,2,4-Trichlorobenzene	U	345	ug/kg	69.0	345	330

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
2-Fluorobiphenyl	1200	1730	ug/kg	70	(45%-101%)
Nitrobenzene-d5	1130	1730	ug/kg	66	(45%-101%)
p-Terphenyl-d14	1320	1730	ug/kg	76	(41%-114%)
2,4,6-Tribromophenol	1780	3450	ug/kg	52	(45%-97%)
2-Fluorophenol	1990	3450	ug/kg	58	(35%-98%)
Phenol-d5	1910	3450	ug/kg	55	(45%-95%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.



Semi-Volatile  
Tentatively Identified Compound  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235005

Date Collected: 05/16/2007 11:00  
Date Received: 05/17/2007 09:30  
Client: SSFL001

Matrix: SOIL  
% Moisture: 3.4  
Project: SSFL00507

Client ID: BLBS0060S01  
Batch ID: 636303  
Run Date: 05/22/2007 14:32  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Inst: MSD2.I  
Analyst: JMB3  
Aliquot: 30 g

SOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown	10.03	612	ug/kg		J
	Unknown	10.12	486	ug/kg		J
1000190-22-7	7-(1,3-Dimethylbuta-1,3-dienyl)-1,6,6-tr	10.16	531	ug/kg	90	NJ
	Unknown	10.21	566	ug/kg		J
	Unknown	10.29	778	ug/kg		J
	Unknown	10.36	1040	ug/kg		J
	Unknown	10.57	754	ug/kg		J
106932-90-5	Oct-5-en-2-ol, 8-(1,4,4a,5,6,7,8,8a-octa	10.63	436	ug/kg	81	NJ
	Unknown	10.66	529	ug/kg		J
1000298-98-5	(1R,1S,8R,8Ar)-8-hydroxy-1-(2-acetoxyeth	10.8	610	ug/kg	80	NJ
1000190-21-8	2-(4a,8-Dimethyl-6-oxo-1,2,3,4,4a,5,6,8a	10.93	734	ug/kg	81	NJ
	Unknown	11.06	533	ug/kg		J
53584-60-4	28-Nor-17.alpha.(H)-hopane	11.13	456	ug/kg	91	NJ
	Unknown Aldol Condensate	2.99	541	ug/kg		J
309735-29-3	1,2-Benzisothiazole, 3-(hexahydro-1H-aze	8.74	366	ug/kg	92	NJ
59426-46-9	2,5-Furandione, 3-dodecyl-	8.94	448	ug/kg	92	NJ
	Unknown	9.2	433	ug/kg		J
	Unknown	9.25	378	ug/kg		J
	Unknown	9.31	631	ug/kg		J
112-95-8	Eicosane	9.37	813	ug/kg	96	NJ
	Unknown	9.44	640	ug/kg		J

Semi-Volatile  
Tentatively Identified Compound  
Sample SummarySDG Number: 186235S  
Lab Sample ID: 186235005Date Collected: 05/16/2007 11:00  
Date Received: 05/17/2007 09:30  
Client: SSFL001Matrix: SOIL  
%Moisture: 3.4  
Project: SSFL00507Client ID: BLBS0060S01  
Batch ID: 636303  
Run Date: 05/22/2007 14:32  
Prep Date: 05/21/2007 15:00Method: SW846 8270C  
Inst: MSD2.1  
Analyst: JMB3  
Aliquot: 30 gSOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown	9.47	764	ug/kg		J
54482-31-4	D-Homoandrostane, (5.alpha.,13.alpha.)-	9.54	864	ug/kg	94	NJ
	Unknown	9.62	496	ug/kg		J
	Unknown	9.66	519	ug/kg		J
1000303-05-9	Pyridine, 4-[5-(2-methoxyphenyl)-[1,3,4]	9.74	1150	ug/kg	90	NJ
	Unknown	9.8	540	ug/kg		J
	Unknown	9.85	646	ug/kg		J
55044-36-5	1H-Indene, 5-butyl-6-hexyloctahydro-	9.91	956	ug/kg	93	NJ
1560-84-5	Eicosane, 2-methyl-	9.99	1510	ug/kg	97	NJ

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235006

Client: SSFL001  
Date Collected: 05/16/2007 11:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 3.3

Client ID: BLBS0053S01  
Batch ID: 636303  
Run Date: 05/22/2007 14:53  
Data File: s2e2216.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	345	ug/kg	68.9	345	330
108-95-2	Phenol	U	345	ug/kg	68.9	345	330
95-57-8	2-Chlorophenol	U	345	ug/kg	68.9	345	330
106-46-7	1,4-Dichlorobenzene	U	345	ug/kg	68.9	345	330
621-64-7	N-Nitrosodi-n-propylamine <i>N-Nitrosodipropylamine</i>	U	345	ug/kg	68.9	345	250
59-50-7	4-Chloro-3-methylphenol	U	345	ug/kg	34.5	345	330
83-32-9	Acenaphthene	U	34.5	ug/kg	11.5	34.5	330
121-14-2	2,4-Dinitrotoluene	U	345	ug/kg	34.5	345	330
100-02-7	4-Nitrophenol	U	345	ug/kg	68.9	345	830
87-86-5	Pentachlorophenol	U	345	ug/kg	68.9	345	830
129-00-0	Pyrene	U	34.5	ug/kg	10.8	34.5	330
62-53-3	Aniline	U	345	ug/kg	121	345	420
111-44-4	Bis(2-chloroethyl)ether <i>bis(2-Chloroethyl) ether</i>	U	345	ug/kg	68.9	345	330
541-73-1	1,3-Dichlorobenzene	U	345	ug/kg	68.9	345	330
100-51-6	Benzyl alcohol	U	345	ug/kg	103	345	330
95-50-1	1,2-Dichlorobenzene	U	345	ug/kg	68.9	345	330
108-60-1	Bis(2-chloroisopropyl)ether <i>bis(2-Chloroisopropyl) ether</i>	U	345	ug/kg	68.9	345	330
95-48-7	2-Methylphenol <i>o-Cresol</i>	U	345	ug/kg	68.9	345	330
65794-96-9	4-Methylphenol <i>m,p-Cresols</i>	U	345	ug/kg	138	345	330
67-72-1	Hexachloroethane	U	345	ug/kg	68.9	345	330
98-95-3	Nitrobenzene	U	345	ug/kg	68.9	345	330
78-59-1	Isophorone	U	345	ug/kg	68.9	345	330
88-75-5	2-Nitrophenol	U	345	ug/kg	34.5	345	330
105-67-9	2,4-Dimethylphenol	U	345	ug/kg	68.9	345	330
111-91-1	Bis(2-chloroethoxy)methane <i>bis(2-Chloroethoxy)methane</i>	U	345	ug/kg	68.9	345	330
65-85-0	Benzoic acid	U	689	ug/kg	172	689	830
91-20-3	Naphthalene	U	34.5	ug/kg	10.3	34.5	330
106-47-8	4-Chloroaniline	U	345	ug/kg	68.9	345	330
87-68-3	Hexachlorobutadiene	U	345	ug/kg	68.9	345	330
91-57-6	2-Methylnaphthalene	U	34.5	ug/kg	6.89	34.5	330
77-47-4	Hexachlorocyclopentadiene	U	345	ug/kg	68.9	345	830
88-06-2	2,4,6-Trichlorophenol	U	345	ug/kg	68.9	345	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235006

