Oneida Total Integrated Enterprises
1220 Kennestone Circle, Suite 106 ● Atlanta, GA 30060 ● (678) 355-5550 ● (770) 528-0167 (Fax)

MEMORANDUM

Date:	May 25, 2012
To:	Russell Henderson, Project Manager, OTIE Superfund Technical Assessment and Response Team (START) for Region 4
Prepared by:	Renea Anglin, START chemist for Region 4
QA/QC	Limari Krebs
Concurrence by:	
Subject:	Data Validation for 35th Avenue – Five Mile Creek Birmingham, AL Project TDD No. TNA-05-003-0169 Laboratory: Spectrum Analytical, Inc. in Tampa, Florida. Sample Delivery Group (SDG): 3505843

1.0 INTRODUCTION

The START chemist for Region 4 validated analytical data for 10 soil samples for semivolatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAH), metals, mercury and Total Organic Carbon (TOC), 3 soil samples for polychlorinated biphenyls (PCBs), and 2 water samples for metals, mercury, and hardness. Samples were collected at the 35th Avenue –Five Mile Creek site on April 24, 2012. The samples were analyzed under SDG 35058343 by Spectrum Analytical, Inc. of Tampa, Florida using U.S. Environmental Protection Agency (U.S. EPA) methods 8270D, 8270D-SIM, 8082, 6010B, 7471A, 7470A, and 9060, and Standards Methods (SM) 2340B.

Laboratory data were validated using guidelines set forth in the U.S. EPA Contract Laboratory Program National Functional Guidelines (NFG) for Superfund Methods Data Review (EPA-540-R-08-01, June 2008), NFG for Inorganic Superfund Data Review (EPA-540-R-10-011, January 2010), and applicable methodologies. The purpose of the chemical data quality evaluation process is to assess the usability of data for the project decision-making process.

Organic data validation consisted of a review of the following QC audits:

- Chain of custody and sample receipt forms review
- Sample preservation and holding time
- Blank results
- Surrogate recoveries
- Matrix spike and Matrix Spike Duplicate (MS/MSD) recovery results
- Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) recovery results
- Field Duplicates (when applicable)
- Initial Calibration Curve
- Continuing Calibration Verification (CCV)
- Tune Criteria

Inorganic data validation consisted of a review of the following QC audits:

- Chain of custody and sample receipt forms review
- Sample preservation and holding time
- Blank results
- Duplicate Sample Results
- LCS recovery results
- MS/MSD recovery results
- Field Duplicates (when applicable)
- Laboratory Sample Duplicates
- Serial Dilutions
- Initial Calibration Curve
- Initial and Continuing Calibration Verification

Section 2.0 of this memorandum discusses the results of organic data validation. Section 3.0 of this memorandum discusses the results of inorganic data validation. Section 4.0 of this memorandum discusses the results of the wet chemistry validation. Section 5.0 presents an overall assessment of the data. The attachment to this memorandum contains the laboratory reporting forms as well as START's handwritten data qualifications where warranted.

2.0 ORGANIC DATA VALIDATION RESULTS

The results of START's organic data validation are summarized below by QC audit reviewed. The data qualifiers listed below were applied to sample analytical results where warranted (see attachment):

- J – The analyte was detected. The reported concentration was considered estimated.
- U – The analyte was not detected.
- UJ – The analyte was not detected. The reporting limit was considered estimated.

After the START project staff received the data packages, they were inventoried for completeness and then reviewed according to matrix-specific protocols and data quality objectives established for the project.

2.1 SOIL SAMPLES BY METHOD 8270D

2.1.1 SAMPLE HANDLING

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on April 24, 2012 and were received on ice within 4°C ± 2°C.

2.1.2 SAMPLE PRESERVATION AND HOLDING TIME

The samples were extracted on May 3, 2012 and analyzed on May 3, 2012 and May 4, 2012. SVOC samples were analyzed within holding time criteria. No discrepancies were noted.

2.1.3 BLANK RESULTS

The purpose of laboratory (or field) blank analysis is to determine the existence and magnitude of contamination resulting from laboratory (or field) activities. One laboratory method blank sample (128824MB) was run with this SDG.

Bis (2-ethylhexyl) phthalate was detected at 144 µg/Kg in the method blank, between the MDL and RL. Bis (2-ethylhexyl) phthalate is not detected in any of the associated samples therefore no further action was required.

2.1.4 SURROGATE RECOVERIES

Laboratory performance on individual samples is established by means of fortifying each sample with surrogate compounds. Surrogate spike compounds included 2-fluorophenol, phenol-d5, nitrobenzene-d5, 2-fluorobiphenyl, 2,4,6-tribromophenol, and terphenyl-d14.

Surrogate recoveries were within laboratory derived acceptable limits with the following exceptions.

Sample EPAFMC-SD-14 had 2-fluorobiohenyl biased low at 12.9%R and nitrobenzene-d5 biased low at 22.6%R. Sample EPAFMC-SD-15 had 2-fluorobiphenyl biased low at 11.6%R and nitrobenzene-d5 biased low at 15.3%R. Therefore, acetophenone, n-nitroso-di-n-propylamine, hexachloroethane, nitrobenzene, 2,6-dinitrotoluene, 2,4-dinitrotoluene, and n-nitrosodiphenylamine were flagged as estimated "UJ" in samples EPAFMC-SD-14 and EPAFMC-SD-15.

2.1.5 MS/MSD RECOVERY RESULTS

Data for MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis.

MS/MSD analysis was requested for this SDG on sample EPAFMC-SD-07.

The MS had the following analytes recovered outside acceptable QC criteria and biased low: hexachlorocyclopentadiene at 6.1 %R, 4,6-dinitro-2-methylphenol at 26.7%R, and 2,4-dinitrotoluene at 0%R.

The MSD had the following analytes recovered outside acceptable QC criteria biased low: hexachlorocyclopentadiene at 0 % R, 2,4-dinitrotoluene at 0%R, and 4,6-dinitro-2-methylphenol at 31.8%R.

The following analytes exceeded RPD criteria: hexachlorocyclopentadiene at 200%RPD.

Therefore, sample EPAFMC-SD-07 was flagged as estimated "UJ" for hexachlorocyclopentadiene, 2,4-dinitrotoluene, and 4,6-dinitro-2-methylphenol.

2.1.6 LCS RECOVERY RESULTS

Data for the LCS is generated to provide information on the accuracy of the analytical method and on the laboratory performance. The LCS were fortified with the full list of SVOCs and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

The LCS had bis (2-ethylhexyl) phthalate biased high at 162%R. Bis (2-ethylhexyl) phthalate is a common laboratory contaminate. All samples were non-detect for bis (2-ethylhexyl) phthalate, therefore no further action was required.

2.1.7 FIELD DUPLICATES

Data for field duplicates were collected and analyzed for chemical constituents to measure the cumulative uncertainty (i.e., precision) of the sample collection, splitting, handling, storage, preparation and analysis operations, as well as natural sample heterogeneity that is not eliminated through simple mixing in the field. Field duplicates are two samples prepared by mixing a volume of sample and splitting it into two separate sample containers that are labeled as individual field samples.

Sample EPAFMC-SD-12 had a duplicate collected (EPAFMC-SD-16) for SVOC analysis. No deficiencies were noted.

2.1.8 INITIAL CALIBRATION

A calibration curve is a method for determining the concentration of a substance in an unknown sample by comparing the unknown to a set of standard samples of known concentrations. The calibration curve plots instrument response verses known concentrations and plots these using either relative response factors or linear regression to determine the best fit for the line.

At least 5 standards were used to calibrate the instrument. Relative response factor and linear regression were used for the calibration curves and the analytes were all within limits. System performance check compounds (SPCCs) and Calibration check compounds (CCCs) are all within QC limits. The %RSD and relative response factor calculations for phenol were verified for the 04/23/12 calibration curve.

2.1.9 INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial calibration checks are performed to verify the validity of the calibration curve and continuing calibration checks at the beginning and end of the analytical run and periodically throughout the run to verify that the instrument calibration is still valid.

No discrepancies were noted.

2.1.10 INTERNAL STANDARD RESULTS

Internal standards are dueterated chemicals that do not occur in nature that are add to all samples, standards and QC samples and are used to correct for losses during sample analysis.

No discrepancies were noted.

2.1.11 INSTRUMENT PERFORMANCE CHECKS

GC/MS instrument performance checks are performed to ensure adequate mass resolution, identification, and to some degree, sensitivity. DFTPP must pass specific criteria and all samples must be analyzed with 12 hours of their associated DFTPP.

Three DFTPP were reported with this SDG. All DFTPP met the ion abundance criteria and all samples were analyzed within 12 hours of their respective DFTPP. The DFTPP results for DFTPP1 on May 3, 2012 at 1031 was checked and verified against the raw data. No discrepancies were noted.

2.2 SOIL SAMPLES BY METHOD 8270D-SIM

2.2.1 *SAMPLE HANDLING*

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on April 24, 2012 and were received on ice within 4°C ± 2°C.

2.2.2 *SAMPLE PRESERVATION AND HOLDING TIME*

The samples were extracted on May 4, 2012 and analyzed May 7, 2012 through May 9, 2012. SVOC samples were analyzed within holding time criteria. No discrepancies were noted.

2.2.3 *BLANK RESULTS*

The purpose of laboratory (or field) blank analysis is to determine the existence and magnitude of contamination resulting from laboratory (or field) activities. Laboratory method blank sample (129055MB) was run with this SDG.

No laboratory method blank detects were noted.

2.2.4 *SURROGATE RECOVERIES*

Laboratory performance on individual samples is established by means of fortifying each sample with surrogate compounds. Surrogate spike compounds included 2-fluorobiphenyl and terphenyl-d14.

No discrepancies were noted.

2.2.5 *MS/MSD RECOVERY RESULTS*

Data for MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis.

A MS/MSD samples was requested for this SDG on sample EPAFMC-SD-01. The native sample had analyte results so high that the MS and MSD required dilution. The concentration of the native sample was so high in comparison to the spike value that the MS/MSD cannot be effectively evaluated; therefore no further action was taken.

2.2.6 *LCS RECOVERY RESULTS*

Data for the LCS is generated to provide information on the accuracy of the analytical method and on the laboratory performance. The LCS were fortified with the full list of SVOCs and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

LCS recoveries were within limits.

2.2.7 *FIELD DUPLICATES*

Data for field duplicates were collected and analyzed for chemical constituents to measure the cumulative uncertainty (i.e., precision) of the sample collection, splitting, handling, storage, preparation and analysis operations, as well as natural sample heterogeneity that is not eliminated through simple mixing in the field.

Field duplicates are two samples prepared by mixing a volume of sample and splitting it into two separate sample containers that are labeled as individual field samples.

Sample EPAFMC-SD-05 had a duplicate collected (EPAFMC-SD-06) for PAH. No deficiencies were noted.

2.2.8 *INITIAL CALIBRATION*

A calibration curve is a method for determining the concentration of a substance in an unknown sample by comparing the unknown to a set of standard samples of known concentrations. The calibration curve plots instrument response verses known concentrations and plots these using either relative response factors or linear regression to determine the best fit for the line.

One calibration curves were used with this SDG. At least 5 standards were used to calibrate the instrument for both calibration curves. Relative response factor were used for the calibration curves and the analytes were all within limits. Calibration check compounds (CCCs) are all within QC limits. The RSD for fluoranthene was verified for the 05/07/12 calibration curve. No discrepancies were noted.

2.2.9 *INITIAL AND CONTINUING CALIBRATION VERIFICATION*

Initial calibration checks are performed to verify the validity of the calibration curve and continuing calibration checks are analyzed at the beginning the analytical run to verify that the instrument calibration is still valid.

No discrepancies were noted.

2.2.10 *INTERNAL STANDARD RESULTS*

Internal standards are dueterated chemicals that do not occur in nature that are add to all samples, standards and QC samples and are used to correct for losses during sample analysis.

No discrepancies were noted.

2.2.11 *INSTRUMENT PERFORMANCE CHECKS*

GC/MS instrument performance checks are performed to ensure adequate mass resolution, identification, and to some degree, sensitivity. DFTPP must pass specific criteria and all samples must be analyzed with 12 hours of their associated DFTPP.

Four DFTPP were reported with this SDG. All DFTPP met the ion abundance criteria and all samples were analyzed within 12 hours of their respective DFTPP. The DFTPP results for DFTPP4 on May 7, 2012 at 1303 was checked and verified against the raw data. No discrepancies were noted.

2.2.12 *GENERAL LABORATORY OBSERVATIONS*

Samples EPAFMC-SD-12, EPAFMC-SD-13 and EPAFMC-SD-16 were diluted due to high concentrations of target analytes. Target analytes that exceeded the upper calibration range in the initial run are reported from the dilution run.

2.3 SOIL SAMPLES BY METHOD 8082

2.3.1 *SAMPLE HANDLING*

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on April 24, 2012 and were received on ice within 4°C ± 2°C.

2.3.2 *SAMPLE PRESERVATION AND HOLDING TIME*

Samples were extracted on April 27, 2012 and analyzed on April 30, 2012. Samples were shipped on ice and were analyzed within holding time criteria. No discrepancies were noted.

2.3.3 *BLANK RESULTS*

The purpose of laboratory blank analysis is to determine the existence and magnitude of contamination resulting from laboratory activities. A laboratory method blank sample (127811MB) was run with this SDG.

No laboratory method blank detects were noted.

2.3.4 *SURROGATE RECOVERIES*

Laboratory performance on individual samples is established by means of fortifying each sample with surrogate compounds. The surrogate spike compound included decachlorobiphenyl.

No discrepancies were noted.

2.3.5 *MS/MSD RECOVERY RESULTS*

Data for MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis.

No MS/MSD samples were requested for this analysis.

2.3.6 *LCS RECOVERY RESULTS*

Data for the LCS is generated to provide information on the accuracy of the analytical method and on the laboratory performance. The LCS was fortified and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

The LCS recoveries were all within QC limits.

2.3.7 *FIELD DUPLICATES*

Data for field duplicates were collected and analyzed for chemical constituents to measure the cumulative uncertainty (i.e., precision) of the sample collection, splitting, handling, storage, preparation and analysis operations, as well as natural sample heterogeneity that is not eliminated through simple mixing in the field. Field duplicates are two samples prepared by mixing a volume of sample and splitting it into two separate sample containers that are labeled as individual field samples.

Sample EPAFMC-SD-12 had a duplicate collected (EPAFMC-SD-16) for PCB analysis. No analytes were detected in either sample.

2.3.8 INITIAL CALIBRATION

A calibration curve is a method for determining the concentration of a substance in an unknown sample by comparing the unknown to a set of standard samples of known concentrations. The calibration curve plots instrument response verses known concentrations and plots these using either relative response factors or linear regression to determine the best fit for the line.

At least five standards were used to calibrate the instrument. Relative response factors and RSDs for the calibration were all within limits. The RSD was verified for the 1260-1 peak. No discrepancies were noted.

2.3.9 INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial calibration checks are performed to verify the validity of the calibration curve and continuing calibration checks at the beginning and end of the analytical run and periodically throughout the run to verify that the instrument calibration is still valid.

The average for the initial and continuing calibration checks on both columns were with QC limits. CCV1074115 (column STX-CLP1) had 1016-5 with a recovery of 20.3%D, CCV1074823 (column STX-CLP1) had 1016-5 at 25.1%D, and 1260-1 at 20.6%D. Aroclors depend on a pattern match and are based on the average of the individual peaks, the average for the CCV's were within acceptable limits therefore no further action was required.

3.0 INORGANIC DATA VALIDATION RESULTS

The results of START's inorganic data validation are summarized below by QC audit reviewed. The data qualifiers listed below were applied to sample analytical results where warranted:

- J – The analyte was detected. The reported concentration was considered estimated.
- U – The analyte was not detected.
- UJ – The analyte was not detected. The reporting limit was considered estimated.

After the START project staff received the data packages, they were inventoried for completeness and then reviewed according to matrix-specific protocols and data quality objectives established for the project.

3.1 SOIL SAMPLES BY METHOD 6010 B

3.1.1 SAMPLE HANDLING

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on April 24 2012 and were received on ice April 25, 2012 within 4°C ± 2°C.

3.1.2 SAMPLE PRESERVATION AND HOLDING TIME

Samples were prepared on April 26, 2012 and analyzed on May 3, 2012 and May 9, 2012. Samples were analyzed within the holding time criteria. No discrepancies were noted.

3.1.3 *BLANK RESULTS*

The assessment of blank analysis results is to determine the existence and magnitude of contamination resulting from laboratory and/or field activities. A laboratory method blank sample for method 6010(127829MB) was run with this SDG.

The method blank had the following analytes detected above the MDL but below the RL: copper at 0.224 mg/Kg and iron at 2.44 mg/Kg. Qualifications were unwarranted since detected concentrations of copper and iron were greater than the RL and greater than 10x the highest blank concentration.

ICB1076626 had the following analytes detected between the MDL and RL: aluminum, barium, beryllium, iron, magnesium, nickel, and silver. Therefore, the result for beryllium in samples EPAFMC-SD-01, EPAFMC-SD-13, and EPAFMC-SD-16, and silver in sample EPAFMC-SD-12 was qualified as non-detect "U" at the elevated RL. All other sample results for the affected analytes were greater than the RL.

CCB1076668 had the following analytes detected between the MDL and RL: aluminum, beryllium, and iron. This CCB affects sample EPAFMC-SD-07, therefore, only the result for beryllium was qualified as non-detect "U" at the elevated RL. All other affected analytes were detected at concentrations greater than the RL.

CCB1076874 had the following analytes detected between the MDL and RL: aluminum, beryllium, iron, magnesium and manganese. Therefore, the result for beryllium in samples EPAFMC-SD-07 EPAFMC-SD-13, EPAFMC-SD-07 was qualified as non-detect "U" at the elevated RL. All other affected analytes were detected at concentrations greater than the RL.

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CCB1076887 had iron detected above the RL at 79.7 µg/L (7.97 mg/kg). All the samples analyzed before this CCB had iron at concentrations much greater (greater than 10x) than the level in the blank therefore no further action is required. In addition, the CCB had the following analytes detected between the MDL and RL: aluminum, beryllium, magnesium and manganese. Therefore, the result for beryllium in samples EPAFMC-SD-07 EPAFMC-SD-13, EPAFMC-SD-07 was qualified as non-detect "U" at the elevated RL. All other affected analytes were detected at concentrations greater than the RL.

CCB1079030, CCB1079043, CCB1079054 had iron detected above the MDL and below the RL. Qualifications were unwarranted since iron was detected at concentrations greater than the RL.