Client: SSFL001  
Date Collected: 05/16/2007 11:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 3.3  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0053S01  
Batch ID: 636303  
Run Date: 05/22/2007 14:53  
Data File: s2e2216.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
95-95-4	2,4,5-Trichlorophenol	U	345	ug/kg	68.9	345	330
91-58-7	2-Chloronaphthalene	U	34.5	ug/kg	12.1	34.5	330
88-74-4	2-Nitroaniline	U	345	ug/kg	68.9	345	330
99-09-2	3-Nitroaniline	U	345	ug/kg	68.9	345	330
131-11-3	Dimethyl phthalate	U	345	ug/kg	68.9	345	330
606-20-2	2,6-Dinitrotoluene	U	345	ug/kg	34.5	345	330
208-96-8	Acenaphthylene	U	34.5	ug/kg	10.3	34.5	330
51-28-5	2,4-Dinitrophenol	U	689	ug/kg	131	689	660
132-64-9	Dibenzofuran	U	345	ug/kg	68.9	345	330
84-66-2	Diethyl phthalate	U	345	ug/kg	68.9	345	330
86-73-7	Fluorene	U	34.5	ug/kg	10.3	34.5	330
7005-72-3	4-Chlorophenyl phenyl ether	U	345	ug/kg	34.5	345	330
534-52-1	4,6-Dinitro-2-methylphenol	U	345	ug/kg	68.9	345	420
100-01-6	4-Nitroaniline	U	345	ug/kg	68.9	345	830
122-39-4	Diphenylamine	U	345	ug/kg	68.9	345	330
122-66-7	1,2-Diphenylhydrazine/Azobenzene	U	345	ug/kg	68.9	345	330
101-55-3	4-Bromophenyl phenyl ether	U	345	ug/kg	34.5	345	330
118-74-1	Hexachlorobenzene	U	345	ug/kg	68.9	345	330
85-01-8	Phenanthrene	U	34.5	ug/kg	10.3	34.5	330
120-12-7	Anthracene	U	34.5	ug/kg	6.89	34.5	330
84-74-2	Di-n-butyl phthalate	U	345	ug/kg	34.5	345	330
206-44-0	Fluoranthene	U	34.5	ug/kg	10.3	34.5	330
92-87-5	Benzidine	U	345	ug/kg	345	345	660
85-68-7	Butyl benzyl phthalate	U	345	ug/kg	68.9	345	330
56-55-3	Benzo(a)anthracene	U	34.5	ug/kg	10.3	34.5	330
91-94-1	3,3'-Dichlorobenzidine	U	345	ug/kg	103	345	830
218-01-9	Chrysene	U	34.5	ug/kg	10.3	34.5	330
117-81-7	Bis(2-ethylhexyl)phthalate	U	172	ug/kg	68.9	172	330
117-84-0	Di-n-octyl phthalate	U	345	ug/kg	68.9	345	330
205-99-2	Benzo(b)fluoranthene	U	34.5	ug/kg	10.3	34.5	330
207-08-9	Benzo(k)fluoranthene	U	34.5	ug/kg	10.3	34.5	330
50-32-8	Benzo(a)pyrene	U	34.5	ug/kg	10.3	34.5	330

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235006

Client: SSFL001  
Date Collected: 05/16/2007 11:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 3.3  
Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-009  
Instrument: MSD2.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Client ID: BLBS0053S01  
Batch ID: 636303  
Run Date: 05/22/2007 14:53  
Data File: s2e2216.d  
Prep Batch: 636302  
Prep Date: 05/21/2007 15:00

Method: SW846 8270C  
Analyst: JMB3  
Inj. Vol: .5 uL  
Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.5	ug/kg	10.3	34.5	330
53-70-3	Dibenzo(a,h)anthracene	U	34.5	ug/kg	10.3	34.5	420
191-24-2	Benzo(ghi)perylene	U	34.5	ug/kg	10.3	34.5	330
87-65-0	2,6-Dichlorophenol	U	345	ug/kg	68.9	345	330
120-82-1	1,2,4-Trichlorobenzene	U	345	ug/kg	68.9	345	330

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery %	Acceptable Limits
2-Fluorobiphenyl	1460	1720	ug/kg	85	(45%-101%)
Nitrobenzene-d5	1390	1720	ug/kg	81	(45%-101%)
p-Terphenyl-d14	1640	1720	ug/kg	95	(41%-114%)
2,4,6-Tribromophenol	2230	3450	ug/kg	65	(45%-97%)
2-Fluorophenol	2360	3450	ug/kg	68	(35%-98%)
Phenol-d5	2290	3450	ug/kg	66	(45%-95%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Tentatively Identified Compound  
Sample Summary

SDG Number: 186235S

Date Collected: 05/16/2007 11:45

Matrix: SOIL

Lab Sample ID: 186235006

Date Received: 05/17/2007 09:30

%Moisture: 3.3

Client: SSFL001

Project: SSFL00507

Client ID: BLBS0053S01

Method: SW846 8270C

SOP Ref: GL-OA-E-009

Batch ID: 636303

Inst: MSD2.1

Dilution: 1

Run Date: 05/22/2007 14:53

Analyst: JMB3

Inj. Vol: .5 uL

Prep Date: 05/21/2007 15:00

Aliquot: 30 g

Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown	10.06	262	ug/kg		J
	Unknown	10.08	273	ug/kg		J
	Unknown	10.25	254	ug/kg		J
	Unknown	10.35	282	ug/kg		J
	Unknown	10.5	230	ug/kg		J
	Unknown	10.74	231	ug/kg		J
112-95-8	Eicosane	10.79	457	ug/kg	98	NJ
	Unknown	10.92	256	ug/kg		J
	Unknown Aldol Condensate	2.99	488	ug/kg		J
	Unknown	8.29	151	ug/kg		J
	Unknown	8.74	218	ug/kg		J
	Unknown	8.88	192	ug/kg		J
	Unknown	8.92	291	ug/kg		J
	Unknown	8.95	207	ug/kg		J
	Unknown	9.04	183	ug/kg		J
593-45-3	Octadecane	9.11	255	ug/kg	95	NJ
	Unknown	9.16	146	ug/kg		J
	Unknown	9.27	155	ug/kg		J
593-49-7	Heptacosane	9.36	593	ug/kg	99	NJ
	Unknown	9.42	296	ug/kg		J
	Unknown	9.5	199	ug/kg		J