3.1.4 *LCS RECOVERY RESULTS*

The LCS serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. The LCS is fortified with each analyte of interest and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

The LCS/LCSD recoveries were within QC limits.

3.1.5 *MS/MSD RECOVERY RESULTS*

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The MS/MSD accuracy performance is measured by %R.

A MS/MSD was requested on sample EPAFMC-SD-07. Calcium, iron and manganese in the native sample was greater than 4x the spike level therefore calcium, iron and manganese cannot be evaluated in the MS and MSD.

The matrix spike had the following analytes biased low: cadmium at 71.5%R, chromium at 67.7%R, vanadium at 73.6%R, and zinc at 9.9%R. The MS also had the following analytes biased high: aluminum at 138%R and magnesium at 216.3%R.

The matrix spike duplicate had the following analytes biased low: selenium at 69.6%R and zinc at 56.4%R. The MS also had the following analytes biased high: aluminum at 149.3%R, chromium at 126.7%R, and magnesium at 148.5%R

The MS/MSD had the following %RPD outside QC limits: chromium at 23.6%RPD, magnesium at 21.2%RPD, and selenium at 33.7%RPD. Therefore, the results for cadmium, chromium, vanadium, zinc, and magnesium were flagged as estimated "J" in sample EPAFMC-SD-07 and selenium was flagged as estimated "UJ".

3.1.6 FIELD DUPLICATES

Data for field duplicates were collected and analyzed for chemical constituents to measure the cumulative uncertainty (i.e., precision) of the sample collection, splitting, handling, storage, preparation and analysis operations, as well as natural sample heterogeneity that is not eliminated through simple mixing in the field. Field duplicates are two samples prepared by mixing a volume of sample and splitting it into two separate sample containers that are labeled as individual field samples.

Sample EPAFMC-SD-12 had a duplicate collected (EPAFMC-SD-16) for metals analysis. The RPD for the following analytes were outside acceptable limits: antimony at 119%RPD, copper at 192%, and silver at 200%RPD. Therefore, the following results were qualified as estimated "J": antimony and copper in samples EPAFMC-SD-12 and EPAFMC-SD-16; and silver in sample EPAFMC-SD-12. The result for silver in sample EPAFMC-SD-16 was flagged as estimated "UJ".

3.1.7 LABORATORY SAMPLE DUPLICATES

Two sample aliquots of the same sample are taken in the analytical laboratory and analyzed separately with identical procedures. Analyses of the sample and duplicate give a measure of the precision associated with laboratory procedures, but not with sample collection. Analytes that are present at greater than five times the CRQL are evaluated for %RPD.

The laboratory used the LCS/LCSD and the MS/MSD for sample EPAFMC-SD-07 as the laboratory duplicate samples. The following analytes exceed the QC limits of 20%RPD in the MS/MSD for sample EPAFMC-SD-07: chromium at 23.6%RPD, magnesium at 21.2%RPD, and selenium at 33.7%RPD. The method requirements for the %RPD is 20% , the EPA Region 4 guidelines for laboratory duplicates RPD is 35%RPD, therefore no further action was warranted.

3.1.8 SERIAL DILUTIONS

The serial dilution of samples determines whether or not significant physical or chemical interferences exist due to sample matrix. Serial dilutions on analytes that are greater than 50x the MDL must be within 10% RPD.

A serial dilution was performed on sample EPAFMC-SD-07. No discrepancies were noted.

3.1.9 *INITIAL CALIBRATION*

A calibration curve is a method for determining the concentration of a substance in an unknown sample by comparing the unknown to a set of standard samples of known concentrations. The calibration curve plots instrument response verses known concentrations and plots these using either relative response factors or linear regression to determine the best fit for the line.

Calibration curves were run on May 3, 2012 and May 9, 2012 for analysis of samples in this SDG. For the May 3, 2012 calibration curve, at least three standards were used to calibrate the instrument for all analytes. The coefficient of determination (r2) value is greater than 0.995 for all analytes using weighted linear regression and the y-intercept was below the RL. For the May 9, 2012 calibration curve, Aluminum had a correlation of determination of 0.908, however sample dilutions for manganese, calcium, copper and iron only were run with this calibration, therefore no further action was required.

3.1.10 *INITIAL AND CONTINUING CALIBRATION VERIFICATION*

Initial calibration checks are performed to verify the validity of the calibration curve and continuing calibration checks at the beginning and end of the analytical run and periodically throughout the run to verify that the instrument calibration is still valid.

The Initial and continuing calibration checks were with QC limits.

3.1.11 *GENERAL LABORATORY OBSERVATIONS*

The laboratory noted that samples EPAFMC-SD-07, EPAFMC-SD-10, and EPAFMC-SD-15 required dilution for calcium, iron, and manganese. Samples EPAFMC-SD-08, EPAFMC-SD-09 and EPAFMC-SD-14 required dilution for iron and manganese. Sample EPAFMC-SD-12 required dilution for copper and manganese and samples EPAFMC-SD-11, EPAFMC-SD-13 and EPAFMC-SD-16 required dilution for manganese. Therefore, the results from the dilution runs were reported for these analytes.

3.2 SOIL SAMPLES BY METHOD 7471

3.2.1 *SAMPLE HANDLING*

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on April 24, 2012 and were received on ice within 4°C ± 2°C.. No discrepancies were noted.

3.2.2 *SAMPLE PRESERVATION AND HOLDING TIME*

Samples were prepared on April 25, 2012 and analyzed on April 27, 2012. Samples were analyzed within the holding time criteria. No discrepancies were noted.

3.2.3 *BLANK RESULTS*

The assessment of blank analysis results is to determine the existence and magnitude of contamination resulting from laboratory and/or field activities. A laboratory method blank sample (127971MB) for method 7471 was run with this SDG.

No laboratory method blank detects were noted. No initial and continuing calibration blank detects were noted.

3.2.4 *LCS RECOVERY RESULTS*

The LCS serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. The LCS is fortified with each analyte of interest and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

The LCS/LCSD recoveries were all within acceptable recovery limits.

3.2.5 *MS/MSD RECOVERY RESULTS*

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The MS/MSD accuracy performance is measured by %R.

A MS/MSD was requested on sample EPAFMC-SD-07. Recoveries were within QC limits.

3.2.6 *FIELD DUPLICATES*

Data for field duplicates were collected and analyzed for chemical constituents to measure the cumulative uncertainty (i.e., precision) of the sample collection, splitting, handling, storage, preparation and analysis operations, as well as natural sample heterogeneity that is not eliminated through simple mixing in the field. Field duplicates are two samples prepared by mixing a volume of sample and splitting it into two separate sample containers that are labeled as individual field samples.

Sample EPAFMC-SD-12 had a duplicate collected (EPAFMC-SD-16) for mercury. No deficiencies were noted.

3.2.7 *LABORATORY SAMPLE DUPLICATES*

Two sample aliquots of the same sample are taken in the analytical laboratory and analyzed separately with identical procedures. Analyses of the sample and duplicate give a measure of the precision associated with laboratory procedures, but not with sample collection. Analytes that are present at greater than five times the CRQL are evaluated for %RPD.

The laboratory used the LCS/LCSD and the MS/MSD for sample EPAFMC-SD-07 as the laboratory duplicate samples. No discrepancies were noted.

3.2.8 *SERIAL DILUTIONS*

The serial dilution of samples determines whether or not significant physical or chemical interferences exist due to sample matrix. Serial dilutions on analytes that are greater than 50x the MDL must be within 10% RPD.

A serial dilution was performed on sample EPAFMC-SD-01. No discrepancies were noted.

3.2.9 *INITIAL CALIBRATION*

A calibration curve is a method for determining the concentration of a substance in an unknown sample by comparing the unknown to a set of standard samples of known concentrations. The calibration curve plots instrument response verses known concentrations and plots these using either relative response factors or linear regression to determine the best fit for the line.

At least 5 standards including a zero standard were used to calibrate the instrument. The coefficient of determination (r2) value is greater than 0.995 for mercury (0.998). The linear regression was checked to for mercury and verified. No discrepancies were noted.

3.2.10 *INITIAL AND CONTINUING CALIBRATION VERIFICATION*

Initial calibration checks are performed to verify the validity of the calibration curve and continuing calibration checks at the beginning and end of the analytical run and periodically throughout the run to verify that the instrument calibration is still valid.

The Initial and continuing calibration checks were with QC limits.

3.1 WATER SAMPLES BY METHOD 6010 B

3.1.1 *SAMPLE HANDLING*

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Water samples were collected on April 24, 2012 and were received on ice within 4° C ± 2 °C.

3.1.2 *SAMPLE PRESERVATION AND HOLDING TIME*

The samples were received at the lab on April 25, 2012 and the lab noted that the 6010 samples were preserved upon receipt. Samples were prepared on April 30, 2012 and analyzed on May 1, 2012. Samples were analyzed within the holding time criteria. No discrepancies were noted.

3.1.3 *BLANK RESULTS*

The assessment of blank analysis results is to determine the existence and magnitude of contamination resulting from laboratory and/or field activities. A laboratory method blank sample for method 6010(128299MB) was run with this SDG.

The method blank had the following analytes detected above the MDL but below the RL: calcium at 65 µg/L, chromium at 0.457 µg/L, and iron at 8.27 µg/L. Both water samples have calcium and iron concentrations above the RL, therefore no further action was required. However, the results for chromium in samples EPAFMC-SW-01 and EPAFMC-SW-03 were qualified as non-detect “U” at the elevated RL.

The following blanks had analyte concentrations detected between the MDL and the RL: aluminum, barium, beryllium, cobalt, iron, and magnesium in initial calibration blank (ICB1075515) and CCB1075520; aluminum, beryllium, cobalt, iron and selenium in CCB1075532.

Barium, iron, and magnesium were detected at concentrations greater than the RL in both water samples and no further action was required.

Aluminum was detected in both water samples at concentrations between the MDL and the RL; therefore, aluminum was reported at the RL of 100 µg/L and flagged as non-detect "U" in samples EPAFMC-SW-01 and EPAFMC-SW-03.

Iron was detected above the RL but less than 10x the level in the blanks, therefore iron was flagged as estimated "J" in samples EPAFMC-SW-01 and EPAFMC-SW-03.

Selenium was non-detect in sample EPAFMC-SW-01, therefore no further action is required. Selenium was detected between the MDL and RL in EPAFMC-SW-03; therefore selenium was reported at the RL of 20 and flagged as non-detect "U".

3.1.4 *LCS RECOVERY RESULTS*

The LCS serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. The LCS is fortified with each analyte of interest and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

The LCS/LCSD recoveries were within QC limits.

3.1.5 *MS/MSD RECOVERY RESULTS*

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The MS/MSD accuracy performance is measured by %R.

No MS/MSD was requested for this matrix in this SDG.

3.1.6 *FIELD DUPLICATES*

Data for field duplicates were collected and analyzed for chemical constituents to measure the cumulative uncertainty (i.e., precision) of the sample collection, splitting, handling, storage, preparation and analysis operations, as well as natural sample heterogeneity that is not eliminated through simple mixing in the field. Field duplicates are two samples prepared by mixing a volume of sample and splitting it into two separate sample containers that are labeled as individual field samples.

Sample EPAFMC-SW-01 had a duplicate collected (EPAFMC-SW-03) for metals analysis. Selenium was detected between the MDL and RL in sample EPAFMC-SW-03 and was below the MDL in sample EPAFMC-SW-01. Selenium in sample EPAFMC-SW-03 was raised to the RL and reported as "U" due to blank contamination, therefore no further action was taken.

3.1.7 *LABORATORY SAMPLE DUPLICATES*

Two sample aliquots of the same sample are taken in the analytical laboratory and analyzed separately with identical procedures. Analyses of the sample and duplicate give a measure of the precision associated with laboratory procedures, but not with sample collection. Analytes that are present at greater than five times the CRQL are evaluated for %RPD.

The laboratory used the LCS/LCSD as the laboratory duplicate samples. No discrepancies were noted.

3.1.8 SERIAL DILUTIONS

The serial dilution of samples determines whether or not significant physical or chemical interferences exist due to sample matrix. Serial dilutions on analytes that are greater than 50x the MDL must be within 10% RPD.

A serial dilution was performed on sample EPAFMC-SW-01. No discrepancies were noted.

3.1.9 INITIAL CALIBRATION

A calibration curve is a method for determining the concentration of a substance in an unknown sample by comparing the unknown to a set of standard samples of known concentrations. The calibration curve plots instrument response verses known concentrations and plots these using either relative response factors or linear regression to determine the best fit for the line.

At least three standards including a zero standard were used to calibrate the instrument for all analytes. The coefficient of determination (r2) value is greater than 0.995 for all analytes using weighted linear regression and the y-intercept was below the RL.

3.1.10 INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial calibration checks are performed to verify the validity of the calibration curve and continuing calibration checks at the beginning and end of the analytical run and periodically throughout the run to verify that the instrument calibration is still valid.

The Initial and continuing calibration checks were with QC limits.

3.1 WATER SAMPLES BY METHOD 7470

3.1.1 SAMPLE HANDLING

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Water samples were collected on April 24, 2012 and were received on ice within 4°C ± 2°C. No discrepancies were noted.

3.1.2 SAMPLE PRESERVATION AND HOLDING TIME

Samples were prepared on April 26, 2012 and analyzed on April 26, 2012. Samples were analyzed within the holding time criteria. No discrepancies were noted.

3.1.3 BLANK RESULTS

The assessment of blank analysis results is to determine the existence and magnitude of contamination resulting from laboratory and/or field activities. A laboratory method blank sample (127643MB) for method 7470 was run with this SDG.

No laboratory method blank detects were noted. No initial and continuing calibration blank detects were noted.

3.1.4 *LCS RECOVERY RESULTS*

The LCS serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. The LCS is fortified with each analyte of interest and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

The LCS/LCSD recoveries were all within acceptable recovery limits.

3.1.5 *MS/MSD RECOVERY RESULTS*

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The MS/MSD accuracy performance is measured by %R.

No MS/MSD was requested on this SDG.

3.1.6 *FIELD DUPLICATES*

Data for field duplicates were collected and analyzed for chemical constituents to measure the cumulative uncertainty (i.e., precision) of the sample collection, splitting, handling, storage, preparation and analysis operations, as well as natural sample heterogeneity that is not eliminated through simple mixing in the field. Field duplicates are two samples prepared by mixing a volume of sample and splitting it into two separate sample containers that are labeled as individual field samples.

Sample EPAFMC-SW-01 had a duplicate collected (EPAFMC-SW-03) for mercury. Mercury was not detected in either sample.

3.1.7 *INITIAL CALIBRATION*

A calibration curve is a method for determining the concentration of a substance in an unknown sample by comparing the unknown to a set of standard samples of known concentrations. The calibration curve plots instrument response verses known concentrations and plots these using either relative response factors or linear regression to determine the best fit for the line.

Five standards including a zero standard were used to calibrate the instrument. The coefficient of determination (r2) value is greater than 0.995 for mercury (0.999). The linear regression was checked to for mercury and verified. No discrepancies were noted.

3.1.8 *INITIAL AND CONTINUEING CALIBRATION VERIFICATION*

Initial calibration checks are performed to verify the validity of the calibration curve and continuing calibration checks at the beginning and end of the analytical run and periodically throughout the run to verify that the instrument calibration is still valid.

The Initial and continuing calibration checks were with QC limits.

3.1 WATER SAMPLES BY METHOD 7841 (THALLIUM)

3.1.1 *SAMPLE HANDLING*

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on April 24, 2012 and were received on ice within 4°C ± 2°C. No discrepancies were noted.

3.1.2 *SAMPLE PRESERVATION AND HOLDING TIME*

Samples were prepared on April 26, 2012 and analyzed on April 27, 2012. Samples were analyzed within the holding time criteria. No discrepancies were noted.

3.1.3 *BLANK RESULTS*

The assessment of blank analysis results is to determine the existence and magnitude of contamination resulting from laboratory and/or field activities. A laboratory method blank sample (127862MB) for method 7841 was run with this SDG.

No laboratory method blank detects were noted. No initial and continuing calibration blank detects were noted.

3.1.4 *LCS RECOVERY RESULTS*

The LCS serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. The LCS is fortified with each analyte of interest and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

The LCS/LCSD recoveries were all within acceptable recovery limits.

3.1.5 *MS/MSD RECOVERY RESULTS*

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The MS/MSD accuracy performance is measured by %R.

No MS/MSD was requested for this SDG.

3.1.6 *FIELD DUPLICATES*

Data for field duplicates were collected and analyzed for chemical constituents to measure the cumulative uncertainty (i.e., precision) of the sample collection, splitting, handling, storage, preparation and analysis operations, as well as natural sample heterogeneity that is not eliminated through simple mixing in the field. Field duplicates are two samples prepared by mixing a volume of sample and splitting it into two separate sample containers that are labeled as individual field samples.

Sample EPAFMC-SW-01 had a duplicate collected (EPAFMC-SW-03) for thallium. No deficiencies were noted.

3.1.7 *INITIAL CALIBRATION*

A calibration curve is a method for determining the concentration of a substance in an unknown sample by comparing the unknown to a set of standard samples of known concentrations. The calibration curve plots

instrument response verses known concentrations and plots these using either relative response factors or linear regression to determine the best fit for the line.

Five standards including a zero standard were used to calibrate the instrument. The coefficient of determination (r2) value is greater than 0.995 for thallium (0.999). The linear regression was checked to for thallium and verified. No discrepancies were noted.

3.1.8 INITIAL AND CONTINUING CALIBRATION VERIFICATION

Initial calibration checks are performed to verify the validity of the calibration curve and continuing calibration checks at the beginning and end of the analytical run and periodically throughout the run to verify that the instrument calibration is still valid.

The Initial and continuing calibration checks were with QC limits.

4.0 WET CHEMISTRY DATA VALIDATION RESULTS

The results of START's inorganic data validation are summarized below by QC audit reviewed. The data qualifiers listed below were applied to sample analytical results where warranted:

- J – The analyte was detected. The reported concentration was considered estimated.
- U – The analyte was not detected.
- UJ – The analyte was not detected. The reporting limit was considered estimated.

After the START project staff received the data packages, they were inventoried for completeness and then reviewed according to matrix-specific protocols and data quality objectives established for the project.

4.1 SOIL SAMPLES BY METHOD 9060

4.1.1 SAMPLE HANDLING

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on April 24, 2012 and were received on ice within 4°C ± 2°C.

4.1.2 SAMPLE PRESERVATION AND HOLDING TIME

Samples were prepared and analyzed May 3, 2012. Samples were analyzed within the holding time criteria. No discrepancies were noted.

4.1.3 BLANK RESULTS

The assessment of blank analysis results is to determine the existence and magnitude of contamination resulting from laboratory and/or field activities. A laboratory method blank sample (129552MB) for method was run with this SDG.

No laboratory method blank detects were noted.

4.1.4 LCS RECOVERY RESULTS

The LCS serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. The LCS is fortified with each analyte of interest and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

The LCS/LCSD recoveries were within acceptable recovery limits.

4.1.5 FIELD DUPLICATES

Data for field duplicates were collected and analyzed for chemical constituents to measure the cumulative uncertainty (i.e., precision) of the sample collection, splitting, handling, storage, preparation and analysis operations, as well as natural sample heterogeneity that is not eliminated through simple mixing in the field. Field duplicates are two samples prepared by mixing a volume of sample and splitting it into two separate sample containers that are labeled as individual field samples.

Sample EPAFMC-SD-12 had a duplicate collected (EPAFMC-SD-16) for TOC. The RPD for TOC is outside acceptable limits at 71.6%RPD. Therefore samples EPAFMC-SD-12 and EPAFMC-SD-16 were flagged as estimated "J" for TOC.

4.1.6 INITIAL CALIBRATION

A calibration curve is a method for determining the concentration of a substance in an unknown sample by comparing the unknown to a set of standard samples of known concentrations. The calibration curve plots instrument response verses known concentrations and plots these using either relative response factors or linear regression to determine the best fit for the line.

Six standards including a zero standard were used to calibrate the instrument. The coefficient of determination (r2) value is greater than 0.995 for TOC (.998). The linear regression was checked to for TOC and verified. No discrepancies were noted.

4.1.7 INITIAL AND CONTINUEING CALIBRATION VERIFICATION

Initial calibration checks are performed to verify the validity of the calibration curve and continuing calibration checks at the beginning and end of the analytical run and periodically throughout the run to verify that the instrument calibration is still valid.

The initial and continuing calibration checks were with QC limits.

5.0 OVERALL ASSESSMENT OF DATA

The analytical results meet the data quality objectives defined by the applicable method and validation guidance documentation. The analytical data is usable and acceptable as reported by the laboratory.

ATTACHMENT

SUMMARY OF VALIDATED ANALYTICAL RESULTS

AND

CHAIN-OF-CUSTODY

USEPA Region 4 COC (LAB COPY)
DateShipped: 4/24/2012
CarrierName: FedEx
AirbillNo: 875585709764

CHAIN OF CUSTODY RECORD
Site #: 1392
Project Number: OTIE-FIVE MILE CREEK
Cooler #: [redacted]

3505843
18

No: EPAFMC 4-24-12
Lab: PEL/SPECTRUM LAB
Lab Contact: KEVIN DUNHAM
Lab Phone: 813-888-9507

Sample #	Media/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
EPAFMC-SD-07	Sediment/ DUSTIN MORIN & RYAN STUBBS	Grab	SVOA + PAHs+TOC(14), TAL METALS + Hg(14)	A (Ice), B (Ice) (3)	EPAFMC06	04/24/2012 11:25	-01-02-03
EPAFMC-SD-08	Sediment/ DUSTIN MORIN & RYAN STUBBS	Grab	SVOA+PAHS+PCB+TOC(14), TAL METALS + Hg(14)	A (Ice), B (Ice) (2)	EPAFMC07	04/24/2012 11:37	-04
EPAFMC-SD-09	Sediment/ DUSTIN MORIN & RYAN STUBBS	Grab	SVOA + PAHs+TOC(14), TAL METALS + Hg(14)	A (Ice), B (Ice) (2)	EPAFMC08	04/24/2012 11:45	-05
EPAFMC-SD-10	Sediment/ DUSTIN MORIN & RYAN STUBBS	Grab	SVOA + PAHs+TOC(14), TAL METALS + Hg(14)	A (Ice), B (Ice) (2)	EPAFMC09	04/24/2012 13:43	-06
EPAFMC-SD-11	Sediment/ DUSTIN MORIN & RYAN STUBBS	Grab	SVOA + PAHs+TOC(14), TAL METALS + Hg(14)	A (Ice), B (Ice) (2)	EPAFMC10	04/24/2012 14:25	-07

Sample(s) to be used for Lab QC: EPAFMC-SD-07

Temp 2.6C, 3.0C
Cools preserved in house

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
coolers + samples	Nairimer Berrios	4/24/12 1730								4/25/12	925

5-30-12

USEPA Region 4 COC (LAB COPY)
DateShipped: 4/24/2012
CarrierName: FedEx
AirbillNo: 875585709764

CHAIN OF CUSTODY RECORD
Site #: 1392
Project Number: OTIE-FIVE MILE CREEK
Cooler #: [redacted]

3505843
NJ

No: EPAFMC 4-24-12
Lab: PEL/SPECTRUM LAB
Lab Contact: KEVIN DUNHAM
Lab Phone: 813-888-9507

Sample #	Media/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
EPAFMC-SD-12	Sediment/ DUSTIN MORIN & RYAN STUBBS	Grab	SVOA+PAHS+PCB+TOC(14), TAL METALS + Hg(14)	A (Ice), B (Ice) (2)	EPAFMC11	04/24/2012 15:40	-08
EPAFMC-SD-13	Sediment/ DUSTIN MORIN & RYAN STUBBS	Grab	SVOA + PAHs+TOC(14), TAL METALS + Hg(14)	A (Ice), B (Ice) (2)	EPAFMC12	04/24/2012 15:04	-09
EPAFMC-SD-14	Sediment/ DUSTIN MORIN & RYAN STUBBS	Grab	SVOA + PAHs+TOC(14), TAL METALS + Hg(14)	A (Ice), B (Ice) (2)	EPAFMC13	04/24/2012 15:35	-10
EPAFMC-SD-15	Sediment/ DUSTIN MORIN & RYAN STUBBS	Grab	SVOA + PAHs+TOC(14), TAL METALS + Hg(14)	A (Ice), B (Ice) (2)	EPAFMC14	04/24/2012 15:19	-11
EPAFMC-SD-16	Sediment/ DUSTIN MORIN & RYAN STUBBS	Grab	SVOA+PAHS+PCB+TOC(14), TAL METALS + Hg(14)	A (Ice), B (Ice) (2)	EPAFMC11	04/24/2012 15:45	-12

3505843
Dup of 12

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key	

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
coolers + samples	Nairimer Berrios	4/24/12 1730							NJ	4/25/12	925

5-30-12

USEPA Region 4 COC (LAB COPY)
DateShipped: 4/24/2012
CarrierName: FedEx
AirbillNo: 875585709764

CHAIN OF CUSTODY RECORD
Site #: 1392
Project Number: OTIE-FIVE MILE CREEK
Cooler #: [redacted]

3505843
N

No: EPAFMC 4-24-12
Lab: PEL/SPECTRUM LAB
Lab Contact: KEVIN DUNHAM
Lab Phone: 813-888-9507

Sample #	Media/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
EPAFMC-SW-01	Surface Water/ DUSTIN MORIN & RYAN STUBBS	Grab	Tests cancelled per RH/4-26-12 MG SVOA+PAHS(14), PCB(14), TAL METALS + Hg(14) Hardness SM2340B	A (Ice), B (Ice), C (Ice) (5)	EPAFMC11	04/24/2012 15:40	-13
EPAFMC-SW-03	Surface Water/ DUSTIN MORIN & RYAN STUBBS	Grab	SVOA+PAHS(14), PCB(14), TAL METALS + Hg(14) Hardness SM 2340B	A (Ice), B (Ice), C (Ice) (5)	EPAFMC11	04/24/2012 15:45	-14

Special Instructions:

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
coolers + samples	Nairimer Berrios	4/24/12 1730								4/25/12	925

5-30-12

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-07

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584301 Lab File ID: 84301.D

Sample wt/vol: 25.08 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1145

PercentSolids: 75.5 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC06 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
111-44-4	Bis(2-chloroethyl)ether	70.8	U	70.8	285
108-95-2	Phenol	68.6	U	68.6	1410
95-57-8	2-Chlorophenol	72.9	U	72.9	285
108-60-1	2,2'-Oxybis(1-chloropropane)	232	U	232	285
95-48-7	2-Methylphenol	101	U	101	282
67-72-1	Hexachloroethane	52.8	U	52.8	285
621-64-7	N-Nitroso-di-n-propylamine	64.4	U	64.4	285
106-44-5	4-Methylphenol	88.1	J	62.3	285
98-95-3	Nitrobenzene	63.4	U	63.4	285
78-59-1	Isophorone	62.3	U	62.3	285
88-75-5	2-Nitrophenol	76	U	76	285
105-67-9	2,4-Dimethylphenol	60.2	U	60.2	282
111-91-1	Bis(2-chloroethoxy)methane	60.2	U	60.2	282
120-83-2	2,4-Dichlorophenol	79.2	U	79.2	282
91-20-3	Naphthalene	67.6	U	67.6	285
106-47-8	4-Chloroaniline	66.5	U	66.5	285
91-57-6	2-Methylnaphthalene	61.2	U	61.2	285
87-68-3	Hexachlorobutadiene	61.2	U	61.2	285
59-50-7	4-Chloro-3-methylphenol	59.1	U	59.1	285
77-47-4	Hexachlorocyclopentadiene	42.2	U	42.2	704
88-06-2	2,4,6-Trichlorophenol	71.8	U	71.8	282
95-95-4	2,4,5-Trichlorophenol	78.2	U	78.2	282
91-58-7	2-Chloronaphthalene	70.4	U	70.4	285
88-74-4	2-Nitroaniline	60.2	U	60.2	285
208-96-8	Acenaphthylene	58.1	U	58.1	285
131-11-3	Dimethylphthalate	62.3	U	62.3	285

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-07

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584301 Lab File ID: 84301.D

Sample wt/vol: 25.08 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1145

PercentSolids: 75.5 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC06 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*		*Q*	*MDL*	*RL*
606-20-2	2,6-Dinitrotoluene	52.8		U	52.8	285
83-32-9	Acenaphthene	51.8		U	51.8	285
99-09-2	3-Nitroaniline	84.5		U	84.5	282
51-28-5	2,4-Dinitrophenol	232		U	232	1420
132-64-9	Dibenzofuran	57		U	57	285
121-14-2	2,4-Dinitrotoluene	51.8	UJ	U	51.8	285
100-02-7	4-Nitrophenol	56		U	56	704
86-73-7	Fluorene	53.9		U	53.9	285
7005-72-3	4-Chlorophenyl-phenylether	53.9		U	53.9	285
84-66-2	Diethylphthalate	53.9		U	53.9	285
100-01-6	4-Nitroaniline	92.9		U	92.9	282
534-52-1	4,6-Dinitro-2-methylphenol	281	UJ	U	281	285
86-30-6	N-Nitrosodiphenylamine	66.5		U	66.5	282
101-55-3	4-Bromophenyl-phenylether	51.8		U	51.8	285
118-74-1	Hexachlorobenzene	56		U	56	282
87-86-5	Pentachlorophenol	140		U	140	285
85-01-8	Phenanthrene	230		J	59.1	285
120-12-7	Anthracene	75.6		J	63.4	285
84-74-2	Di-n-butylphthalate	46.5		U	46.5	285
206-44-0	Fluoranthene	785			50.7	285
129-00-0	Pyrene	667			97.2	285
85-68-7	Butylbenzylphthalate	66.5		U	66.5	285
91-94-1	3,3'-Dichlorobenzidine	62.3		U	62.3	285
56-55-3	Benzo(a)anthracene	449			60.2	285
218-01-9	Chrysene	489			35.9	282
117-81-7	Bis(2-ethylhexyl)phthalate	87.7		U	87.7	285

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-07

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584301 Lab File ID: 84301.D

Sample wt/vol: 25.08 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1145

PercentSolids: 75.5 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC06 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
117-84-0	Di-n-octylphthalate	61.2	U	61.2	285
205-99-2	Benzo(b)fluoranthene	526		66.5	285
207-08-9	Benzo(k)fluoranthene	421		60.2	285
50-32-8	Benzo(a)pyrene	400		45.4	285
193-39-5	Indeno(1,2,3-cd)pyrene	204	J	54.9	285
53-70-3	Dibenzo(a,h)anthracene	71.8	J	43.3	285
191-24-2	Benzo(g,h,i)perylene	232	J	42.2	285
98-86-2	Acetophenone	106	U	106	285
95-94-3	1,2,4,5-Tetrachlorobenzene	49.6	U	49.6	285
86-74-8	Carbazole	57	U	57	285
105-60-2	Caprolactam	148	U	148	285
92-52-4	1,1'-Biphenyl	64.4	U	64.4	285
1912-24-9	Atrazine	83.4	U	83.4	285
100-52-7	Benzaldehyde	47.5	U	47.5	285

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-08

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584304 Lab File ID: 84304.D

Sample wt/vol: 25.39 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1409

PercentSolids: 97.1 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC07 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
111-44-4	Bis(2-chloroethyl)ether	54.4	U	54.4	219
108-95-2	Phenol	52.7	U	52.7	1080
95-57-8	2-Chlorophenol	56	U	56	219
108-60-1	2,2'-Oxybis(1-chloropropane)	178	U	178	219
95-48-7	2-Methylphenol	77.9	U	77.9	216
67-72-1	Hexachloroethane	40.6	U	40.6	219
621-64-7	N-Nitroso-di-n-propylamine	49.5	U	49.5	219
106-44-5	4-Methylphenol	47.9	U	47.9	219
98-95-3	Nitrobenzene	48.7	U	48.7	219
78-59-1	Isophorone	47.9	U	47.9	219
88-75-5	2-Nitrophenol	58.4	U	58.4	219
105-67-9	2,4-Dimethylphenol	46.2	U	46.2	216
111-91-1	Bis(2-chloroethoxy)methane	46.2	U	46.2	216
120-83-2	2,4-Dichlorophenol	60.8	U	60.8	216
91-20-3	Naphthalene	51.9	U	51.9	219
106-47-8	4-Chloroaniline	51.1	U	51.1	219
91-57-6	2-Methylnaphthalene	47	U	47	219
87-68-3	Hexachlorobutadiene	47	U	47	219
59-50-7	4-Chloro-3-methylphenol	45.4	U	45.4	219
77-47-4	Hexachlorocyclopentadiene	32.4	U	32.4	541
88-06-2	2,4,6-Trichlorophenol	55.2	U	55.2	216
95-95-4	2,4,5-Trichlorophenol	60	U	60	216
91-58-7	2-Chloronaphthalene	54.1	U	54.1	219
88-74-4	2-Nitroaniline	46.2	U	46.2	219
208-96-8	Acenaphthylene	44.6	U	44.6	219
131-11-3	Dimethylphthalate	47.9	U	47.9	219

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-08

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584304 Lab File ID: 84304.D

Sample wt/vol: 25.39 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1409

PercentSolids: 97.1 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC07 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
606-20-2	2,6-Dinitrotoluene	40.6	U	40.6	219
83-32-9	Acenaphthene	39.7	U	39.7	219
99-09-2	3-Nitroaniline	64.9	U	64.9	216
51-28-5	2,4-Dinitrophenol	178	U	178	1090
132-64-9	Dibenzofuran	43.8	U	43.8	219
121-14-2	2,4-Dinitrotoluene	39.7	U	39.7	219
100-02-7	4-Nitrophenol	43	U	43	541
86-73-7	Fluorene	41.4	U	41.4	219
7005-72-3	4-Chlorophenyl-phenylether	41.4	U	41.4	219
84-66-2	Diethylphthalate	41.4	U	41.4	219
100-01-6	4-Nitroaniline	71.4	U	71.4	216
534-52-1	4,6-Dinitro-2-methylphenol	216	U	216	219
86-30-6	N-Nitrosodiphenylamine	51.1	U	51.1	216
101-55-3	4-Bromophenyl-phenylether	39.7	U	39.7	219
118-74-1	Hexachlorobenzene	43	U	43	216
87-86-5	Pentachlorophenol	108	U	108	219
85-01-8	Phenanthrene	215	J	45.4	219
120-12-7	Anthracene	48.7	U	48.7	219
84-74-2	Di-n-butylphthalate	35.7	U	35.7	219
206-44-0	Fluoranthene	380		38.9	219
129-00-0	Pyrene	317		74.6	219
85-68-7	Butylbenzylphthalate	51.1	U	51.1	219
91-94-1	3,3'-Dichlorobenzidine	47.9	U	47.9	219
56-55-3	Benzo(a)anthracene	172	J	46.2	219
218-01-9	Chrysene	187	J	27.6	216
117-81-7	Bis(2-ethylhexyl)phthalate	67.3	U	67.3	219

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-08

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584304 Lab File ID: 84304.D

Sample wt/vol: 25.39 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1409

PercentSolids: 97.1 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC07 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
117-84-0	Di-n-octylphthalate	47	U	47	219
205-99-2	Benzo(b)fluoranthene	210	J	51.1	219
207-08-9	Benzo(k)fluoranthene	87.6	J	46.2	219
50-32-8	Benzo(a)pyrene	129	J	34.9	219
193-39-5	Indeno(1,2,3-cd)pyrene	79.2	J	42.2	219
53-70-3	Dibenzo(a,h)anthracene	33.2	U	33.2	219
191-24-2	Benzo(g,h,i)perylene	88.6	J	32.4	219
98-86-2	Acetophenone	81.1	U	81.1	219
95-94-3	1,2,4,5-Tetrachlorobenzene	38.1	U	38.1	219
86-74-8	Carbazole	43.8	U	43.8	219
105-60-2	Caprolactam	114	U	114	219
92-52-4	1,1'-Biphenyl	49.5	U	49.5	219
1912-24-9	Atrazine	64.1	U	64.1	219
100-52-7	Benzaldehyde	36.5	U	36.5	219

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-09

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584305 Lab File ID: 84305.D

Sample wt/vol: 25.06 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1433

PercentSolids: 77.7 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC08 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
111-44-4	Bis(2-chloroethyl)ether	68.8	U	68.8	277
108-95-2	Phenol	66.8	U	66.8	1370
95-57-8	2-Chlorophenol	70.9	U	70.9	277
108-60-1	2,2'-Oxybis(1-chloropropane)	226	U	226	277
95-48-7	2-Methylphenol	98.6	U	98.6	274
67-72-1	Hexachloroethane	51.4	U	51.4	277
621-64-7	N-Nitroso-di-n-propylamine	62.6	U	62.6	277
106-44-5	4-Methylphenol	60.6	U	60.6	277
98-95-3	Nitrobenzene	61.6	U	61.6	277
78-59-1	Isophorone	60.6	U	60.6	277
88-75-5	2-Nitrophenol	74	U	74	277
105-67-9	2,4-Dimethylphenol	58.5	U	58.5	274
111-91-1	Bis(2-chloroethoxy)methane	58.5	U	58.5	274
120-83-2	2,4-Dichlorophenol	77	U	77	274
91-20-3	Naphthalene	65.7	U	65.7	277
106-47-8	4-Chloroaniline	64.7	U	64.7	277
91-57-6	2-Methylnaphthalene	59.6	U	59.6	277
87-68-3	Hexachlorobutadiene	59.6	U	59.6	277
59-50-7	4-Chloro-3-methylphenol	57.5	U	57.5	277
77-47-4	Hexachlorocyclopentadiene	41.1	U	41.1	685
88-06-2	2,4,6-Trichlorophenol	69.8	U	69.8	274
95-95-4	2,4,5-Trichlorophenol	76	U	76	274
91-58-7	2-Chloronaphthalene	68.5	U	68.5	277
88-74-4	2-Nitroaniline	58.5	U	58.5	277
208-96-8	Acenaphthylene	56.5	U	56.5	277
131-11-3	Dimethylphthalate	60.6	U	60.6	277