Semi-Volatile  
Tentatively Identified Compound  
Sample SummarySDG Number: 186235S  
Lab Sample ID: 186235006Date Collected: 05/16/2007 11:45  
Date Received: 05/17/2007 09:30  
Client: SSFL001Matrix: SOIL  
% Moisture: 3.3  
Project: SSFL00507Client ID: BLBS0053S01  
Batch ID: 636303  
Run Date: 05/22/2007 14:53  
Prep Date: 05/21/2007 15:00Method: SW846 8270C  
Inst: MSD2.I  
Analyst: JMB3  
Aliquot: 30 gSOP Ref: GL-OA-E-009  
Dilution: 1  
Inj. Vol: .5 uL  
Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown	9.53	319	ug/kg		J
	Unknown	9.55	428	ug/kg		J
	Unknown	9.65	352	ug/kg		J
	Unknown	9.73	178	ug/kg		J
	Unknown	9.89	228	ug/kg		J
7225-64-1	Heptadecane, 9-octyl-	9.98	2090	ug/kg	95	NJ

# Semi-Volatile Certificate of Analysis Sample Summary

SDG Number: 186235W  
Lab Sample ID: 186237001

Client: SSFL001  
Date Collected: 05/16/2007 13:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: WATER

Client ID: BLQW0019F01  
Batch ID: 635623  
Run Date: 05/21/2007 00:34  
Data File: s1e2127.d  
Prep Batch: 635621  
Prep Date: 05/18/2007 17:37

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3510C  
Aliquot: 1070 mL

Prep Basis: As Received  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-013  
Final Volume: 1 mL

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
62-75-9	N-Nitrosodimethylamine <i>N-Methyl-N-nitrosomethylamine</i>	U	9.35	ug/L	1.87	9.35	20.0
108-95-2	Phenol	U	9.35	ug/L	0.935	9.35	10.0
95-57-8	2-Chlorophenol	U	9.35	ug/L	1.87	9.35	10.0
106-46-7	1,4-Dichlorobenzene	U	9.35	ug/L	1.87	9.35	10.0
621-64-7	N-Nitrosodi-n-propylamine <i>N-Nitrosodipropylamine</i>	U	9.35	ug/L	1.87	9.35	10.0
59-50-7	4-Chloro-3-methylphenol	U	9.35	ug/L	1.87	9.35	20.0
83-32-9	Acenaphthene	U	0.935	ug/L	0.290	0.935	10.0
121-14-2	2,4-Dinitrotoluene	U	9.35	ug/L	1.87	9.35	10.0
100-02-7	4-Nitrophenol	U	9.35	ug/L	1.87	9.35	20.0
87-86-5	Pentachlorophenol	U	9.35	ug/L	1.87	9.35	20.0
129-00-0	Pyrene	U	0.935	ug/L	0.280	0.935	10.0
62-53-3	Aniline	U	9.35	ug/L	2.34	9.35	10.0
111-44-4	Bis(2-chloroethyl)ether <i>bis(2-Chloroethyl) ether</i>	U	9.35	ug/L	1.87	9.35	10.0
541-73-1	1,3-Dichlorobenzene	U	9.35	ug/L	1.87	9.35	10.0
100-51-6	Benzyl alcohol	U	9.35	ug/L	1.87	9.35	20.0
95-50-1	1,2-Dichlorobenzene	U	9.35	ug/L	1.87	9.35	10.0
108-60-1	Bis(2-chloroisopropyl)ether <i>bis(2-Chloroisopropyl) ether</i>	U	9.35	ug/L	1.87	9.35	10.0
95-48-7	2-Methylphenol <i>o-Cresol</i>	U	9.35	ug/L	1.87	9.35	10.0
65794-96-9	4-Methylphenol <i>m,p-Cresols</i>	U	9.35	ug/L	2.80	9.35	10.0
67-72-1	Hexachloroethane	U	9.35	ug/L	1.87	9.35	10.0
98-95-3	Nitrobenzene	U	9.35	ug/L	2.80	9.35	20.0
78-59-1	Isophorone	U	9.35	ug/L	1.87	9.35	10.0
88-75-5	2-Nitrophenol	U	9.35	ug/L	1.87	9.35	10.0
105-67-9	2,4-Dimethylphenol	U	9.35	ug/L	1.87	9.35	20.0
111-91-1	Bis(2-chloroethoxy)methane <i>bis(2-Chloroethoxy)methane</i>	U	9.35	ug/L	2.80	9.35	10.0
120-83-2	2,4-Dichlorophenol	U	9.35	ug/L	1.87	9.35	10.0
65-85-0	Benzole acid	U	18.7	ug/L	5.61	18.7	20.0
91-20-3	Naphthalene	U	0.935	ug/L	0.280	0.935	10.0
106-47-8	4-Chloroaniline	U	9.35	ug/L	1.87	9.35	10.0
87-68-3	Hexachlorobutadiene	U	9.35	ug/L	1.87	9.35	10.0
91-57-6	2-Methylnaphthalene	U	0.935	ug/L	0.280	0.935	10.0
77-47-4	Hexachlorocyclopentadiene	U	9.35	ug/L	1.87	9.35	20.0

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.



Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186235W  
Lab Sample ID: 186237001

Client: SSFL001  
Date Collected: 05/16/2007 13:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: WATER

Client ID: BLQW0019F01  
Batch ID: 635623  
Run Date: 05/21/2007 00:34  
Data File: s1e2127.d  
Prep Batch: 635621  
Prep Date: 05/18/2007 17:37

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: 5 uL  
Prep Method: SW846 3510C  
Aliquot: 1070 mL

Prep Basis: As Received  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.1  
Dilution: 1  
Prep SOP Ref: GL-OA-E-013  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
88-06-2	2,4,6-Trichlorophenol	U	9.35	ug/L	1.87	9.35	20.0
95-95-4	2,4,5-Trichlorophenol	U	9.35	ug/L	0.935	9.35	20.0
91-58-7	2-Chloronaphthalene	U	0.935	ug/L	0.327	0.935	10.0
88-74-4	2-Nitroaniline	U	9.35	ug/L	1.87	9.35	20.0
99-09-2	3-Nitroaniline	U	9.35	ug/L	1.87	9.35	20.0
131-11-3	Dimethyl phthalate	U	9.35	ug/L	1.87	9.35	10.0
606-20-2	2,6-Dinitrotoluene	U	9.35	ug/L	1.87	9.35	10.0
208-96-8	Acenaphthylene	U	0.935	ug/L	0.187	0.935	10.0
51-28-5	2,4-Dinitrophenol	U	18.7	ug/L	9.35	18.7	20.0
132-64-9	Dibenzofuran	U	9.35	ug/L	1.87	9.35	10.0
84-66-2	Diethyl phthalate	U	9.35	ug/L	1.87	9.35	10.0
86-73-7	Fluorene	U	0.935	ug/L	0.187	0.935	10.0
7005-72-3	4-Chlorophenyl phenyl ether	U	9.35	ug/L	1.87	9.35	10.0
534-52-1	4,6-Dinitro-2-methylphenol	U	9.35	ug/L	2.80	9.35	20.0
100-01-6	4-Nitroaniline	U	9.35	ug/L	2.80	9.35	20.0
122-39-4	Diphenylamine	U	9.35	ug/L	2.80	9.35	10.0
122-66-7	1,2-Diphenylhydrazine/Azobenzene	U	9.35	ug/L	1.87	9.35	20.0
101-55-3	4-Bromophenyl phenyl ether	U	9.35	ug/L	1.87	9.35	10.0
118-74-1	Hexachlorobenzene	U	9.35	ug/L	1.87	9.35	10.0
85-01-8	Phenanthrene	U	0.935	ug/L	0.187	0.935	10.0
120-12-7	Anthracene	U	0.935	ug/L	0.187	0.935	10.0
84-74-2	Di-n-butyl phthalate	U	9.35	ug/L	1.87	9.35	20.0
206-44-0	Fluoranthene	U	0.935	ug/L	0.187	0.935	10.0
92-87-5	Benzidine	U	9.35	ug/L	1.87	9.35	20.0
85-68-7	Butyl benzyl phthalate	U	9.35	ug/L	1.87	9.35	20.0
56-55-3	Benzo(a)anthracene	U	0.935	ug/L	0.187	0.935	10.0
91-94-1	3,3'-Dichlorobenzidine	U	9.35	ug/L	0.935	9.35	20.0
218-01-9	Chrysene	U	0.935	ug/L	0.187	0.935	10.0
117-81-7	Bis(2-ethylhexyl)phthalate	U	9.35	ug/L	1.87	9.35	50.0
117-84-0	Di-n-octyl phthalate	U	9.35	ug/L	2.80	9.35	20.0
205-99-2	Benzo(b)fluoranthene	U	0.935	ug/L	0.187	0.935	10.0
207-08-9	Benzo(k)fluoranthene	U	0.935	ug/L	0.187	0.935	10.0

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Certificate of Analysis  
Sample Summary

SDG Number: 186235W  
Lab Sample ID: 186237001

Client: SSFL001  
Date Collected: 05/16/2007 13:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: WATER

Client ID: BLQW0019F01  
Batch ID: 635623  
Run Date: 05/21/2007 00:34  
Data File: s1e2127.d  
Prep Batch: 635621  
Prep Date: 05/18/2007 17:37

Method: SW846 8270C  
Analyst: CAK  
Inj. Vol: .5 uL  
Prep Method: SW846 3510C  
Aliquot: 1070 mL

Prep Basis: As Received  
SOP Ref: GL-OA-E-009  
Instrument: MSD1.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-013  
Final Volume: 1 mL

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
50-32-8	Benzo(a)pyrene	U	0.935	ug/L	0.187	0.935	10.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	0.935	ug/L	0.187	0.935	20.0
53-70-3	Dibenzo(a,h)anthracene	U	0.935	ug/L	0.187	0.935	20.0
191-24-2	Benzo(ghi)perylene	U	0.935	ug/L	0.187	0.935	10.0
120-82-1	1,2,4-Trichlorobenzene	U	9.35	ug/L	1.87	9.35	10.0

## Surrogate/Tracer recovery

	Result	Nominal	Units	Recovery%	Acceptable Limits
2-Fluorobiphenyl	32.0	46.7	ug/L	69	(41%-99%)
Nitrobenzene-d5	33.2	46.7	ug/L	71	(39%-99%)
p-Terphenyl-d14	36.4	46.7	ug/L	78	(41%-115%)
2,4,6-Tribromophenol	75.4	93.5	ug/L	81	(35%-107%)
2-Fluorophenol	34.6	93.5	ug/L	37	(15%-67%)
Phenol-d5	21.0	93.5	ug/L	23	(10%-53%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Semi-Volatile  
Tentatively Identified Compound  
Sample Summary

SDG Number: 186235W

Lab Sample ID: 186237001

Date Collected: 05/16/2007 13:45

Date Received: 05/17/2007 09:30

Client: SSFL001

Matrix: WATER

Project: SSFL00507

Client ID: BLQW0019F01

Batch ID: 635623

Run Date: 05/21/2007 00:34

Prep Date: 05/18/2007 17:37

Method: SW846 8270C

Inst: MSD1.I

Analyst: CAK

Aliquot: 1070 mL

SOP Ref: GL-OA-E-009

Dilution: 1

Inj. Vol: .5 uL

Final Volume: 1 mL

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Concentration	Units	Fit	Qual
	Unknown	1.82	5.47	ug/L		J
	Unknown	1.85	9.18	ug/L		J
	Unknown	3.19	6.72	ug/L		J
4291-79-6	Cyclohexane, 1-methyl-2-propyl-	3.36	4.98	ug/L	87	NJ