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-09

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584305 Lab File ID: 84305.D

Sample wt/vol: 25.06 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1433

PercentSolids: 77.7 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC08 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
606-20-2	2,6-Dinitrotoluene	51.4	U	51.4	277
83-32-9	Acenaphthene	50.3	U	50.3	277
99-09-2	3-Nitroaniline	82.2	U	82.2	274
51-28-5	2,4-Dinitrophenol	226	U	226	1380
132-64-9	Dibenzofuran	55.5	U	55.5	277
121-14-2	2,4-Dinitrotoluene	50.3	U	50.3	277
100-02-7	4-Nitrophenol	54.4	U	54.4	685
86-73-7	Fluorene	52.4	U	52.4	277
7005-72-3	4-Chlorophenyl-phenylether	52.4	U	52.4	277
84-66-2	Diethylphthalate	52.4	U	52.4	277
100-01-6	4-Nitroaniline	90.4	U	90.4	274
534-52-1	4,6-Dinitro-2-methylphenol	273	U	273	277
86-30-6	N-Nitrosodiphenylamine	64.7	U	64.7	274
101-55-3	4-Bromophenyl-phenylether	50.3	U	50.3	277
118-74-1	Hexachlorobenzene	54.4	U	54.4	274
87-86-5	Pentachlorophenol	137	U	137	277
85-01-8	Phenanthrene	57.5	U	57.5	277
120-12-7	Anthracene	61.6	U	61.6	277
84-74-2	Di-n-butylphthalate	45.2	U	45.2	277
206-44-0	Fluoranthene	214	J	49.3	277
129-00-0	Pyrene	252	J	94.5	277
85-68-7	Butylbenzylphthalate	64.7	U	64.7	277
91-94-1	3,3'-Dichlorobenzidine	60.6	U	60.6	277
56-55-3	Benzo(a)anthracene	161	J	58.5	277
218-01-9	Chrysene	161	J	34.9	274
117-81-7	Bis(2-ethylhexyl)phthalate	85.2	U	85.2	277

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-09

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584305 Lab File ID: 84305.D

Sample wt/vol: 25.06 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1433

PercentSolids: 77.7 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC08 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
117-84-0	Di-n-octylphthalate	59.6	U	59.6	277
205-99-2	Benzo(b)fluoranthene	163	J	64.7	277
207-08-9	Benzo(k)fluoranthene	77.4	J	58.5	277
50-32-8	Benzo(a)pyrene	108	J	44.2	277
193-39-5	Indeno(1,2,3-cd)pyrene	57.9	J	53.4	277
53-70-3	Dibenzo(a,h)anthracene	42.1	U	42.1	277
191-24-2	Benzo(g,h,i)perylene	65.7	J	41.1	277
98-86-2	Acetophenone	103	U	103	277
95-94-3	1,2,4,5-Tetrachlorobenzene	48.3	U	48.3	277
86-74-8	Carbazole	55.5	U	55.5	277
105-60-2	Caprolactam	144	U	144	277
92-52-4	1,1'-Biphenyl	62.6	U	62.6	277
1912-24-9	Atrazine	81.1	U	81.1	277
100-52-7	Benzaldehyde	46.2	U	46.2	277

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-10

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584306 Lab File ID: 84306.D

Sample wt/vol: 25.81 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1457

PercentSolids: 79.7 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC09 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
111-44-4	Bis(2-chloroethyl)ether	65.1	U	65.1	262
108-95-2	Phenol	63.2	U	63.2	1300
95-57-8	2-Chlorophenol	67.1	U	67.1	262
108-60-1	2,2'-Oxybis(1-chloropropane)	214	U	214	262
95-48-7	2-Methylphenol	93.3	U	93.3	260
67-72-1	Hexachloroethane	48.6	U	48.6	262
621-64-7	N-Nitroso-di-n-propylamine	59.3	U	59.3	262
106-44-5	4-Methylphenol	57.4	U	57.4	262
98-95-3	Nitrobenzene	58.3	U	58.3	262
78-59-1	Isophorone	57.4	U	57.4	262
88-75-5	2-Nitrophenol	70	U	70	262
105-67-9	2,4-Dimethylphenol	55.4	U	55.4	260
111-91-1	Bis(2-chloroethoxy)methane	55.4	U	55.4	260
120-83-2	2,4-Dichlorophenol	72.9	U	72.9	260
91-20-3	Naphthalene	62.9	J	62.2	262
106-47-8	4-Chloroaniline	61.2	U	61.2	262
91-57-6	2-Methylnaphthalene	56.4	U	56.4	262
87-68-3	Hexachlorobutadiene	56.4	U	56.4	262
59-50-7	4-Chloro-3-methylphenol	54.4	U	54.4	262
77-47-4	Hexachlorocyclopentadiene	38.9	U	38.9	648
88-06-2	2,4,6-Trichlorophenol	66.1	U	66.1	260
95-95-4	2,4,5-Trichlorophenol	72	U	72	260
91-58-7	2-Chloronaphthalene	64.8	U	64.8	262
88-74-4	2-Nitroaniline	55.4	U	55.4	262
208-96-8	Acenaphthylene	84.4	J	53.5	262
131-11-3	Dimethylphthalate	57.4	U	57.4	262

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-10

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584306 Lab File ID: 84306.D

Sample wt/vol: 25.81 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1457

PercentSolids: 79.7 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC09 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
606-20-2	2,6-Dinitrotoluene	48.6	U	48.6	262
83-32-9	Acenaphthene	47.6	U	47.6	262
99-09-2	3-Nitroaniline	77.8	U	77.8	260
51-28-5	2,4-Dinitrophenol	214	U	214	1300
132-64-9	Dibenzofuran	61.7	J	52.5	262
121-14-2	2,4-Dinitrotoluene	47.6	U	47.6	262
100-02-7	4-Nitrophenol	51.5	U	51.5	648
86-73-7	Fluorene	122	J	49.6	262
7005-72-3	4-Chlorophenyl-phenylether	49.6	U	49.6	262
84-66-2	Diethylphthalate	49.6	U	49.6	262
100-01-6	4-Nitroaniline	85.6	U	85.6	260
534-52-1	4,6-Dinitro-2-methylphenol	259	U	259	262
86-30-6	N-Nitrosodiphenylamine	61.2	U	61.2	260
101-55-3	4-Bromophenyl-phenylether	47.6	U	47.6	262
118-74-1	Hexachlorobenzene	51.5	U	51.5	260
87-86-5	Pentachlorophenol	129	U	129	262
85-01-8	Phenanthrene	574		54.4	262
120-12-7	Anthracene	154	J	58.3	262
84-74-2	Di-n-butylphthalate	42.8	U	42.8	262
206-44-0	Fluoranthene	630		46.7	262
129-00-0	Pyrene	495		89.4	262
85-68-7	Butylbenzylphthalate	61.2	U	61.2	262
91-94-1	3,3'-Dichlorobenzidine	57.4	U	57.4	262
56-55-3	Benzo(a)anthracene	338		55.4	262
218-01-9	Chrysene	326		33	260
117-81-7	Bis(2-ethylhexyl)phthalate	80.7	U	80.7	262

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-10

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584306 Lab File ID: 84306.D

Sample wt/vol: 25.81 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1457

PercentSolids: 79.7 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC09 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
117-84-0	Di-n-octylphthalate	56.4	U	56.4	262
205-99-2	Benzo(b)fluoranthene	350		61.2	262
207-08-9	Benzo(k)fluoranthene	123	J	55.4	262
50-32-8	Benzo(a)pyrene	227	J	41.8	262
193-39-5	Indeno(1,2,3-cd)pyrene	104	J	50.5	262
53-70-3	Dibenzo(a,h)anthracene	50.2	J	39.9	262
191-24-2	Benzo(g,h,i)perylene	118	J	38.9	262
98-86-2	Acetophenone	97.2	U	97.2	262
95-94-3	1,2,4,5-Tetrachlorobenzene	45.7	U	45.7	262
86-74-8	Carbazole	76.6	J	52.5	262
105-60-2	Caprolactam	136	U	136	262
92-52-4	1,1'-Biphenyl	59.3	U	59.3	262
1912-24-9	Atrazine	76.8	U	76.8	262
100-52-7	Benzaldehyde	43.8	U	43.8	262

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-11

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584307 Lab File ID: 84307.D

Sample wt/vol: 25.15 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1521

PercentSolids: 78.4 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC10 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
111-44-4	Bis(2-chloroethyl)ether	68	U	68	274
108-95-2	Phenol	65.9	U	65.9	1350
95-57-8	2-Chlorophenol	70	U	70	274
108-60-1	2,2'-Oxybis(1-chloropropane)	223	U	223	274
95-48-7	2-Methylphenol	97.4	U	97.4	271
67-72-1	Hexachloroethane	50.7	U	50.7	274
621-64-7	N-Nitroso-di-n-propylamine	61.9	U	61.9	274
106-44-5	4-Methylphenol	59.8	U	59.8	274
98-95-3	Nitrobenzene	60.8	U	60.8	274
78-59-1	Isophorone	59.8	U	59.8	274
88-75-5	2-Nitrophenol	73	U	73	274
105-67-9	2,4-Dimethylphenol	57.8	U	57.8	271
111-91-1	Bis(2-chloroethoxy)methane	57.8	U	57.8	271
120-83-2	2,4-Dichlorophenol	76.1	U	76.1	271
91-20-3	Naphthalene	64.9	U	64.9	274
106-47-8	4-Chloroaniline	63.9	U	63.9	274
91-57-6	2-Methylnaphthalene	58.8	U	58.8	274
87-68-3	Hexachlorobutadiene	58.8	U	58.8	274
59-50-7	4-Chloro-3-methylphenol	56.8	U	56.8	274
77-47-4	Hexachlorocyclopentadiene	40.6	U	40.6	676
88-06-2	2,4,6-Trichlorophenol	69	U	69	271
95-95-4	2,4,5-Trichlorophenol	75	U	75	271
91-58-7	2-Chloronaphthalene	67.6	U	67.6	274
88-74-4	2-Nitroaniline	57.8	U	57.8	274
208-96-8	Acenaphthylene	55.8	U	55.8	274
131-11-3	Dimethylphthalate	59.8	U	59.8	274

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-11

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584307 Lab File ID: 84307.D

Sample wt/vol: 25.15 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1521

PercentSolids: 78.4 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC10 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
606-20-2	2,6-Dinitrotoluene	50.7	U	50.7	274
83-32-9	Acenaphthene	49.7	U	49.7	274
99-09-2	3-Nitroaniline	81.1	U	81.1	271
51-28-5	2,4-Dinitrophenol	223	U	223	1360
132-64-9	Dibenzofuran	54.8	U	54.8	274
121-14-2	2,4-Dinitrotoluene	49.7	U	49.7	274
100-02-7	4-Nitrophenol	53.8	U	53.8	676
86-73-7	Fluorene	51.7	U	51.7	274
7005-72-3	4-Chlorophenyl-phenylether	51.7	U	51.7	274
84-66-2	Diethylphthalate	51.7	U	51.7	274
100-01-6	4-Nitroaniline	89.2	U	89.2	271
534-52-1	4,6-Dinitro-2-methylphenol	270	U	270	274
86-30-6	N-Nitrosodiphenylamine	63.9	U	63.9	271
101-55-3	4-Bromophenyl-phenylether	49.7	U	49.7	274
118-74-1	Hexachlorobenzene	53.8	U	53.8	271
87-86-5	Pentachlorophenol	135	U	135	274
85-01-8	Phenanthrene	56.8	U	56.8	274
120-12-7	Anthracene	60.8	U	60.8	274
84-74-2	Di-n-butylphthalate	44.6	U	44.6	274
206-44-0	Fluoranthene	275		48.7	274
129-00-0	Pyrene	265	J	93.3	274
85-68-7	Butylbenzylphthalate	63.9	U	63.9	274
91-94-1	3,3'-Dichlorobenzidine	59.8	U	59.8	274
56-55-3	Benzo(a)anthracene	176	J	57.8	274
218-01-9	Chrysene	183	J	34.5	271
117-81-7	Bis(2-ethylhexyl)phthalate	84.2	U	84.2	274

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-11

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584307 Lab File ID: 84307.D

Sample wt/vol: 25.15 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1521

PercentSolids: 78.4 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC10 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
117-84-0	Di-n-octylphthalate	58.8	U	58.8	274
205-99-2	Benzo(b)fluoranthene	186	J	63.9	274
207-08-9	Benzo(k)fluoranthene	91.8	J	57.8	274
50-32-8	Benzo(a)pyrene	118	J	43.6	274
193-39-5	Indeno(1,2,3-cd)pyrene	60.6	J	52.7	274
53-70-3	Dibenzo(a,h)anthracene	41.6	U	41.6	274
191-24-2	Benzo(g,h,i)perylene	70.2	J	40.6	274
98-86-2	Acetophenone	101	U	101	274
95-94-3	1,2,4,5-Tetrachlorobenzene	47.7	U	47.7	274
86-74-8	Carbazole	54.8	U	54.8	274
105-60-2	Caprolactam	142	U	142	274
92-52-4	1,1'-Biphenyl	61.9	U	61.9	274
1912-24-9	Atrazine	80.1	U	80.1	274
100-52-7	Benzaldehyde	45.6	U	45.6	274

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-12

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584308 Lab File ID: 84308.D

Sample wt/vol: 25.52 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1545

PercentSolids: 84.4 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC11 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
111-44-4	Bis(2-chloroethyl)ether	62.2	U	62.2	251
108-95-2	Phenol	60.4	U	60.4	1240
95-57-8	2-Chlorophenol	64.1	U	64.1	251
108-60-1	2,2'-Oxybis(1-chloropropane)	204	U	204	251
95-48-7	2-Methylphenol	89.1	U	89.1	248
67-72-1	Hexachloroethane	46.4	U	46.4	251
621-64-7	N-Nitroso-di-n-propylamine	56.6	U	56.6	251
106-44-5	4-Methylphenol	54.8	U	54.8	251
98-95-3	Nitrobenzene	55.7	U	55.7	251
78-59-1	Isophorone	54.8	U	54.8	251
88-75-5	2-Nitrophenol	66.8	U	66.8	251
105-67-9	2,4-Dimethylphenol	52.9	U	52.9	248
111-91-1	Bis(2-chloroethoxy)methane	52.9	U	52.9	248
120-83-2	2,4-Dichlorophenol	69.6	U	69.6	248
91-20-3	Naphthalene	342		59.4	251
106-47-8	4-Chloroaniline	58.5	U	58.5	251
91-57-6	2-Methylnaphthalene	65.7	J	53.8	251
87-68-3	Hexachlorobutadiene	53.8	U	53.8	251
59-50-7	4-Chloro-3-methylphenol	52	U	52	251
77-47-4	Hexachlorocyclopentadiene	37.1	U	37.1	619
88-06-2	2,4,6-Trichlorophenol	63.1	U	63.1	248
95-95-4	2,4,5-Trichlorophenol	68.7	U	68.7	248
91-58-7	2-Chloronaphthalene	61.9	U	61.9	251
88-74-4	2-Nitroaniline	52.9	U	52.9	251
208-96-8	Acenaphthylene	97.7	J	51.1	251
131-11-3	Dimethylphthalate	54.8	U	54.8	251

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-12

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584308 Lab File ID: 84308.D

Sample wt/vol: 25.52 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1545

PercentSolids: 84.4 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC11 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
606-20-2	2,6-Dinitrotoluene	46.4	U	46.4	251
83-32-9	Acenaphthene	45.5	U	45.5	251
99-09-2	3-Nitroaniline	74.3	U	74.3	248
51-28-5	2,4-Dinitrophenol	204	U	204	1240
132-64-9	Dibenzofuran	57.3	J	50.1	251
121-14-2	2,4-Dinitrotoluene	45.5	U	45.5	251
100-02-7	4-Nitrophenol	49.2	U	49.2	619
86-73-7	Fluorene	55.3	J	47.4	251
7005-72-3	4-Chlorophenyl-phenylether	47.4	U	47.4	251
84-66-2	Diethylphthalate	47.4	U	47.4	251
100-01-6	4-Nitroaniline	81.7	U	81.7	248
534-52-1	4,6-Dinitro-2-methylphenol	247	U	247	251
86-30-6	N-Nitrosodiphenylamine	58.5	U	58.5	248
101-55-3	4-Bromophenyl-phenylether	45.5	U	45.5	251
118-74-1	Hexachlorobenzene	49.2	U	49.2	248
87-86-5	Pentachlorophenol	124	U	124	251
85-01-8	Phenanthrene	373		52	251
120-12-7	Anthracene	176	J	55.7	251
84-74-2	Di-n-butylphthalate	40.8	U	40.8	251
206-44-0	Fluoranthene	1060		44.6	251
129-00-0	Pyrene	878		85.4	251
85-68-7	Butylbenzylphthalate	58.5	U	58.5	251
91-94-1	3,3'-Dichlorobenzidine	54.8	U	54.8	251
56-55-3	Benzo(a)anthracene	574		52.9	251
218-01-9	Chrysene	550		31.6	248
117-81-7	Bis(2-ethylhexyl)phthalate	77.1	U	77.1	251

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-12

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584308 Lab File ID: 84308.D

Sample wt/vol: 25.52 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1545

PercentSolids: 84.4 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC11 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
117-84-0	Di-n-octylphthalate	53.8	U	53.8	251
205-99-2	Benzo(b)fluoranthene	569		58.5	251
207-08-9	Benzo(k)fluoranthene	279		52.9	251
50-32-8	Benzo(a)pyrene	397		39.9	251
193-39-5	Indeno(1,2,3-cd)pyrene	192	J	48.3	251
53-70-3	Dibenzo(a,h)anthracene	71.6	J	38.1	251
191-24-2	Benzo(g,h,i)perylene	215	J	37.1	251
98-86-2	Acetophenone	92.9	U	92.9	251
95-94-3	1,2,4,5-Tetrachlorobenzene	43.6	U	43.6	251
86-74-8	Carbazole	69.8	J	50.1	251
105-60-2	Caprolactam	130	U	130	251
92-52-4	1,1'-Biphenyl	56.6	U	56.6	251
1912-24-9	Atrazine	73.4	U	73.4	251
100-52-7	Benzaldehyde	41.8	U	41.8	251

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-13

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584309 Lab File ID: 84309.D

Sample wt/vol: 25.22 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1609

PercentSolids: 78 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC12 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
111-44-4	Bis(2-chloroethyl)ether	68.1	U	68.1	274
108-95-2	Phenol	66.1	U	66.1	1360
95-57-8	2-Chlorophenol	70.2	U	70.2	274
108-60-1	2,2'-Oxybis(1-chloropropane)	224	U	224	274
95-48-7	2-Methylphenol	97.6	U	97.6	271
67-72-1	Hexachloroethane	50.8	U	50.8	274
621-64-7	N-Nitroso-di-n-propylamine	62	U	62	274
106-44-5	4-Methylphenol	60	U	60	274
98-95-3	Nitrobenzene	61	U	61	274
78-59-1	Isophorone	60	U	60	274
88-75-5	2-Nitrophenol	73.2	U	73.2	274
105-67-9	2,4-Dimethylphenol	58	U	58	271
111-91-1	Bis(2-chloroethoxy)methane	58	U	58	271
120-83-2	2,4-Dichlorophenol	76.2	U	76.2	271
91-20-3	Naphthalene	121	J	65.1	274
106-47-8	4-Chloroaniline	64	U	64	274
91-57-6	2-Methylnaphthalene	59	U	59	274
87-68-3	Hexachlorobutadiene	59	U	59	274
59-50-7	4-Chloro-3-methylphenol	56.9	U	56.9	274
77-47-4	Hexachlorocyclopentadiene	40.7	U	40.7	678
88-06-2	2,4,6-Trichlorophenol	69.1	U	69.1	271
95-95-4	2,4,5-Trichlorophenol	75.2	U	75.2	271
91-58-7	2-Chloronaphthalene	67.8	U	67.8	274
88-74-4	2-Nitroaniline	58	U	58	274
208-96-8	Acenaphthylene	55.9	U	55.9	274
131-11-3	Dimethylphthalate	60	U	60	274

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-13

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584309 Lab File ID: 84309.D

Sample wt/vol: 25.22 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1609

PercentSolids: 78 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC12 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
606-20-2	2,6-Dinitrotoluene	50.8	U	50.8	274
83-32-9	Acenaphthene	49.8	U	49.8	274
99-09-2	3-Nitroaniline	81.3	U	81.3	271
51-28-5	2,4-Dinitrophenol	224	U	224	1360
132-64-9	Dibenzofuran	54.9	U	54.9	274
121-14-2	2,4-Dinitrotoluene	49.8	U	49.8	274
100-02-7	4-Nitrophenol	53.9	U	53.9	678
86-73-7	Fluorene	58.9	J	51.8	274
7005-72-3	4-Chlorophenyl-phenylether	51.8	U	51.8	274
84-66-2	Diethylphthalate	51.8	U	51.8	274
100-01-6	4-Nitroaniline	89.5	U	89.5	271
534-52-1	4,6-Dinitro-2-methylphenol	270	U	270	274
86-30-6	N-Nitrosodiphenylamine	64	U	64	271
101-55-3	4-Bromophenyl-phenylether	49.8	U	49.8	274
118-74-1	Hexachlorobenzene	53.9	U	53.9	271
87-86-5	Pentachlorophenol	135	U	135	274
85-01-8	Phenanthrene	534		56.9	274
120-12-7	Anthracene	142	J	61	274
84-74-2	Di-n-butylphthalate	44.7	U	44.7	274
206-44-0	Fluoranthene	910		48.8	274
129-00-0	Pyrene	914		93.5	274
85-68-7	Butylbenzylphthalate	64	U	64	274
91-94-1	3,3'-Dichlorobenzidine	60	U	60	274
56-55-3	Benzo(a)anthracene	466		58	274
218-01-9	Chrysene	591		34.6	271
117-81-7	Bis(2-ethylhexyl)phthalate	84.4	U	84.4	274

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-13

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584309 Lab File ID: 84309.D

Sample wt/vol: 25.22 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1609

PercentSolids: 78 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC12 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
117-84-0	Di-n-octylphthalate	59	U	59	274
205-99-2	Benzo(b)fluoranthene	603		64	274
207-08-9	Benzo(k)fluoranthene	454		58	274
50-32-8	Benzo(a)pyrene	362		43.7	274
193-39-5	Indeno(1,2,3-cd)pyrene	206	J	52.9	274
53-70-3	Dibenzo(a,h)anthracene	41.7	U	41.7	274
191-24-2	Benzo(g,h,i)perylene	235	J	40.7	274
98-86-2	Acetophenone	102	U	102	274
95-94-3	1,2,4,5-Tetrachlorobenzene	47.8	U	47.8	274
86-74-8	Carbazole	61.3	J	54.9	274
105-60-2	Caprolactam	142	U	142	274
92-52-4	1,1'-Biphenyl	62	U	62	274
1912-24-9	Atrazine	80.3	U	80.3	274
100-52-7	Benzaldehyde	45.8	U	45.8	274

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-14

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584310 Lab File ID: 84310.D

Sample wt/vol: 25.67 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1632

PercentSolids: 80.6 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC13 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*		*Q*	*MDL*	*RL*
111-44-4	Bis(2-chloroethyl)ether	64.8		U	64.8	261
108-95-2	Phenol	62.8		U	62.8	1290
95-57-8	2-Chlorophenol	66.7		U	66.7	261
108-60-1	2,2'-Oxybis(1-chloropropane)	213		U	213	261
95-48-7	2-Methylphenol	92.8		U	92.8	258
67-72-1	Hexachloroethane	48.3	UJ	U	48.3	261
621-64-7	N-Nitroso-di-n-propylamine	59	UJ	U	59	261
106-44-5	4-Methylphenol	57		U	57	261
98-95-3	Nitrobenzene	58	UJ	U	58	261
78-59-1	Isophorone	57		U	57	261
88-75-5	2-Nitrophenol	69.6		U	69.6	261
105-67-9	2,4-Dimethylphenol	55.1		U	55.1	258
111-91-1	Bis(2-chloroethoxy)methane	55.1		U	55.1	258
120-83-2	2,4-Dichlorophenol	72.5		U	72.5	258
91-20-3	Naphthalene	61.9		U	61.9	261
106-47-8	4-Chloroaniline	60.9		U	60.9	261
91-57-6	2-Methylnaphthalene	56.1		U	56.1	261
87-68-3	Hexachlorobutadiene	56.1		U	56.1	261
59-50-7	4-Chloro-3-methylphenol	54.1		U	54.1	261
77-47-4	Hexachlorocyclopentadiene	38.7		U	38.7	645
88-06-2	2,4,6-Trichlorophenol	65.7		U	65.7	258
95-95-4	2,4,5-Trichlorophenol	71.5		U	71.5	258
91-58-7	2-Chloronaphthalene	64.5		U	64.5	261
88-74-4	2-Nitroaniline	55.1		U	55.1	261
208-96-8	Acenaphthylene	53.2		U	53.2	261
131-11-3	Dimethylphthalate	57		U	57	261

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-14

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584310 Lab File ID: 84310.D

Sample wt/vol: 25.67 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1632

PercentSolids: 80.6 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC13 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*		*Q*	*MDL*	*RL*
606-20-2	2,6-Dinitrotoluene	48.3	UJ	U	48.3	261
83-32-9	Acenaphthene	47.4		U	47.4	261
99-09-2	3-Nitroaniline	77.3		U	77.3	258
51-28-5	2,4-Dinitrophenol	213		U	213	1300
132-64-9	Dibenzofuran	52.2		U	52.2	261
121-14-2	2,4-Dinitrotoluene	47.4	UJ	U	47.4	261
100-02-7	4-Nitrophenol	51.2		U	51.2	645
86-73-7	Fluorene	49.3		U	49.3	261
7005-72-3	4-Chlorophenyl-phenylether	49.3		U	49.3	261
84-66-2	Diethylphthalate	49.3		U	49.3	261
100-01-6	4-Nitroaniline	85.1		U	85.1	258
534-52-1	4,6-Dinitro-2-methylphenol	257		U	257	261
86-30-6	N-Nitrosodiphenylamine	60.9	UJ	U	60.9	258
101-55-3	4-Bromophenyl-phenylether	47.4		U	47.4	261
118-74-1	Hexachlorobenzene	51.2		U	51.2	258
87-86-5	Pentachlorophenol	128		U	128	261
85-01-8	Phenanthrene	730			54.1	261
120-12-7	Anthracene	169		J	58	261
84-74-2	Di-n-butylphthalate	42.5		U	42.5	261
206-44-0	Fluoranthene	1580			46.4	261
129-00-0	Pyrene	1200			88.9	261
85-68-7	Butylbenzylphthalate	60.9		U	60.9	261
91-94-1	3,3'-Dichlorobenzidine	57		U	57	261
56-55-3	Benzo(a)anthracene	767			55.1	261
218-01-9	Chrysene	815			32.9	258
117-81-7	Bis(2-ethylhexyl)phthalate	80.2		U	80.2	261

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-14

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584310 Lab File ID: 84310.D

Sample wt/vol: 25.67 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1632

PercentSolids: 80.6 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC13 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
117-84-0	Di-n-octylphthalate	56.1	U	56.1	261
205-99-2	Benzo(b)fluoranthene	882		60.9	261
207-08-9	Benzo(k)fluoranthene	660		55.1	261
50-32-8	Benzo(a)pyrene	549		41.6	261
193-39-5	Indeno(1,2,3-cd)pyrene	292		50.3	261
53-70-3	Dibenzo(a,h)anthracene	124	J	39.6	261
191-24-2	Benzo(g,h,i)perylene	324		38.7	261
98-86-2	Acetophenone	96.7	U	96.7	261
95-94-3	1,2,4,5-Tetrachlorobenzene	45.4	U	45.4	261
86-74-8	Carbazole	142	J	52.2	261
105-60-2	Caprolactam	135	U	135	261
92-52-4	1,1'-Biphenyl	59	U	59	261
1912-24-9	Atrazine	76.4	U	76.4	261
100-52-7	Benzaldehyde	43.5	U	43.5	261

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-15

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584311 Lab File ID: 84311.D

Sample wt/vol: 25.45 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1656

PercentSolids: 82.2 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC14 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*		*Q*	*MDL*	*RL*
111-44-4	Bis(2-chloroethyl)ether	64		U	64	258
108-95-2	Phenol	62.1		U	62.1	1280
95-57-8	2-Chlorophenol	66		U	66	258
108-60-1	2,2'-Oxybis(1-chloropropane)	210		U	210	258
95-48-7	2-Methylphenol	91.8		U	91.8	255
67-72-1	Hexachloroethane	47.8	u J	U	47.8	258
621-64-7	N-Nitroso-di-n-propylamine	58.3	u J	U	58.3	258
106-44-5	4-Methylphenol	56.4		U	56.4	258
98-95-3	Nitrobenzene	57.4	u J	U	57.4	258
78-59-1	Isophorone	56.4		U	56.4	258
88-75-5	2-Nitrophenol	68.8		U	68.8	258
105-67-9	2,4-Dimethylphenol	54.5		U	54.5	255
111-91-1	Bis(2-chloroethoxy)methane	54.5		U	54.5	255
120-83-2	2,4-Dichlorophenol	71.7		U	71.7	255
91-20-3	Naphthalene	61.2		U	61.2	258
106-47-8	4-Chloroaniline	60.2		U	60.2	258
91-57-6	2-Methylnaphthalene	55.4		U	55.4	258
87-68-3	Hexachlorobutadiene	55.4		U	55.4	258
59-50-7	4-Chloro-3-methylphenol	53.5		U	53.5	258
77-47-4	Hexachlorocyclopentadiene	38.2		U	38.2	638
88-06-2	2,4,6-Trichlorophenol	65		U	65	255
95-95-4	2,4,5-Trichlorophenol	70.7		U	70.7	255
91-58-7	2-Chloronaphthalene	63.8		U	63.8	258
88-74-4	2-Nitroaniline	54.5		U	54.5	258
208-96-8	Acenaphthylene	52.6		U	52.6	258
131-11-3	Dimethylphthalate	56.4		U	56.4	258

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-15

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584311 Lab File ID: 84311.D

Sample wt/vol: 25.45 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1656

PercentSolids: 82.2 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC14 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	ANALYTE	RESULT	Q	MDL	RL
606-20-2	2,6-Dinitrotoluene	47.8 UJ	U	47.8	258
83-32-9	Acenaphthene	46.8	U	46.8	258
99-09-2	3-Nitroaniline	76.5	U	76.5	255
51-28-5	2,4-Dinitrophenol	210	U	210	1280
132-64-9	Dibenzofuran	51.6	U	51.6	258
121-14-2	2,4-Dinitrotoluene	46.8 UJ	U	46.8	258
100-02-7	4-Nitrophenol	50.7	U	50.7	638
86-73-7	Fluorene	48.8	U	48.8	258
7005-72-3	4-Chlorophenyl-phenylether	48.8	U	48.8	258
84-66-2	Diethylphthalate	48.8	U	48.8	258
100-01-6	4-Nitroaniline	84.1	U	84.1	255
534-52-1	4,6-Dinitro-2-methylphenol	254	U	254	258
86-30-6	N-Nitrosodiphenylamine	60.2 UJ	U	60.2	255
101-55-3	4-Bromophenyl-phenylether	46.8	U	46.8	258
118-74-1	Hexachlorobenzene	50.7	U	50.7	255
87-86-5	Pentachlorophenol	127	U	127	258
85-01-8	Phenanthrene	53.5	U	53.5	258
120-12-7	Anthracene	57.4	U	57.4	258
84-74-2	Di-n-butylphthalate	42.1	U	42.1	258
206-44-0	Fluoranthene	45.9	U	45.9	258
129-00-0	Pyrene	88	U	88	258
85-68-7	Butylbenzylphthalate	60.2	U	60.2	258
91-94-1	3,3'-Dichlorobenzidine	56.4	U	56.4	258
56-55-3	Benzo(a)anthracene	54.5	U	54.5	258
218-01-9	Chrysene	32.5	U	32.5	255
117-81-7	Bis(2-ethylhexyl)phthalate	79.3	U	79.3	258

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-15

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584311 Lab File ID: 84311.D

Sample wt/vol: 25.45 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1656

PercentSolids: 82.2 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC14 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*		*Q*	*MDL*	*RL*
117-84-0	Di-n-octylphthalate	55.4		U	55.4	258
205-99-2	Benzo(b)fluoranthene	60.2		U	60.2	258
207-08-9	Benzo(k)fluoranthene	54.5		U	54.5	258
50-32-8	Benzo(a)pyrene	41.1		U	41.1	258
193-39-5	Indeno(1,2,3-cd)pyrene	49.7		U	49.7	258
53-70-3	Dibenzo(a,h)anthracene	39.2		U	39.2	258
191-24-2	Benzo(g,h,i)perylene	38.2		U	38.2	258
98-86-2	Acetophenone	95.6	UJ	U	95.6	258
95-94-3	1,2,4,5-Tetrachlorobenzene	44.9		U	44.9	258
86-74-8	Carbazole	51.6		U	51.6	258
105-60-2	Caprolactam	134		U	134	258
92-52-4	1,1'-Biphenyl	58.3		U	58.3	258
1912-24-9	Atrazine	75.5		U	75.5	258
100-52-7	Benzaldehyde	43		U	43	258

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-16

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584312 Lab File ID: 84312.D

Sample wt/vol: 25.38 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1720

PercentSolids: 80.1 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC11 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
111-44-4	Bis(2-chloroethyl)ether	65.9	U	65.9	266
108-95-2	Phenol	63.9	U	63.9	1310
95-57-8	2-Chlorophenol	67.9	U	67.9	266
108-60-1	2,2'-Oxybis(1-chloropropane)	216	U	216	266
95-48-7	2-Methylphenol	94.4	U	94.4	263
67-72-1	Hexachloroethane	49.2	U	49.2	266
621-64-7	N-Nitroso-di-n-propylamine	60	U	60	266
106-44-5	4-Methylphenol	58	U	58	266
98-95-3	Nitrobenzene	59	U	59	266
78-59-1	Isophorone	58	U	58	266
88-75-5	2-Nitrophenol	70.8	U	70.8	266
105-67-9	2,4-Dimethylphenol	56.1	U	56.1	263
111-91-1	Bis(2-chloroethoxy)methane	56.1	U	56.1	263
120-83-2	2,4-Dichlorophenol	73.8	U	73.8	263
91-20-3	Naphthalene	431		63	266
106-47-8	4-Chloroaniline	62	U	62	266
91-57-6	2-Methylnaphthalene	81.5	J	57.1	266
87-68-3	Hexachlorobutadiene	57.1	U	57.1	266
59-50-7	4-Chloro-3-methylphenol	55.1	U	55.1	266
77-47-4	Hexachlorocyclopentadiene	39.4	U	39.4	656
88-06-2	2,4,6-Trichlorophenol	66.9	U	66.9	263
95-95-4	2,4,5-Trichlorophenol	72.8	U	72.8	263
91-58-7	2-Chloronaphthalene	65.6	U	65.6	266
88-74-4	2-Nitroaniline	56.1	U	56.1	266
208-96-8	Acenaphthylene	86.3	J	54.1	266
131-11-3	Dimethylphthalate	58	U	58	266