Flame Ionization Detector  
Certificate of Analysis  
Sample Summary

Page 1 of 1

SDG Number: 186235S  
Lab Sample ID: 186235002Client: SSFL001  
Date Collected: 05/16/2007 09:45  
Date Received: 05/17/2007 09:30Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2.1Client ID: BLBS0058S01  
Batch ID: 635433  
Run Date: 05/19/2007 09:05  
Data File: 029b2901.d  
Prep Batch: 635432  
Prep Date: 05/18/2007 10:30Method: SW846 8015A/B SVOC  
Analyst: JAOC  
Prep Method: SW846 3550B  
Aliquot: 30 gPrep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 10  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ
92-06-8	m-Terphenyl	U	1.70	mg/kg	1.70	1.70
84-15-1	o-Terphenyl	U	1.70	mg/kg	1.70	1.70
92-94-4	p-Terphenyl	U	1.70	mg/kg	1.70	1.70

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
5-alpha-Androstane	1.17	1.70	mg/kg	69	(50%-150%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level V

## Flame Ionization Detector

Page 1 of 1

## Certificate of Analysis

## Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235003

Client: SSFL001  
Date Collected: 05/16/2007 10:05  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 2

Client ID: BLBS0052S01  
Batch ID: 635433  
Run Date: 05/19/2007 09:42  
Data File: 03063001.d  
Prep Batch: 635432  
Prep Date: 05/18/2007 10:30

Method: SW846 8015A/B SVOC  
Analyst: JAOC

Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 10  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ
92-06-8	m-Terphenyl	U	1.70	mg/kg	1.70	1.70
94-15-1	o-Terphenyl	U	1.70	mg/kg	1.70	1.70
92-94-4	p-Terphenyl	U	1.70	mg/kg	1.70	1.70

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
5-alpha-Androstane	2.36	1.70	mg/kg	139	(50%-150%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

level I

## Flame Ionization Detector

Page 1 of 1

## Certificate of Analysis

## Sample Summary

SDG Number: 186235S  
Lab Sample ID: 186235004

Client: SSFL001  
Date Collected: 05/16/2007 10:25  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 1.6

Client ID: BLBS0057S01  
Batch ID: 635433  
Run Date: 05/19/2007 10:20  
Data File: 031b3101.d  
Prep Batch: 635432  
Prep Date: 05/18/2007 10:30

Method: SW846 8015A/B SVOC  
Analyst: JAOC

Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 10  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

Prep Method: SW846 3550B  
Aliquot: 30 g

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ
02-06-8	m-Terphenyl	U	1.69	mg/kg	1.69	1.69
04-15-1	o-Terphenyl	U	1.69	mg/kg	1.69	1.69
02-94-4	p-Terphenyl	U	1.69	mg/kg	1.69	1.69

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
5-alpha-Androstane	1.26	1.69	mg/kg	75	(50%-150%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level II

Flame Ionization Detector  
Certificate of Analysis  
Sample SummarySDG Number: 186235S  
Lab Sample ID: 186235005Client: SSFL001  
Date Collected: 05/16/2007 11:00  
Date Received: 05/17/2007 09:30Project: SSFL00507  
Matrix: SOIL  
%Moisture: 3.4Client ID: BLBS0060S01  
Batch ID: 635433  
Run Date: 05/19/2007 15:37  
Data File: 040b4001.d  
Prep Batch: 635432  
Prep Date: 05/18/2007 10:30Method: SW846 8015A/B SVOC  
Analyst: JAOC  
Prep Method: SW846 3550B  
Aliquot: 30 gPrep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ
92-06-8	m-Terphenyl	U	0.173	mg/kg	0.173	0.173
84-15-1	o-Terphenyl	U	0.173	mg/kg	0.173	0.173
92-94-4	p-Terphenyl	U	0.173	mg/kg	0.173	0.173

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
5-alpha-Androstane	1.35	1.73	mg/kg	78	(50%-150%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level I

**Flame Ionization Detector  
Certificate of Analysis  
Sample Summary**

SDG Number: 186235S  
Lab Sample ID: 186235006

Client: SSFL001  
Date Collected: 05/16/2007 11:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: SOIL  
%Moisture: 3.3

Client ID: BLBS0053S01  
Batch ID: 635433  
Run Date: 05/19/2007 13:06  
Data File: 036b3601.d  
Prep Batch: 635432  
Prep Date: 05/18/2007 10:30

Method: SW846 8015A/B SVOC  
Analyst: JAOC  
Prep Method: SW846 3550B  
Aliquot: 30 g

Prep Basis: Dry Weight  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-010  
Final Volume: 1 mL

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ
92-06-8	m-Terphenyl <i>u</i>	U	0.172	mg/kg	0.172	0.172
84-15-1	o-Terphenyl	U	0.172	mg/kg	0.172	0.172
92-94-4	p-Terphenyl <i>↓</i>	U	0.172	mg/kg	0.172	0.172

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
5-alpha-Androstane	1.33	1.72	mg/kg	77	(50%-150%)

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

*Level II*



**Flame Ionization Detector  
Certificate of Analysis  
Sample Summary**

Page 1 of 1

SDG Number: 186235W  
Lab Sample ID: 186237001

Client: SSFL001  
Date Collected: 05/16/2007 13:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: WATER

Client ID: BLQW0019F01  
Batch ID: 635555  
Run Date: 05/19/2007 19:24  
Data File: 047b4701.d  
Prep Batch: 635554  
Prep Date: 05/18/2007 15:33

Method: SW846 8015A/B SVOC  
Analyst: JAOC  
Aliquot: 1050 mL  
Prep Method: SW846 3510C  
Aliquot: 1050 mL

Prep Basis: As Received  
SOP Ref: GL-OA-E-003  
Instrument: FID4A.I  
Dilution: 1  
Prep SOP Ref: GL-OA-E-013  
Final Volume: 1 mL

CAS No.	Pariname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
EFHD (C12-C14)	EFH C12-C14 <i>EFH (&gt;C11 - C14)</i>	U	0.0952	mg/L	0.0314	0.0952	0.500
EFHD (C15-C20)	EFH C15-C20 <i>EFH (&gt;C14 - C20)</i>	U	0.0952	mg/L	0.0314	0.0952	0.500
EFHD (C21-C30)	EFH C21-C30 <i>EFH (&gt;C20 - C30)</i>	U	0.0952	mg/L	0.0314	0.0952	0.500
EFHD (C8-C11)	EFH C8-C11 <i>EFH (C8 - C11)</i>	U	0.0952	mg/L	0.0314	0.0952	0.500
92-06-8	m-Terphenyl	U	0.00476	mg/L	0.00476	0.00476	
84-15-1	o-Terphenyl	U	0.00476	mg/L	0.00476	0.00476	
92-94-4	p-Terphenyl	U	0.00476	mg/L	0.00476	0.00476	