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-16

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584312 Lab File ID: 84312.D

Sample wt/vol: 25.38 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1720

PercentSolids: 80.1 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC11 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
606-20-2	2,6-Dinitrotoluene	49.2	U	49.2	266
83-32-9	Acenaphthene	48.2	U	48.2	266
99-09-2	3-Nitroaniline	78.7	U	78.7	263
51-28-5	2,4-Dinitrophenol	216	U	216	1320
132-64-9	Dibenzofuran	77.6	J	53.1	266
121-14-2	2,4-Dinitrotoluene	48.2	U	48.2	266
100-02-7	4-Nitrophenol	52.1	U	52.1	656
86-73-7	Fluorene	66.6	J	50.2	266
7005-72-3	4-Chlorophenyl-phenylether	50.2	U	50.2	266
84-66-2	Diethylphthalate	50.2	U	50.2	266
100-01-6	4-Nitroaniline	86.6	U	86.6	263
534-52-1	4,6-Dinitro-2-methylphenol	262	U	262	266
86-30-6	N-Nitrosodiphenylamine	62	U	62	263
101-55-3	4-Bromophenyl-phenylether	48.2	U	48.2	266
118-74-1	Hexachlorobenzene	52.1	U	52.1	263
87-86-5	Pentachlorophenol	131	U	131	266
85-01-8	Phenanthrene	314		55.1	266
120-12-7	Anthracene	152	J	59	266
84-74-2	Di-n-butylphthalate	43.3	U	43.3	266
206-44-0	Fluoranthene	710		47.2	266
129-00-0	Pyrene	610		90.5	266
85-68-7	Butylbenzylphthalate	62	U	62	266
91-94-1	3,3'-Dichlorobenzidine	58	U	58	266
56-55-3	Benzo(a)anthracene	414		56.1	266
218-01-9	Chrysene	438		33.4	263
117-81-7	Bis(2-ethylhexyl)phthalate	81.6	U	81.6	266

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-16

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584312 Lab File ID: 84312.D

Sample wt/vol: 25.38 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/04/12 Time: 1720

PercentSolids: 80.1 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC11 Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
117-84-0	Di-n-octylphthalate	57.1	U	57.1	266
205-99-2	Benzo(b)fluoranthene	410		62	266
207-08-9	Benzo(k)fluoranthene	329		56.1	266
50-32-8	Benzo(a)pyrene	303		42.3	266
193-39-5	Indeno(1,2,3-cd)pyrene	145	J	51.1	266
53-70-3	Dibenzo(a,h)anthracene	40.3	U	40.3	266
191-24-2	Benzo(g,h,i)perylene	164	J	39.4	266
98-86-2	Acetophenone	98.4	U	98.4	266
95-94-3	1,2,4,5-Tetrachlorobenzene	46.2	U	46.2	266
86-74-8	Carbazole	79.3	J	53.1	266
105-60-2	Caprolactam	138	U	138	266
92-52-4	1,1'-Biphenyl	60	U	60	266
1912-24-9	Atrazine	77.7	U	77.7	266
100-52-7	Benzaldehyde	44.3	U	44.3	266

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 128824MB

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 1392

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 128824MB Lab File ID: 9300MB.D

Sample wt/vol: 20.34 Units: G Date Received: 05/03/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 1403

PercentSolids: 100 decanted : (Dilution Factor: 1

Extraction: OTHER Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
111-44-4	Bis(2-chloroethyl)ether	65.9	U	65.9	265
108-95-2	Phenol	63.9	U	63.9	1310
95-57-8	2-Chlorophenol	67.8	U	67.8	265
108-60-1	2,2'-Oxybis(1-chloropropane)	216	U	216	265
95-48-7	2-Methylphenol	94.4	U	94.4	262
67-72-1	Hexachloroethane	49.2	U	49.2	265
621-64-7	N-Nitroso-di-n-propylamine	60	U	60	265
106-44-5	4-Methylphenol	58	U	58	265
98-95-3	Nitrobenzene	59	U	59	265
78-59-1	Isophorone	58	U	58	265
88-75-5	2-Nitrophenol	70.8	U	70.8	265
105-67-9	2,4-Dimethylphenol	56	U	56	262
111-91-1	Bis(2-chloroethoxy)methane	56	U	56	262
120-83-2	2,4-Dichlorophenol	73.7	U	73.7	262
91-20-3	Naphthalene	62.9	U	62.9	265
106-47-8	4-Chloroaniline	61.9	U	61.9	265
91-57-6	2-Methylnaphthalene	57	U	57	265
87-68-3	Hexachlorobutadiene	57	U	57	265
59-50-7	4-Chloro-3-methylphenol	55.1	U	55.1	265
77-47-4	Hexachlorocyclopentadiene	39.3	U	39.3	656
88-06-2	2,4,6-Trichlorophenol	66.9	U	66.9	262
95-95-4	2,4,5-Trichlorophenol	72.8	U	72.8	262
91-58-7	2-Chloronaphthalene	65.6	U	65.6	265
88-74-4	2-Nitroaniline	56	U	56	265
208-96-8	Acenaphthylene	54.1	U	54.1	265
131-11-3	Dimethylphthalate	58	U	58	265
606-20-2	2,6-Dinitrotoluene	49.2	U	49.2	265

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 128824MB

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 1392

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 128824MB Lab File ID: 9300MB.D

Sample wt/vol: 20.34 Units: G Date Received: 05/03/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 1403

PercentSolids: 100 decanted : (Dilution Factor: 1

Extraction: OTHER Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
83-32-9	Acenaphthene	48.2	U	48.2	265
99-09-2	3-Nitroaniline	78.7	U	78.7	262
51-28-5	2,4-Dinitrophenol	216	U	216	1320
132-64-9	Dibenzofuran	53.1	U	53.1	265
121-14-2	2,4-Dinitrotoluene	48.2	U	48.2	265
100-02-7	4-Nitrophenol	52.1	U	52.1	656
86-73-7	Fluorene	50.1	U	50.1	265
7005-72-3	4-Chlorophenyl-phenylether	50.1	U	50.1	265
84-66-2	Diethylphthalate	50.1	U	50.1	265
100-01-6	4-Nitroaniline	86.5	U	86.5	262
534-52-1	4,6-Dinitro-2-methylphenol	262	U	262	265
86-30-6	N-Nitrosodiphenylamine	61.9	U	61.9	262
101-55-3	4-Bromophenyl-phenylether	48.2	U	48.2	265
118-74-1	Hexachlorobenzene	52.1	U	52.1	262
87-86-5	Pentachlorophenol	131	U	131	265
85-01-8	Phenanthrene	55.1	U	55.1	265
120-12-7	Anthracene	59	U	59	265
84-74-2	Di-n-butylphthalate	43.3	U	43.3	265
206-44-0	Fluoranthene	47.2	U	47.2	265
129-00-0	Pyrene	90.5	U	90.5	265
85-68-7	Butylbenzylphthalate	61.9	U	61.9	265
91-94-1	3,3'-Dichlorobenzidine	58	U	58	265
56-55-3	Benzo(a)anthracene	56	U	56	265
218-01-9	Chrysene	33.4	U	33.4	262
117-81-7	Bis(2-ethylhexyl)phthalate	144	J	81.6	265
117-84-0	Di-n-octylphthalate	57	U	57	265
205-99-2	Benzo(b)fluoranthene	61.9	U	61.9	265

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 128824MB

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 1392

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 128824MB Lab File ID: 9300MB.D

Sample wt/vol: 20.34 Units: G Date Received: 05/03/12

Concentrated Extract Volume: 1 Date Extracted: 05/03/12

Level:(low/med) LOW Date Analyzed: 05/03/12 Time: 1403

PercentSolids: 100 decanted : (Dilution Factor: 1

Extraction: OTHER Station ID: Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
207-08-9	Benzo(k)fluoranthene	56	U	56	265
50-32-8	Benzo(a)pyrene	42.3	U	42.3	265
193-39-5	Indeno(1,2,3-cd)pyrene	51.1	U	51.1	265
53-70-3	Dibenzo(a,h)anthracene	40.3	U	40.3	265
191-24-2	Benzo(g,h,i)perylene	39.3	U	39.3	265
98-86-2	Acetophenone	98.3	U	98.3	265
95-94-3	1,2,4,5-Tetrachlorobenzene	46.2	U	46.2	265
86-74-8	Carbazole	53.1	U	53.1	265
105-60-2	Caprolactam	138	U	138	265
92-52-4	1,1'-Biphenyl	60	U	60	265
1912-24-9	Atrazine	77.7	U	77.7	265
100-52-7	Benzaldehyde	44.2	U	44.2	265

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-08

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584304 Lab File ID: 843-4R.D

Sample wt/vol: 33.33 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 10 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1116

PercentSolids: 97.1 decanted : Dilution Factor: 1

Extraction: SONC Station ID: EPAFMC07 Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
12674-11-2	Aroclor-1016	13	U	13	30
11096-82-5	Aroclor-1260	21	J	7.1	30
11104-28-2	Aroclor-1221	12	U	12	30
11141-16-5	Aroclor-1232	20	U	20	30
53469-21-9	Aroclor-1242	11	U	11	30
12672-29-6	Aroclor-1248	11	U	11	30
11097-69-1	Aroclor-1254	9.7	U	9.7	30

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-12

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584308 Lab File ID: 843-8R.D

Sample wt/vol: 33.5 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 10 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/30/12 Time: 1131

PercentSolids: 84.4 decanted : Dilution Factor: 1

Extraction: SONC Station ID: EPAFMC11 Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
12674-11-2	Aroclor-1016	15	U	15	35
11096-82-5	Aroclor-1260	8.2	U	8.2	35
11104-28-2	Aroclor-1221	14	U	14	35
11141-16-5	Aroclor-1232	23	U	23	35
53469-21-9	Aroclor-1242	13	U	13	35
12672-29-6	Aroclor-1248	13	U	13	35
11097-69-1	Aroclor-1254	11	U	11	35

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PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-16

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584312 Lab File ID: 843-12.D

Sample wt/vol: 33.03 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 10 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 2251

PercentSolids: 80.1 decanted : Dilution Factor: 1

Extraction: SONC Station ID: EPAFMC11 Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
12674-11-2	Aroclor-1016	16	U	16	37
11096-82-5	Aroclor-1260	8.7	U	8.7	37
11104-28-2	Aroclor-1221	15	U	15	37
11141-16-5	Aroclor-1232	25	U	25	37
53469-21-9	Aroclor-1242	14	U	14	37
12672-29-6	Aroclor-1248	14	U	14	37
11097-69-1	Aroclor-1254	12	U	12	37

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 127811MB

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 1392

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 127811MB Lab File ID: 9229MB.D

Sample wt/vol: 33.15 Units: G Date Received: 04/27/12

Concentrated Extract Volume: 10 Date Extracted: 04/27/12

Level:(low/med) LOW Date Analyzed: 04/27/12 Time: 1919

PercentSolids: 100 decanted : (Dilution Factor: 1

Extraction: SONC Station ID: Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
12674-11-2	Aroclor-1016	13	U	13	30
11096-82-5	Aroclor-1260	7	U	7	30
11104-28-2	Aroclor-1221	12	U	12	30
11141-16-5	Aroclor-1232	20	U	20	30
53469-21-9	Aroclor-1242	11	U	11	30
12672-29-6	Aroclor-1248	11	U	11	30
11097-69-1	Aroclor-1254	9.4	U	9.4	30

110512 1915

5-30-12

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-07

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584301 Lab File ID: 84301.D

Sample wt/vol: 25.3 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/08/12 Time: 0932

PercentSolids: 75.5 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC06 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	8		1.4	3.5
91-57-6	2-Methylnaphthalene	21		1.4	3.5
83-32-9	Acenaphthene	9		1.4	3.5
208-96-8	Acenaphthylene	26		1.4	3.5
120-12-7	Anthracene	53.2		1.4	3.5
56-55-3	Benzo(a)anthracene	186		1.5	3.5
50-32-8	Benzo(a)pyrene	153		1.9	3.5
205-99-2	Benzo(b)fluoranthene	213		2	3.5
191-24-2	Benzo(g,h,i)perylene	90.9		3.2	3.5
207-08-9	Benzo(k)fluoranthene	89.3		2.2	3.5
218-01-9	Chrysene	185		1.4	3.5
53-70-3	Dibenzo(a,h)anthracene	29.2		2.7	3.5
206-44-0	Fluoranthene	318		1.4	3.5
86-73-7	Fluorene	23.6		1.4	3.5
193-39-5	Indeno(1,2,3-cd)pyrene	81		3.1	3.5
91-20-3	Naphthalene	58.4		1.5	3.5
85-01-8	Phenanthrene	124		1.4	3.5
129-00-0	Pyrene	236		1.4	3.5

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-08

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584304 Lab File ID: 84304.D

Sample wt/vol: 25.3 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/08/12 Time: 1357

PercentSolids: 97.1 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC07 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	4.5		1.1	2.7
91-57-6	2-Methylnaphthalene	9.6		1.1	2.7
83-32-9	Acenaphthene	25.2		1.1	2.7
208-96-8	Acenaphthylene	52.8		1.1	2.7
120-12-7	Anthracene	43.1		1.1	2.7
56-55-3	Benzo(a)anthracene	119		1.1	2.7
50-32-8	Benzo(a)pyrene	95.7		1.5	2.7
205-99-2	Benzo(b)fluoranthene	154		1.5	2.7
191-24-2	Benzo(g,h,i)perylene	61.4		2.5	2.7
207-08-9	Benzo(k)fluoranthene	44.9		1.7	2.7
218-01-9	Chrysene	106		1	2.7
53-70-3	Dibenzo(a,h)anthracene	18.7		2.1	2.7
206-44-0	Fluoranthene	202		1.1	2.7
86-73-7	Fluorene	14.4		1.1	2.7
193-39-5	Indeno(1,2,3-cd)pyrene	54.1		2.4	2.7
91-20-3	Naphthalene	29.5		1.1	2.7
85-01-8	Phenanthrene	81		1.1	2.7
129-00-0	Pyrene	148		1.1	2.7

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-09

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584305 Lab File ID: 84305.D

Sample wt/vol: 25.71 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/08/12 Time: 1430

PercentSolids: 77.7 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC08 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	2.8	J	1.3	3.3
91-57-6	2-Methylnaphthalene	6.4		1.3	3.3
83-32-9	Acenaphthene	3.4		1.3	3.3
208-96-8	Acenaphthylene	17.6		1.3	3.3
120-12-7	Anthracene	29.8		1.3	3.3
56-55-3	Benzo(a)anthracene	148		1.4	3.3
50-32-8	Benzo(a)pyrene	114		1.8	3.3
205-99-2	Benzo(b)fluoranthene	160		1.9	3.3
191-24-2	Benzo(g,h,i)perylene	62.3		3.1	3.3
207-08-9	Benzo(k)fluoranthene	51.6		2.1	3.3
218-01-9	Chrysene	124		1.3	3.3
53-70-3	Dibenzo(a,h)anthracene	23.7		2.6	3.3
206-44-0	Fluoranthene	199		1.3	3.3
86-73-7	Fluorene	7.5		1.3	3.3
193-39-5	Indeno(1,2,3-cd)pyrene	59.4		3	3.3
91-20-3	Naphthalene	26		1.4	3.3
85-01-8	Phenanthrene	50.1		1.3	3.3
129-00-0	Pyrene	230		1.3	3.3

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-10

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584306 Lab File ID: 84306.D

Sample wt/vol: 25.69 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/08/12 Time: 1454

PercentSolids: 79.7 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC09 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	4.6		1.3	3.2
91-57-6	2-Methylnaphthalene	11.3		1.3	3.2
83-32-9	Acenaphthene	4.2		1.3	3.2
208-96-8	Acenaphthylene	39.9		1.3	3.2
120-12-7	Anthracene	104		1.3	3.2
56-55-3	Benzo(a)anthracene	298		1.4	3.2
50-32-8	Benzo(a)pyrene	208		1.8	3.2
205-99-2	Benzo(b)fluoranthene	298		1.8	3.2
191-24-2	Benzo(g,h,i)perylene	111		3	3.2
207-08-9	Benzo(k)fluoranthene	107		2	3.2
218-01-9	Chrysene	297		1.3	3.2
53-70-3	Dibenzo(a,h)anthracene	46.3		2.5	3.2
206-44-0	Fluoranthene	423		1.3	3.2
86-73-7	Fluorene	16.6		1.3	3.2
193-39-5	Indeno(1,2,3-cd)pyrene	110		2.9	3.2
91-20-3	Naphthalene	42.8		1.4	3.2
85-01-8	Phenanthrene	106		1.3	3.2
129-00-0	Pyrene	313		1.3	3.2

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-11

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584307 Lab File ID: 84307.D

Sample wt/vol: 25.15 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/08/12 Time: 1543

PercentSolids: 78.4 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC10 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	5.3		1.3	3.4
91-57-6	2-Methylnaphthalene	9.9		1.3	3.4
83-32-9	Acenaphthene	7.7		1.3	3.4
208-96-8	Acenaphthylene	20.8		1.3	3.4
120-12-7	Anthracene	35.5		1.3	3.4
56-55-3	Benzo(a)anthracene	107		1.4	3.4
50-32-8	Benzo(a)pyrene	92.4		1.8	3.4
205-99-2	Benzo(b)fluoranthene	135		1.9	3.4
191-24-2	Benzo(g,h,i)perylene	55.8		3.1	3.4
207-08-9	Benzo(k)fluoranthene	46		2.1	3.4
218-01-9	Chrysene	88.9		1.3	3.4
53-70-3	Dibenzo(a,h)anthracene	19.7		2.6	3.4
206-44-0	Fluoranthene	185		1.3	3.4
86-73-7	Fluorene	15.3		1.3	3.4
193-39-5	Indeno(1,2,3-cd)pyrene	51.8		3	3.4
91-20-3	Naphthalene	69		1.4	3.4
85-01-8	Phenanthrene	60.8		1.3	3.4
129-00-0	Pyrene	133		1.3	3.4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-12

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584308 Lab File ID: 84308.D

Sample wt/vol: 25.29 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/08/12 Time: 1607

PercentSolids: 84.4 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC11 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	65.8		1.2	3.1
91-57-6	2-Methylnaphthalene	162		1.2	3.1
83-32-9	Acenaphthene	36.1		1.2	3.1
208-96-8	Acenaphthylene	120		1.2	3.1
120-12-7	Anthracene	270		1.2	3.1
56-55-3	Benzo(a)anthracene	423		1.3	3.1
50-32-8	Benzo(a)pyrene	361		1.7	3.1
205-99-2	Benzo(b)fluoranthene	519	E	1.8	3.1
191-24-2	Benzo(g,h,i)perylene	215		2.9	3.1
207-08-9	Benzo(k)fluoranthene	179		2	3.1
218-01-9	Chrysene	371		1.2	3.1
53-70-3	Dibenzo(a,h)anthracene	74.7		2.4	3.1
206-44-0	Fluoranthene	782	E	1.2	3.1
86-73-7	Fluorene	116		1.2	3.1
193-39-5	Indeno(1,2,3-cd)pyrene	206		2.8	3.1
91-20-3	Naphthalene	648	E	1.3	3.1
85-01-8	Phenanthrene	422		1.2	3.1
129-00-0	Pyrene	473	E	1.2	3.1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-12DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584308DL1 Lab File ID: 84308D5.D

Sample wt/vol: 25.29 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/09/12 Time: 0952

PercentSolids: 84.4 decanted : Dilution Factor: 5

Extraction: OTHER Station ID: EPAFMC11 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	71.4		6.2	15.6
91-57-6	2-Methylnaphthalene	152		6.2	15.6
83-32-9	Acenaphthene	36.9		6.2	15.6
208-96-8	Acenaphthylene	127		6.2	15.6
120-12-7	Anthracene	258		6.2	15.6
56-55-3	Benzo(a)anthracene	466		6.6	15.6
50-32-8	Benzo(a)pyrene	357		8.4	15.6
205-99-2	Benzo(b)fluoranthene	544		8.9	15.6
191-24-2	Benzo(g,h,i)perylene	202		14.5	15.6
207-08-9	Benzo(k)fluoranthene	153		9.8	15.6
218-01-9	Chrysene	408		6.1	15.6
53-70-3	Dibenzo(a,h)anthracene	70.6		12.2	15.6
206-44-0	Fluoranthene	764		6.2	15.6
86-73-7	Fluorene	111		6.2	15.6
193-39-5	Indeno(1,2,3-cd)pyrene	193		14	15.6
91-20-3	Naphthalene	666		6.6	15.6
85-01-8	Phenanthrene	412		6.2	15.6
129-00-0	Pyrene	532		6.2	15.6

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-13

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584309 Lab File ID: 84309.D

Sample wt/vol: 25.39 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/08/12 Time: 1631

PercentSolids: 78 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC12 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	16.2		1.3	3.4
91-57-6	2-Methylnaphthalene	35		1.3	3.4
83-32-9	Acenaphthene	22.8		1.3	3.4
208-96-8	Acenaphthylene	68.7		1.3	3.4
120-12-7	Anthracene	143		1.3	3.4
56-55-3	Benzo(a)anthracene	518	E	1.4	3.4
50-32-8	Benzo(a)pyrene	407		1.8	3.4
205-99-2	Benzo(b)fluoranthene	595	E	1.9	3.4
191-24-2	Benzo(g,h,i)perylene	249		3.1	3.4
207-08-9	Benzo(k)fluoranthene	199		2.1	3.4
218-01-9	Chrysene	452		1.3	3.4
53-70-3	Dibenzo(a,h)anthracene	84.4		2.6	3.4
206-44-0	Fluoranthene	827	E	1.3	3.4
86-73-7	Fluorene	35		1.3	3.4
193-39-5	Indeno(1,2,3-cd)pyrene	231		3	3.4
91-20-3	Naphthalene	120		1.4	3.4
85-01-8	Phenanthrene	276		1.3	3.4
129-00-0	Pyrene	610	E	1.3	3.4

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-13DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584309DL1 Lab File ID: 84309D5.D

Sample wt/vol: 25.39 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/09/12 Time: 1016

PercentSolids: 78 decanted : Dilution Factor: 5

Extraction: OTHER Station ID: EPAFMC12 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	20		6.7	16.8
91-57-6	2-Methylnaphthalene	38.1		6.7	16.8
83-32-9	Acenaphthene	26		6.7	16.8
208-96-8	Acenaphthylene	77.5		6.7	16.8
120-12-7	Anthracene	170		6.7	16.8
56-55-3	Benzo(a)anthracene	582		7.1	16.8
50-32-8	Benzo(a)pyrene	459		9.1	16.8
205-99-2	Benzo(b)fluoranthene	672		9.6	16.8
191-24-2	Benzo(g,h,i)perylene	270		15.6	16.8
207-08-9	Benzo(k)fluoranthene	272		10.6	16.8
218-01-9	Chrysene	520		6.6	16.8
53-70-3	Dibenzo(a,h)anthracene	85.9		13.1	16.8
206-44-0	Fluoranthene	962		6.7	16.8
86-73-7	Fluorene	40.3		6.7	16.8
193-39-5	Indeno(1,2,3-cd)pyrene	254		15.1	16.8
91-20-3	Naphthalene	135		7.1	16.8
85-01-8	Phenanthrene	318		6.7	16.8
129-00-0	Pyrene	698		6.7	16.8

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-14

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584310 Lab File ID: 84310.D

Sample wt/vol: 25.82 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/08/12 Time: 1655

PercentSolids: 80.6 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC13 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	2.1	J	1.3	3.2
91-57-6	2-Methylnaphthalene	4.1		1.3	3.2
83-32-9	Acenaphthene	2.3	J	1.3	3.2
208-96-8	Acenaphthylene	5.4		1.3	3.2
120-12-7	Anthracene	7.6		1.3	3.2
56-55-3	Benzo(a)anthracene	36.4		1.3	3.2
50-32-8	Benzo(a)pyrene	32.2		1.7	3.2
205-99-2	Benzo(b)fluoranthene	53.5		1.8	3.2
191-24-2	Benzo(g,h,i)perylene	21.5		3	3.2
207-08-9	Benzo(k)fluoranthene	15		2	3.2
218-01-9	Chrysene	33.6		1.2	3.2
53-70-3	Dibenzo(a,h)anthracene	7.4		2.5	3.2
206-44-0	Fluoranthene	54.1		1.3	3.2
86-73-7	Fluorene	4.1		1.3	3.2
193-39-5	Indeno(1,2,3-cd)pyrene	19.1		2.9	3.2
91-20-3	Naphthalene	13.9		1.3	3.2
85-01-8	Phenanthrene	20.7		1.3	3.2
129-00-0	Pyrene	45.8		1.3	3.2

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-15

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584311 Lab File ID: 84311.D

Sample wt/vol: 25.09 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/08/12 Time: 1719

PercentSolids: 82.2 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC14 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	1.9	J	1.3	3.2
91-57-6	2-Methylnaphthalene	4.2		1.3	3.2
83-32-9	Acenaphthene	1.4	J	1.3	3.2
208-96-8	Acenaphthylene	4		1.3	3.2
120-12-7	Anthracene	4.8		1.3	3.2
56-55-3	Benzo(a)anthracene	28.1		1.4	3.2
50-32-8	Benzo(a)pyrene	30.3		1.7	3.2
205-99-2	Benzo(b)fluoranthene	50		1.8	3.2
191-24-2	Benzo(g,h,i)perylene	25.9		3	3.2
207-08-9	Benzo(k)fluoranthene	15.2		2	3.2
218-01-9	Chrysene	30.3		1.3	3.2
53-70-3	Dibenzo(a,h)anthracene	7		2.5	3.2
206-44-0	Fluoranthene	51.6		1.3	3.2
86-73-7	Fluorene	2.1	J	1.3	3.2
193-39-5	Indeno(1,2,3-cd)pyrene	22.1		2.9	3.2
91-20-3	Naphthalene	8.8		1.4	3.2
85-01-8	Phenanthrene	19.1		1.3	3.2
129-00-0	Pyrene	43.7		1.3	3.2

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-16

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584312 Lab File ID: 84312.D

Sample wt/vol: 25.57 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/08/12 Time: 1744

PercentSolids: 80.1 decanted : Dilution Factor: 1

Extraction: OTHER Station ID: EPAFMC11 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	48.9		1.3	3.2
91-57-6	2-Methylnaphthalene	116		1.3	3.2
83-32-9	Acenaphthene	40.1		1.3	3.2
208-96-8	Acenaphthylene	94.4		1.3	3.2
120-12-7	Anthracene	200		1.3	3.2
56-55-3	Benzo(a)anthracene	398		1.4	3.2
50-32-8	Benzo(a)pyrene	343		1.8	3.2
205-99-2	Benzo(b)fluoranthene	480		1.8	3.2
191-24-2	Benzo(g,h,i)perylene	204		3	3.2
207-08-9	Benzo(k)fluoranthene	166		2	3.2
218-01-9	Chrysene	344		1.3	3.2
53-70-3	Dibenzo(a,h)anthracene	73.2		2.5	3.2
206-44-0	Fluoranthene	678	E	1.3	3.2
86-73-7	Fluorene	98.7		1.3	3.2
193-39-5	Indeno(1,2,3-cd)pyrene	196		2.9	3.2
91-20-3	Naphthalene	502	E	1.4	3.2
85-01-8	Phenanthrene	359		1.3	3.2
129-00-0	Pyrene	502	E	1.3	3.2

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-16DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 13

Lab Code : PEL Case No. SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584312DL1 Lab File ID: 84312D5.D

Sample wt/vol: 25.57 Units: G Date Received: 04/25/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/09/12 Time: 1040

PercentSolids: 80.1 decanted : Dilution Factor: 5

Extraction: OTHER Station ID: EPAFMC11 Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	53.4		6.5	16.2
91-57-6	2-Methylnaphthalene	63.9		6.5	16.2
83-32-9	Acenaphthene	43.6		6.5	16.2
208-96-8	Acenaphthylene	101		6.5	16.2
120-12-7	Anthracene	238		6.5	16.2
56-55-3	Benzo(a)anthracene	439		6.8	16.2
50-32-8	Benzo(a)pyrene	395		8.8	16.2
205-99-2	Benzo(b)fluoranthene	544		9.3	16.2
191-24-2	Benzo(g,h,i)perylene	218		15.1	16.2
207-08-9	Benzo(k)fluoranthene	182		10.2	16.2
218-01-9	Chrysene	384		6.3	16.2
53-70-3	Dibenzo(a,h)anthracene	75.6		12.7	16.2
206-44-0	Fluoranthene	758		6.5	16.2
86-73-7	Fluorene	103		6.5	16.2
193-39-5	Indeno(1,2,3-cd)pyrene	211		14.6	16.2
91-20-3	Naphthalene	578		6.8	16.2
85-01-8	Phenanthrene	401		6.5	16.2
129-00-0	Pyrene	565		6.5	16.2

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 129055MB

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 1392

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 129055MB Lab File ID: 9311MB.D

Sample wt/vol: 20.21 Units: G Date Received: 05/04/12

Concentrated Extract Volume: 1 Date Extracted: 05/04/12

Level:(low/med) LOW Date Analyzed: 05/07/12 Time: 1348

PercentSolids: 100 decanted : (Dilution Factor: 1

Extraction: OTHER Station ID: Method: 8270 SIM

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*	*MDL*	*RL*
90-12-0	1-Methylnaphthalene	1.3	U	1.3	3.3
91-57-6	2-Methylnaphthalene	1.3	U	1.3	3.3
83-32-9	Acenaphthene	1.3	U	1.3	3.3
208-96-8	Acenaphthylene	1.3	U	1.3	3.3
120-12-7	Anthracene	1.3	U	1.3	3.3
56-55-3	Benzo(a)anthracene	1.4	U	1.4	3.3
50-32-8	Benzo(a)pyrene	1.8	U	1.8	3.3
205-99-2	Benzo(b)fluoranthene	1.9	U	1.9	3.3
191-24-2	Benzo(g,h,i)perylene	3.1	U	3.1	3.3
207-08-9	Benzo(k)fluoranthene	2.1	U	2.1	3.3
218-01-9	Chrysene	1.3	U	1.3	3.3
53-70-3	Dibenzo(a,h)anthracene	2.6	U	2.6	3.3
206-44-0	Fluoranthene	1.3	U	1.3	3.3
86-73-7	Fluorene	1.3	U	1.3	3.3
193-39-5	Indeno(1,2,3-cd)pyrene	3	U	3	3.3
91-20-3	Naphthalene	1.4	U	1.4	3.3
85-01-8	Phenanthrene	1.3	U	1.3	3.3
129-00-0	Pyrene	1.3	U	1.3	3.3

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SW-01

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: WATER Lab Sample ID: 350584313

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 0 Station ID: EPAFMC11

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	~~64.5~~ 100	UJ		P		9.3	100
7440-36-0	Antimony	3.3	U		P		3.3	10
7440-38-2	Arsenic	7.06	J		P		3.31	10
7440-39-3	Barium	32			P		0.22	10
7440-41-7	Beryllium	0.12	U		P		0.12	5
7440-43-9	Cadmium	0.72	U		P		0.72	5
7440-70-2	Calcium	44300			P		39	100
7440-47-3	Chromium	~~0.901~~ 10	UJ		P		0.43	10
7440-48-4	Cobalt	0.37	U		P		0.37	10
7440-50-8	Copper	2.7	U		P		2.7	10
7439-89-6	Iron	102	J		P		5.5	50
7439-92-1	Lead	3.7	U		P		3.7	15
7439-95-4	Magnesium	20400			P		9.8	100
7439-96-5	Manganese	33.9			P		0.35	10
7439-97-6	Mercury	0.037	U		CV		0.037	0.2
7440-02-0	Nickel	0.93	U		P		0.93	5
7440-09-7	Potassium	1130			P		71.7	500
7782-49-2	Selenium	4.1	U		P		4.1	20
7440-22-4	Silver	0.52	U		P		0.52	10
7440-23-5	Sodium	26000			P		180	300
7440-28-0	Thallium	0.507	J		F		0.34	2

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

5-30-12

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SW-01

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: WATER Lab Sample ID: 350584313

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 0 Station ID: EPAFMC11

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7440-62-2	Vanadium	0.565	J		P		0.44	10
7440-66-6	Zinc	4.23	J		P		4	20

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

110512 1816

5-30-12

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SW-03

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: WATER Lab Sample ID: 350584314

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 0 Station ID: EPAFMC11

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	~~57.3~~ 100	UJ		P		9.3	100
7440-36-0	Antimony	3.3	U		P		3.3	10
7440-38-2	Arsenic	3.31	U		P		3.31	10
7440-39-3	Barium	33.9			P		0.22	10
7440-41-7	Beryllium	0.12	U		P		0.12	5
7440-43-9	Cadmium	0.72	U		P		0.72	5
7440-70-2	Calcium	46200			P		39	100
7440-47-3	Chromium	~~0.813~~ 10	UJ		P		0.43	10
7440-48-4	Cobalt	0.37	U		P		0.37	10
7440-50-8	Copper	2.7	U		P		2.7	10
7439-89-6	Iron	94.8	J		P		5.5	50
7439-92-1	Lead	3.7	U		P		3.7	15
7439-95-4	Magnesium	21400			P		9.8	100
7439-96-5	Manganese	37.7			P		0.35	10
7439-97-6	Mercury	0.037	U		CV		0.037	0.2
7440-02-0	Nickel	0.93	U		P		0.93	5
7440-09-7	Potassium	1220			P		71.7	500
7782-49-2	Selenium	~~12.9~~ 20	UJ		P		4.1	20
7440-22-4	Silver	0.52	U		P		0.52	10
7440-23-5	Sodium	27200			P		180	300
7440-28-0	Thallium	0.34	U		F		0.34	2

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

5-30-12

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SW-03

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: WATER Lab Sample ID: 350584314

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 0 Station ID: EPAFMC11

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7440-62-2	Vanadium	0.546	J		P		0.44	10
7440-66-6	Zinc	4.44	J		P		4	20

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

5-30-12

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 127643MB

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: WATER Lab Sample ID: 127643MB

Level:(low/med) LOW Date Received: 4/26/2012

PercentSolids: 0 Station ID:

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7439-97-6	Mercury	0.037	U		CV		0.037	0.2

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

110512 1916

5-30-12

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 127862MB

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: WATER Lab Sample ID: 127862MB

Level:(low/med) LOW Date Received: 4/26/2012

PercentSolids: 0 Station ID:

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7440-28-0	Thallium	0.34	U		F		0.34	2

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

5-30-12

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

128299MB

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: WATER Lab Sample ID: 128299MB

Level:(low/med) LOW Date Received: 4/30/2012

PercentSolids: 0 Station ID:

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	9.3	U		P		9.3	100
7440-36-0	Antimony	3.3	U		P		3.3	10
7440-38-2	Arsenic	3.31	U		P		3.31	10
7440-39-3	Barium	0.22	U		P		0.22	10
7440-41-7	Beryllium	0.12	U		P		0.12	5
7440-43-9	Cadmium	0.72	U		P		0.72	5
7440-70-2	Calcium	65	J		P		39	100
7440-47-3	Chromium	0.457	J		P		0.43	10
7440-48-4	Cobalt	0.37	U		P		0.37	10
7440-50-8	Copper	2.7	U		P		2.7	10
7439-89-6	Iron	8.27	J		P		5.5	50
7439-92-1	Lead	3.7	U		P		3.7	15
7439-95-4	Magnesium	9.8	U		P		9.8	100
7440-02-0	Nickel	0.93	U		P		0.93	5
7440-09-7	Potassium	71.7	U		P		71.7	500
7782-49-2	Selenium	4.1	U		P		4.1	20
7440-22-4	Silver	0.52	U		P		0.52	10
7440-23-5	Sodium	180	U		P		180	300
7440-62-2	Vanadium	0.44	U		P		0.44	10
7440-66-6	Zinc	4	U		P		4	20

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

4-30-12

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-07

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584301

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 75.5 Station ID: EPAFMC06

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
1012_5	TOC	9740			TC		57.4	494

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EPAFMC-SD-07

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584301

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 75.5 Station ID: EPAFMC06

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	5010		N	P		1.68	8.82
7440-36-0	Antimony	0.66	J		P		0.212	0.882
7440-38-2	Arsenic	18.1			P		0.441	0.882
7440-39-3	Barium	37.2			P		0.141	0.441
7440-41-7	Beryllium	~~0.399~~ 0.441	UJ		P		0.141	0.441
7440-43-9	Cadmium	8.64	J	N	P		0.0441	0.441
7440-47-3	Chromium	63.3	J	*N	P		0.141	0.441
7440-48-4	Cobalt	6.5			P		0.0441	0.441
7440-50-8	Copper	9.28			P		0.141	0.441
7439-92-1	Lead	21.7			P		0.3	0.705
7439-95-4	Magnesium	5340	J	*N	P		2.56	8.82
7439-97-6	Mercury	0.0156	J		CV		0.0046	0.0249
7440-02-0	Nickel	9.53			P		0.141	0.441
7440-09-7	Potassium	298		E	P		4.41	44.1
7782-49-2	Selenium	0.353	UJ	*N	P		0.353	1.76
7440-22-4	Silver	0.141	U		P		0.141	0.441
7440-23-5	Sodium	67.4			P		8.82	26.4
7440-28-0	Thallium	0.531	J		P		0.3	0.882
7440-62-2	Vanadium	58.8	J	N	P		0.141	0.441
7440-66-6	Zinc	142	J	N	P		0.291	0.882

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-07DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584301DL1

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 75.5 Station ID: EPAFMC06

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7440-70-2	Calcium	15600			P		14.6	44.1
7439-89-6	Iron	34600			P		2.64	22
7439-96-5	Manganese	422			P		0.705	2.2