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
5-alpha-Androstane	0.0343	0.0476	mg/L	72	(50%-150%)

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

*Level I*

**Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186235W  
Lab Sample ID: 186237001

Client: SSFL001  
Date Collected: 05/16/2007 13:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: WATER

Client ID: BLQW0019F01  
Batch ID: 635983  
Run Date: 05/21/2007 09:48  
Data File: 51107.d  
Prep Batch: 635983  
Prep Date: 05/21/2007 09:48

Method: SW846 8260B  
Analyst: CDS1  
Purge Vol: 5 mL  
Prep Method: SW846 8260B

Prep Basis: As Received  
SOP Ref: GL-OA-E-038  
Instrument: VOA5.1  
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.500	1.00	5.00
74-87-3	Chloromethane	U	1.00	ug/L	0.500	1.00	5.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00	5.00
74-83-9	Bromomethane	U	1.00	ug/L	0.500	1.00	5.00
75-00-3	Chloroethane	U	1.00	ug/L	0.500	1.00	5.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.310	1.00	5.00
67-64-1	Acetone	U	5.00	ug/L	1.25	5.00	10.0
75-35-4	1,1-Dichloroethene	U	1.00	ug/L	0.300	1.00	5.00
75-09-2	Methylene chloride	U	5.00	ug/L	2.00	5.00	5.00
1634-04-4	Methyl-tert-butyl Ether (MTBE)	U	1.00	ug/L	0.250	1.00	5.00
156-60-5	trans-1,2-Dichloroethene	U	1.00	ug/L	0.300	1.00	2.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00	2.00
78-93-3	2-Butanone (MEK)	J	3.09	ug/L	1.25	5.00	10.0
156-59-2	cis-1,2-Dichloroethene	U	1.00	ug/L	0.300	1.00	2.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00	2.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00	2.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00	5.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.300	1.00	2.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00	2.00
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.250	1.00	5.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00	2.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00	2.00
79-01-6	Trichloroethene	U	1.00	ug/L	0.250	1.00	2.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00	2.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00	5.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00	2.00
110-75-8	2-Chloroethyl vinyl ether	U	5.00	ug/L	1.50	5.00	5.00
108-10-1	4-Methyl-2-pentanone (MIBK)	U	5.00	ug/L	1.25	5.00	10.0
10061-01-5	cis-1,3-Dichloropropene	U	1.00	ug/L	0.250	1.00	2.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00	2.00
10061-02-6	trans-1,3-Dichloropropene	U	1.00	ug/L	0.250	1.00	2.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00	2.00

## Comments:

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level IV

**Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186235W  
Lab Sample ID: 186237001

Client: SSFL001  
Date Collected: 05/16/2007 13:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: WATER

Client ID: BLQW0019F01  
Batch ID: 635983  
Run Date: 05/21/2007 09:48  
Data File: 51107.d  
Prep Batch: 635983  
Prep Date: 05/21/2007 09:48

Method: SW846 8260B  
Analyst: CDS1  
Purge Vol: 5 mL  
Prep Method: SW846 8260B

Prep Basis: As Received  
SOP Ref: GL-OA-E-038  
Instrument: VOA5.1  
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00	10.0
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.250	1.00	2.00
127-18-4	Tetrachloroethene <i>Tetrachloroethylene</i>	U	1.00	ug/L	0.250	1.00	2.00
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.250	1.00	2.00
106-93-4	1,2-Dibromoethane (EDB) <i>1,2-Dibromoethane</i>	U	1.00	ug/L	0.250	1.00	2.00
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00	2.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00	2.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.250	2.00	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.250	1.00	2.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00	2.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00	5.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00	2.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00	10.0
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00	5.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00	2.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00	5.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00	2.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00	2.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00	5.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00	5.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00	2.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00	5.00
99-87-6	p-Isopropyltoluene <i>4-Isopropyltoluene</i>	U	1.00	ug/L	0.250	1.00	2.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00	2.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00	2.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00	5.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.500	1.00	5.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.250	1.00	5.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00	5.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.300	1.00	5.00
76-13-1	Trichlorotrifluoroethane (Freon 113) <i>Trichlorotrifluoroethane</i>	U	5.00	ug/L	1.00	5.00	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00	5.00

## Comments:

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level IV

**Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186235W  
Lab Sample ID: 186237001

Client: SSFL001  
Date Collected: 05/16/2007 13:45  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: WATER

Client ID: BLQW0019F01  
Batch ID: 635983  
Run Date: 05/21/2007 09:48  
Data File: 51107.d  
Prep Batch: 635983  
Prep Date: 05/21/2007 09:48

Method: SW846 8260B  
Analyst: CDS1  
Purge Vol: 5 mL  
Prep Method: SW846 8260B

Prep Basis: As Received  
SOP Ref: GL-OA-E-038  
Instrument: VOA5.1  
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00	5.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	44.3	50.0	ug/L	89	(68%-121%)
Bromofluorobenzene	48.7	50.0	ug/L	97	(80%-120%)
Dibromofluoromethane	48.0	50.0	ug/L	96	(78%-124%)
Toluene-d8	54.3	50.0	ug/L	109	(77%-122%)

**Comments:**

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

*Level IV*

**Volatile**  
**Tentatively Identified Compound**  
**Sample Summary**

Page 1 of 1

SDG Number: 186235W

Lab Sample ID: 186237001

Number of TICs Found : 0

Date Collected: 05/16/2007 13:45

Date Received: 05/17/2007 09:30

Client: SSFL001

Matrix: WATER

Project: SSFL00507

Level V

**Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186235W  
Lab Sample ID: 186237002

Client: SSFL001  
Date Collected: 05/16/2007 14:00  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: WATER

Client ID: BLQW0019T01  
Batch ID: 635983  
Run Date: 05/21/2007 10:13  
Data File: 51108.d  
Prep Batch: 635983  
Prep Date: 05/21/2007 10:13

Method: SW846 8260B  
Analyst: CDS1  
Purge Vol: 5 mL  
Prep Method: SW846 8260B

Prep Basis: As Received  
SOP Ref: GL-OA-E-038  
Instrument: VOA5.1  
Dilution: 1