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-08

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584304

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 97.1 Station ID: EPAFMC07

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	5600			P		1.56	8.2
7440-36-0	Antimony	0.204	J		P		0.197	0.82
7440-38-2	Arsenic	16.1			P		0.41	0.82
7440-39-3	Barium	57.1			P		0.131	0.41
7440-41-7	Beryllium	0.577			P		0.131	0.41
7440-43-9	Cadmium	0.041	U		P		0.041	0.41
7440-70-2	Calcium	17400			P		2.7	8.2
7440-47-3	Chromium	68.2			P		0.131	0.41
7440-48-4	Cobalt	8.45			P		0.041	0.41
7440-50-8	Copper	19.3			P		0.131	0.41
7439-92-1	Lead	20.3			P		0.279	0.656
7439-95-4	Magnesium	7250			P		2.38	8.2
7439-97-6	Mercury	0.0182	J		CV		0.00361	0.0195
7440-02-0	Nickel	10.1			P		0.131	0.41
7440-09-7	Potassium	334			P		4.1	41
7782-49-2	Selenium	0.328	U		P		0.328	1.64
7440-22-4	Silver	0.131	U		P		0.131	0.41
7440-23-5	Sodium	74.2			P		8.2	24.6
7440-28-0	Thallium	0.707	J		P		0.279	0.82
7440-62-2	Vanadium	44.6			P		0.131	0.41
7440-66-6	Zinc	140			P		0.27	0.82

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-08DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584304DL1

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 97.1 Station ID: EPAFMC07

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7439-89-6	Iron	42400			P		2.46	20.5
7439-96-5	Manganese	659			P		0.656	2.05

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-09

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584305

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 77.7 Station ID: EPAFMC08

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	5060			P		1.57	8.25
7440-36-0	Antimony	0.636	J		P		0.198	0.825
7440-38-2	Arsenic	23.8			P		0.412	0.825
7440-39-3	Barium	50.3			P		0.132	0.412
7440-41-7	Beryllium	0.437			P		0.132	0.412
7440-43-9	Cadmium	0.0412	U		P		0.0412	0.412
7440-70-2	Calcium	17400			P		2.72	8.25
7440-47-3	Chromium	58.8			P		0.132	0.412
7440-48-4	Cobalt	8.27			P		0.0412	0.412
7440-50-8	Copper	29			P		0.132	0.412
7439-92-1	Lead	22.2			P		0.28	0.66
7439-95-4	Magnesium	5090			P		2.39	8.25
7439-97-6	Mercury	0.0457			CV		0.00278	0.015
7440-02-0	Nickel	8.52			P		0.132	0.412
7440-09-7	Potassium	262			P		4.12	41.2
7782-49-2	Selenium	0.33	U		P		0.33	1.65
7440-22-4	Silver	0.132	U		P		0.132	0.412
7440-23-5	Sodium	140			P		8.25	24.8
7440-28-0	Thallium	0.525	J		P		0.28	0.825
7440-62-2	Vanadium	55.3			P		0.132	0.412
7440-66-6	Zinc	117			P		0.272	0.825

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-09DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584305DL1

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 77.7 Station ID: EPAFMC08

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7439-89-6	Iron	43700			P		2.48	20.6
7439-96-5	Manganese	512			P		0.66	2.06

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-10

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584306

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 79.7 Station ID: EPAFMC09

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	8300			P		1.51	7.95
7440-36-0	Antimony	1.24			P		0.191	0.795
7440-38-2	Arsenic	26.7			P		0.398	0.795
7440-39-3	Barium	102			P		0.127	0.398
7440-41-7	Beryllium	1.25			P		0.127	0.398
7440-43-9	Cadmium	0.0398	U		P		0.0398	0.398
7440-47-3	Chromium	106			P		0.127	0.398
7440-48-4	Cobalt	10.8			P		0.0398	0.398
7440-50-8	Copper	11.1			P		0.127	0.398
7439-92-1	Lead	22.3			P		0.27	0.636
7439-95-4	Magnesium	6610			P		2.3	7.95
7439-97-6	Mercury	0.00858	J		CV		0.00239	0.0129
7440-02-0	Nickel	9.96			P		0.127	0.398
7440-09-7	Potassium	658			P		3.98	39.8
7782-49-2	Selenium	0.318	U		P		0.318	1.59
7440-22-4	Silver	0.127	U		P		0.127	0.398
7440-23-5	Sodium	186			P		7.95	23.8
7440-28-0	Thallium	0.686	J		P		0.27	0.795
7440-62-2	Vanadium	86.3			P		0.127	0.398
7440-66-6	Zinc	231			P		0.262	0.795

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-10DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584306DL1

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 79.7 Station ID: EPAFMC09

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7440-70-2	Calcium	25200			P		13.1	39.8
7439-89-6	Iron	56200			P		2.38	19.9
7439-96-5	Manganese	1750			P		0.636	1.99

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-11

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584307

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 78.4 Station ID: EPAFMC10

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	4910			P		1.86	9.81
7440-36-0	Antimony	0.345	J		P		0.235	0.981
7440-38-2	Arsenic	13.2			P		0.49	0.981
7440-39-3	Barium	45.5			P		0.157	0.49
7440-41-7	Beryllium	0.577			P		0.157	0.49
7440-43-9	Cadmium	0.049	U		P		0.049	0.49
7440-70-2	Calcium	21400			P		3.24	9.81
7440-47-3	Chromium	47.6			P		0.157	0.49
7440-48-4	Cobalt	6.73			P		0.049	0.49
7440-50-8	Copper	6.49			P		0.157	0.49
7439-89-6	Iron	28000			P		0.589	4.9
7439-92-1	Lead	14.2			P		0.334	0.785
7439-95-4	Magnesium	6810			P		2.84	9.81
7439-97-6	Mercury	0.021			CV		0.00335	0.0181
7440-02-0	Nickel	7.28			P		0.157	0.49
7440-09-7	Potassium	343			P		4.9	49
7782-49-2	Selenium	0.392	U		P		0.392	1.96
7440-22-4	Silver	0.157	U		P		0.157	0.49
7440-23-5	Sodium	95.8			P		9.81	29.4
7440-28-0	Thallium	0.334	U		P		0.334	0.981
7440-62-2	Vanadium	44.1			P		0.157	0.49

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-11

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584307

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 78.4 Station ID: EPAFMC10

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7440-66-6	Zinc	100			P		0.324	0.981

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-11DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584307DL1

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 78.4 Station ID: EPAFMC10

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7439-96-5	Manganese	591			P		0.785	2.45

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-12

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584308

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 84.4 Station ID: EPAFMC11

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	4670			P		1.78	9.34
7440-36-0	Antimony	1.26	J		P		0.224	0.934
7440-38-2	Arsenic	18			P		0.467	0.934
7440-39-3	Barium	54.6			P		0.15	0.467
7440-41-7	Beryllium	0.486			P		0.15	0.467
7440-43-9	Cadmium	0.0467	U		P		0.0467	0.467
7440-70-2	Calcium	18600			P		3.08	9.34
7440-47-3	Chromium	61.3			P		0.15	0.467
7440-48-4	Cobalt	13			P		0.0467	0.467
7439-89-6	Iron	31500			P		0.561	4.67
7439-92-1	Lead	30.4			P		0.318	0.748
7439-95-4	Magnesium	6980			P		2.71	9.34
7439-97-6	Mercury	0.0256			CV		0.00375	0.0203
7440-02-0	Nickel	18.3			P		0.15	0.467
7440-09-7	Potassium	272			P		4.67	46.7
7782-49-2	Selenium	0.374	U		P		0.374	1.87
7440-22-4	Silver	~~0.328~~ 0.467	U J		P		0.15	0.467
7440-23-5	Sodium	80.1			P		9.34	28
7440-28-0	Thallium	0.318	U		P		0.318	0.934
7440-62-2	Vanadium	45			P		0.15	0.467
7440-66-6	Zinc	144			P		0.308	0.934

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-12DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584308DL1

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 84.4 Station ID: EPAFMC11

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7440-50-8	Copper	636	J		P		0.748	2.34
7439-96-5	Manganese	892			P		0.748	2.34

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110612 1916

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-13

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584309

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 78 Station ID: EPAFMC12

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	5520			P		1.98	10.4
7440-36-0	Antimony	0.735	J		P		0.25	1.04
7440-38-2	Arsenic	15.2			P		0.52	1.04
7440-39-3	Barium	49.1			P		0.166	0.52
7440-41-7	Beryllium	~~0.44~~ 0.52	in s		P		0.166	0.52
7440-43-9	Cadmium	0.052	U		P		0.052	0.52
7440-70-2	Calcium	19200			P		3.43	10.4
7440-47-3	Chromium	50.2			P		0.166	0.52
7440-48-4	Cobalt	10.3			P		0.052	0.52
7440-50-8	Copper	43.1			P		0.166	0.52
7439-89-6	Iron	35700			P		0.624	5.2
7439-92-1	Lead	36.1			P		0.354	0.832
7439-95-4	Magnesium	7370			P		3.02	10.4
7439-97-6	Mercury	0.167			CV		0.00256	0.0138
7440-02-0	Nickel	10.7			P		0.166	0.52
7440-09-7	Potassium	312			P		5.2	52
7782-49-2	Selenium	0.416	U		P		0.416	2.08
7440-22-4	Silver	0.166	U		P		0.166	0.52
7440-23-5	Sodium	73.6			P		10.4	31.2
7440-28-0	Thallium	0.656	J		P		0.354	1.04
7440-62-2	Vanadium	52			P		0.166	0.52

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-13

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584309

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 78 Station ID: EPAFMC12

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7440-66-6	Zinc	168			P		0.343	1.04

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-13DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584309DL1

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 78 Station ID: EPAFMC12

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7439-96-5	Manganese	915			P		0.832	2.6

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1918

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-14

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584310

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 80.6 Station ID: EPAFMC13

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	3570			P		1.34	7.04
7440-36-0	Antimony	0.562	J		P		0.169	0.704
7440-38-2	Arsenic	13.9			P		0.352	0.704
7440-39-3	Barium	26.8			P		0.113	0.352
7440-41-7	Beryllium	0.437			P		0.113	0.352
7440-43-9	Cadmium	0.0352	U		P		0.0352	0.352
7440-70-2	Calcium	12400			P		2.32	7.04
7440-47-3	Chromium	45			P		0.113	0.352
7440-48-4	Cobalt	6.51			P		0.0352	0.352
7440-50-8	Copper	14.3			P		0.113	0.352
7439-92-1	Lead	15.2			P		0.239	0.563
7439-95-4	Magnesium	4680			P		2.04	7.04
7439-97-6	Mercury	0.0186			CV		0.00345	0.0186
7440-02-0	Nickel	5.7			P		0.113	0.352
7440-09-7	Potassium	126			P		3.52	35.2
7782-49-2	Selenium	0.282	U		P		0.282	1.41
7440-22-4	Silver	0.113	U		P		0.113	0.352
7440-23-5	Sodium	45.8			P		7.04	21.1
7440-28-0	Thallium	0.326	J		P		0.239	0.704
7440-62-2	Vanadium	44			P		0.113	0.352
7440-66-6	Zinc	110			P		0.232	0.704

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-14DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584310DL1

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 80.6 Station ID: EPAFMC13

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7439-89-6	Iron	32500			P		2.11	17.6
7439-96-5	Manganese	787			P		0.563	1.76

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-15

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584311

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 82.2 Station ID: EPAFMC14

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	5890			P		1.47	7.74
7440-36-0	Antimony	0.55	J		P		0.186	0.774
7440-38-2	Arsenic	14.4			P		0.387	0.774
7440-39-3	Barium	67.7			P		0.124	0.387
7440-41-7	Beryllium	0.587			P		0.124	0.387
7440-43-9	Cadmium	1.46			P		0.0387	0.387
7440-47-3	Chromium	63.2			P		0.124	0.387
7440-48-4	Cobalt	7.69			P		0.0387	0.387
7440-50-8	Copper	11.9			P		0.124	0.387
7439-92-1	Lead	18.4			P		0.263	0.619
7439-95-4	Magnesium	9660			P		2.24	7.74
7439-97-6	Mercury	0.0165			CV		0.00264	0.0143
7440-02-0	Nickel	16.6			P		0.124	0.387
7440-09-7	Potassium	283			P		3.87	38.7
7782-49-2	Selenium	0.31	U		P		0.31	1.55
7440-22-4	Silver	0.124	U		P		0.124	0.387
7440-23-5	Sodium	227			P		7.74	23.2
7440-28-0	Thallium	0.271	J		P		0.263	0.774
7440-62-2	Vanadium	50.5			P		0.124	0.387
7440-66-6	Zinc	146			P		0.255	0.774

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-15DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584311DL1

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 82.2 Station ID: EPAFMC14

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7440-70-2	Calcium	24200			P		12.8	38.7
7439-89-6	Iron	35000			P		2.32	19.3
7439-96-5	Manganese	851			P		0.619	1.93

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-16

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584312

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 80.1 Station ID: EPAFMC11

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	4120			P		1.53	8.08
7440-36-0	Antimony	4.95	J		P		0.194	0.808
7440-38-2	Arsenic	12.4			P		0.404	0.808
7440-39-3	Barium	56			P		0.129	0.404
7440-41-7	Beryllium	~~0.389~~ 0.404	UJ		P		0.129	0.404
7440-43-9	Cadmium	0.0404	U		P		0.0404	0.404
7440-70-2	Calcium	20000			P		2.66	8.08
7440-47-3	Chromium	54.4			P		0.129	0.404
7440-48-4	Cobalt	10.4			P		0.0404	0.404
7440-50-8	Copper	12.3	J		P		0.129	0.404
7439-89-6	Iron	24300			P		0.484	4.04
7439-92-1	Lead	42.7			P		0.274	0.646
7439-95-4	Magnesium	8940			P		2.34	8.08
7439-97-6	Mercury	0.0193			CV		0.00288	0.0156
7440-02-0	Nickel	14.1			P		0.129	0.404
7440-09-7	Potassium	238			P		4.04	40.4
7782-49-2	Selenium	0.323	U		P		0.323	1.62
7440-22-4	Silver	0.129	UJ		P		0.129	0.404
7440-23-5	Sodium	93.4			P		8.08	24.2
7440-28-0	Thallium	0.5	J		P		0.274	0.808
7440-62-2	Vanadium	34.9			P		0.129	0.404

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-16

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584312

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 80.1 Station ID: EPAFMC11

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7440-66-6	Zinc	121			P		0.266	0.808

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-16DL1

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584312DL1

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 80.1 Station ID: EPAFMC11

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7439-96-5	Manganese	703			P		0.646	2.02

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 127829MB

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 127829MB

Level:(low/med) LOW Date Received: 4/26/2012

PercentSolids: 100 Station ID:

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7429-90-5	Aluminum	1.69	U		P		1.69	8.88
7440-36-0	Antimony	0.213	U		P		0.213	0.888
7440-38-2	Arsenic	0.444	U		P		0.444	0.888
7440-39-3	Barium	0.142	U		P		0.142	0.444
7440-41-7	Beryllium	0.142	U		P		0.142	0.444
7440-43-9	Cadmium	0.0444	U		P		0.0444	0.444
7440-70-2	Calcium	2.93	U		P		2.93	8.88
7440-47-3	Chromium	0.142	U		P		0.142	0.444
7440-48-4	Cobalt	0.0444	U		P		0.0444	0.444
7440-50-8	Copper	0.224	J		P		0.142	0.444
7439-89-6	Iron	2.44	J		P		0.533	4.44
7439-92-1	Lead	0.302	U		P		0.302	0.71
7439-95-4	Magnesium	2.58	U		P		2.58	8.88
7439-96-5	Manganese	0.142	U		P		0.142	0.444
7440-02-0	Nickel	0.142	U		P		0.142	0.444
7440-09-7	Potassium	4.44	U		P		4.44	44.4
7782-49-2	Selenium	0.355	U		P		0.355	1.78
7440-22-4	Silver	0.142	U		P		0.142	0.444
7440-23-5	Sodium	8.88	U		P		8.88	26.6
7440-28-0	Thallium	0.302	U		P		0.302	0.888
7440-62-2	Vanadium	0.142	U		P		0.142	0.444

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

127829MB

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 127829MB

Level:(low/med) LOW Date Received: 4/26/2012

PercentSolids: 100 Station ID:

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7440-66-6	Zinc	0.293	U		P		0.293	0.888

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

110512 1916

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

127984MB

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 127984MB

Level:(low/med) LOW Date Received: 4/26/2012

PercentSolids: 100 Station ID:

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
7439-97-6	Mercury	0.00348	U		CV		0.00348	0.0188

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1916

4/30/12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SW-01

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: WATER Lab Sample ID: 350584313

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 0 Station ID: EPAFMC11

CONCENTRATION UNITS: mg/L

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
35-50-0	Hardness	195			P		0.2	1

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1917

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SW-03

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: WATER Lab Sample ID: 350584314

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 0 Station ID: EPAFMC11

CONCENTRATION UNITS: mg/L

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
35-50-0	Hardness	203			P		0.2	1

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

110512 1917

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-08

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584304

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 97.1 Station ID: EPAFMC07

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
1012_5	TOC	1220			TC		38.8	334

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1917

5-30-12

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-09

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584305

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 77.7 Station ID: EPAFMC08

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
1012_5	TOC	2430			TC		66	568

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1917

5-30-12

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-10

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584306

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 79.7 Station ID: EPAFMC09

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
1012_5	TOC	6000			TC		50	430

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

110512 1917

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-11

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584307

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 78.4 Station ID: EPAFMC10

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
1012_5	TOC	7320			TC		67	576

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

110512 1917

5-30-12

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-12

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584308

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 84.4 Station ID: EPAFMC11

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
1012_5	TOC	13200			TC		46.5	401

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

110612 1917

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-13

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584309

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 78 Station ID: EPAFMC12

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
1012_5	TOC	26200			TC		60.6	521

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

110512 1917

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-14

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584310

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 80.6 Station ID: EPAFMC13

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
1012_5	TOC	1640			TC		52.1	449

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1917

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-15

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584311

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 82.2 Station ID: EPAFMC14

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
1012_5	TOC	14300			TC		54.6	470

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110612 1917

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EPAFMC-SD-16

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 350584312

Level:(low/med) LOW Date Received: 4/25/2012

PercentSolids: 80.1 Station ID: EPAFMC11

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
1012_5	TOC	6240			TC		49	422

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110612 1917

5-30-12

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 129552MB

Lab Name: Spectrum Analytical, Inc. Contract: OTIE- Five Mile Creek / Site 139

Lab Code : PEL Case No.: SAS No: SDG No.: 3505843

Matrix: SOIL Lab Sample ID: 129552MB

Level:(low/med) LOW Date Received: 5/3/2012

PercentSolids: 100 Station ID:

CONCENTRATION UNITS: MG/KG

CAS NO.	ANALYTE	Concentration	C	Q	M		MDL	RL
1012_5	TOC	54.6	U		TC		54.6	470

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

110512 1917

5-30-12