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
75-71-8	Dichlorodifluoromethane	U	1.00	ug/L	0.500	1.00	5.00
74-87-3	Chloromethane	U	1.00	ug/L	0.500	1.00	5.00
75-01-4	Vinyl chloride	U	1.00	ug/L	0.500	1.00	5.00
74-83-9	Bromomethane	U	1.00	ug/L	0.500	1.00	5.00
75-00-3	Chloroethane	U	1.00	ug/L	0.500	1.00	5.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/L	0.310	1.00	5.00
67-64-1	Acetone	U	5.00	ug/L	1.25	5.00	10.0
75-35-4	1,1-Dichloroethene <i>1,1-Dichloroethylene</i>	U	1.00	ug/L	0.300	1.00	5.00
75-09-2	Methylene chloride	U	5.00	ug/L	2.00	5.00	5.00
1634-04-4	Methyl-tert-butyl Ether (MTBE) <i>tert-Butyl methyl ether</i>	U	1.00	ug/L	0.250	1.00	5.00
156-60-5	trans-1,2-Dichloroethene <i>trans-1,2-Dichloroethylene</i>	U	1.00	ug/L	0.300	1.00	2.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/L	0.300	1.00	2.00
78-93-3	2-Butanone (MEK) <i>2-Butanone</i>	U	5.00	ug/L	1.25	5.00	10.0
156-59-2	cis-1,2-Dichloroethene <i>cis-1,2-Dichloroethylene</i>	U	1.00	ug/L	0.300	1.00	2.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/L	0.300	1.00	2.00
67-66-3	Chloroform	U	1.00	ug/L	0.250	1.00	2.00
74-97-5	Bromochloromethane	U	1.00	ug/L	0.300	1.00	5.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/L	0.300	1.00	2.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/L	0.250	1.00	2.00
56-23-5	Carbon tetrachloride	U	1.00	ug/L	0.250	1.00	5.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/L	0.250	1.00	2.00
71-43-2	Benzene	U	1.00	ug/L	0.300	1.00	2.00
79-01-6	Trichloroethene <i>Trichloroethylene</i>	U	1.00	ug/L	0.250	1.00	2.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/L	0.250	1.00	2.00
75-27-4	Bromodichloromethane	U	1.00	ug/L	0.250	1.00	5.00
74-95-3	Dibromomethane	U	1.00	ug/L	0.300	1.00	2.00
110-75-8	2-Chloroethyl vinyl ether <i>2-Chloroethylvinyl ether</i>	U	5.00	ug/L	1.50	5.00	5.00
108-10-1	4-Methyl-2-pentanone (MIBK) <i>4-Methyl-2-pentanone</i>	U	5.00	ug/L	1.25	5.00	10.0
10061-01-5	cis-1,3-Dichloropropene <i>cis-1,3-Dichloropropylene</i>	U	1.00	ug/L	0.250	1.00	2.00
108-88-3	Toluene	U	1.00	ug/L	0.250	1.00	2.00
10061-02-6	trans-1,3-Dichloropropene <i>trans-1,3-Dichloropropylene</i>	U	1.00	ug/L	0.250	1.00	2.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/L	0.250	1.00	2.00

**Comments:**

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level V

**Volatile  
Certificate of Analysis  
Sample Summary**

SDG Number: 186235W  
Lab Sample ID: 186237002

Client: SSFL001  
Date Collected: 05/16/2007 14:00  
Date Received: 05/17/2007 09:30

Project: SSFL00507  
Matrix: WATER

Client ID: BLQW0019T01  
Batch ID: 635983  
Run Date: 05/21/2007 10:13  
Data File: 51108.d  
Prep Batch: 635983  
Prep Date: 05/21/2007 10:13

Method: SW846 8260B  
Analyst: CDS1  
Purge Vol: 5 mL  
Prep Method: SW846 8260B

Prep Basis: As Received  
SOP Ref: GL-OA-E-038  
Instrument: VOA5.1  
Dilution: 1

CAS No.	Parname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
591-78-6	2-Hexanone	U	5.00	ug/L	1.25	5.00	10.0
142-28-9	1,3-Dichloropropane	U	1.00	ug/L	0.250	1.00	2.00
127-18-4	Tetrachloroethene	U	1.00	ug/L	0.250	1.00	2.00
124-48-1	Tetrachloroethylene						
124-48-1	Dibromochloromethane	U	1.00	ug/L	0.250	1.00	2.00
106-93-4	1,2-Dibromoethane (EDB)	U	1.00	ug/L	0.250	1.00	2.00
	1,2-Dibromoethane						
108-90-7	Chlorobenzene	U	1.00	ug/L	0.250	1.00	2.00
100-41-4	Ethylbenzene	U	1.00	ug/L	0.250	1.00	2.00
179601-23-1	m,p-Xylenes	U	2.00	ug/L	0.250	2.00	2.00
95-47-6	o-Xylene	U	1.00	ug/L	0.250	1.00	2.00
100-42-5	Styrene	U	1.00	ug/L	0.250	1.00	2.00
75-25-2	Bromoform	U	1.00	ug/L	0.250	1.00	5.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00	2.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/L	0.300	1.00	10.0
108-86-1	Bromobenzene	U	1.00	ug/L	0.250	1.00	5.00
103-65-1	n-Propylbenzene	U	1.00	ug/L	0.250	1.00	2.00
95-49-8	2-Chlorotoluene	U	1.00	ug/L	0.250	1.00	5.00
98-82-8	Isopropylbenzene	U	1.00	ug/L	0.250	1.00	2.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/L	0.250	1.00	2.00
106-43-4	4-Chlorotoluene	U	1.00	ug/L	0.250	1.00	5.00
98-06-6	tert-Butylbenzene	U	1.00	ug/L	0.250	1.00	5.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/L	0.250	1.00	2.00
135-98-8	sec-Butylbenzene	U	1.00	ug/L	0.250	1.00	5.00
99-87-6	p-Isopropyltoluene	U	1.00	ug/L	0.250	1.00	2.00
	4-Isopropyltoluene						
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/L	0.250	1.00	2.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/L	0.250	1.00	2.00
104-51-8	n-Butylbenzene	U	1.00	ug/L	0.250	1.00	5.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/L	0.500	1.00	5.00
87-68-3	Hexachlorobutadiene	U	1.00	ug/L	0.250	1.00	5.00
91-20-3	Naphthalene	U	1.00	ug/L	0.250	1.00	5.00
87-61-6	1,2,3-Trichlorobenzene	U	1.00	ug/L	0.300	1.00	5.00
76-13-1	Trichlorotrifluoroethane (Freon 113)	U	5.00	ug/L	1.00	5.00	5.00
	Trichlorotrifluoroethane						
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/L	0.250	1.00	5.00

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Level V

Volatile  
Certificate of Analysis  
Sample Summary

Page 3 of 3

SDG Number: 186235W  
Lab Sample ID: 186237002Client: SSFL001  
Date Collected: 05/16/2007 14:00  
Date Received: 05/17/2007 09:30Project: SSFL00507  
Matrix: WATERClient ID: BLQW0019T01  
Batch ID: 635983  
Run Date: 05/21/2007 10:13  
Data File: 51108.d  
Prep Batch: 635983  
Prep Date: 05/21/2007 10:13Method: SW846 8260B  
Analyst: CDS1  
Purge Vol: 5 mL  
Prep Method: SW846 8260BPrep Basis: As Received  
SOP Ref: GL-OA-E-038  
Instrument: VOA5.1  
Dilution: 1

CAS No.	Parmname	Qual	Result	Units	MDL/LOD	PQL/LOQ	RDL
120-82-1	1,2,4-Trichlorobenzene	U	1.00	ug/L	0.300	1.00	5.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/L	0.250	1.00	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	43.9	50.0	ug/L	88	(68%-121%)
Bromofluorobenzene	48.1	50.0	ug/L	96	(80%-120%)
Dibromofluoromethane	48.1	50.0	ug/L	96	(78%-124%)
Toluene-d8	54.8	50.0	ug/L	110	(77%-122%)

## Comments:

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Lancel - V



**Volatile**  
**Tentatively Identified Compound**  
**Sample Summary**

SDG Number: 186235W

Date Collected: 05/16/2007 14:00

Matrix: WATER

Lab Sample ID: 186237002

Date Received: 05/17/2007 09:30

Client: SSFL001

Project: SSFL00507

Number of TICs Found : 0

Level IV

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : MECx, LLC  
Address : 12269 East Vassar Drive  
Aurora, Colorado 80014

Contact: Ms. Elizabeth Wessling, MECx  
Project: SSFL Group 8 Hastings Data Gap Sampling

Report Date: May 22, 2007

Client Sample ID: BLBS0058S01  
Sample ID: 186235002  
Matrix: SOIL  
Collect Date: 16-MAY-07 09:45  
Receive Date: 17-MAY-07  
Collector: Client  
Moisture: 2.1%

Project: SSFL00507  
Client ID: SSFL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Ion Chromatography

EPA300.0 Fluoride in Soil

Fluoride	J	1.04	0.296	5.00	mg/kg	1	RXM1	05/19/07	0305	635549	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	RXM1	05/18/07	1000	635546

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 300.0	

LEVEL V

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : MECx, LLC  
Address : 12269 East Vassar Drive  
Aurora, Colorado 80014

Contact: Ms. Elizabeth Wessling, MECx  
Project: SSFL Group 8 Hastings Data Gap Sampling

Report Date: May 22, 2007

Client Sample ID: BLBS0052S01  
Sample ID: 186235003  
Matrix: SOIL  
Collect Date: 16-MAY-07 10:05  
Receive Date: 17-MAY-07  
Collector: Client  
Moisture: 1.98%

Project: SSFL00507  
Client ID: SSFL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>											
EPA300.0 Fluoride in Soil											
Fluoride	J	0.977	0.302	5.00	mg/kg	1	RXM1	05/19/07	0326	635549	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	RXM1	05/18/07	1000	635546

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 300.0	

LEVEL V

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : MECx, LLC  
Address : 12269 East Vassar Drive  
Aurora, Colorado 80014

Contact: Ms. Elizabeth Wessling, MECx  
Project: **SSFL Group 8 Hastings Data Gap Sampling**

Report Date: May 22, 2007

Client Sample ID: BLBS0057S01  
Sample ID: 186235004  
Matrix: SOIL  
Collect Date: 16-MAY-07 10:25  
Receive Date: 17-MAY-07  
Collector: Client  
Moisture: 1.56%

Project: SSFL00507  
Client ID: SSFL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>											
EPA300.0 Fluoride in Soil											
Fluoride	J	2.00	0.287	5.00	mg/kg	1	RXM1	05/19/07	0427	635549	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	RXM1	05/18/07	1000	635546

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 300.0	

LEVEL V

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : MECx, LLC  
Address : 12269 East Vassar Drive  
Aurora, Colorado 80014

Contact: Ms. Elizabeth Wessling, MECx  
Project: SSFL Group 8 Hastings Data Gap Sampling

Report Date: May 22, 2007

Client Sample ID: BLBS0060S01  
Sample ID: 186235005  
Matrix: SOIL  
Collect Date: 16-MAY-07 11:00  
Receive Date: 17-MAY-07  
Collector: Client  
Moisture: 3.45%

Project: SSFL00507  
Client ID: SSFL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>											
EPA300.0 Fluoride in Soil											
Fluoride	J	1.18	0.297	5.00	mg/kg	1	RXM1	05/19/07	0447	635549	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	RXM1	05/18/07	1000	635546

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 300.0	

LEVEL V

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : MECx, LLC  
Address : 12269 East Vassar Drive  
Aurora, Colorado 80014

Contact: Ms. Elizabeth Wessling, MECx  
Project: **SSFL Group 8 Hastings Data Gap Sampling**

Report Date: May 22, 2007

Client Sample ID: BLBS0053S01  
Sample ID: 186235006  
Matrix: SOIL  
Collect Date: 16-MAY-07 11:45  
Receive Date: 17-MAY-07  
Collector: Client  
Moisture: 3.3%

Project: SSFL00507  
Client ID: SSFL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>											
EPA300.0 Fluoride in Soil											
Fluoride	J	1.05	0.301	5.00	mg/kg	1	RXM1	05/19/07	0507	635549	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	RXM1	05/18/07	1000	635546

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 300.0	

LEVEL V

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : MECx, LLC  
Address : 12269 East Vassar Drive  
Aurora, Colorado 80014

Report Date: May 21, 2007

Contact: Ms. Elizabeth Wessling, MECx  
Project: SSFL Group 8 Hastings Data Gap Sampling

Client Sample ID: BLOW0019F01  
Sample ID: 186237001  
Matrix: WATER  
Collect Date: 16-MAY-07 13:45  
Receive Date: 17-MAY-07  
Collector: Client

Project: SSFL00507  
Client ID: SSFL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography Federal</b>											
EPA300.0 Fluoride in Liquid Fluoride	U	0.00	0.033	0.500	mg/L	1	RXM105/19/07	1012	635705	1	

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 300.0	

LEVEL V