TECHNICAL IMPRACTICABILITY WAIVER APPLICATION
STEEL WINDS I WIND FACILITY
TECUMSEH REDEVELOPMENT SITE
(SITE NO. C915205)
LACKAWANNA, NEW YORK

PREPARED FOR:
New York Department of Environmental Conservation
Buffalo, New York

PREPARED BY:
GZA GeoEnvironmental, Inc.
Providence, Rhode Island

November 2014
File No. 33579.07

GZA
GeoEnvironmental, Inc.

Engineers and
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Re: Technical Impracticability Waiver Application
Steel Winds I Wind Facility
Tecumseh Redevelopment Site (Site No. C915205)
Lackawanna, New York

Dear Mr. Moore:

GZA GeoEnvironmental, Inc. (GZA) is pleased to provide this Technical Impracticability (TI) Waiver Application for the Steel Winds I portion of the Tecumseh Redevelopment Site (Site) to the New York State Department of Environmental Conservation (DEC). This TI Waiver Application has been prepared to address applicable requirements of the Brownfields Cleanup Agreement (BCA) for the Site and is based in part on supplemental field studies performed by GZA in summer 2014, in accordance with the DEC approved TI Waiver Supplemental Field Studies Work Plan (Work Plan), prepared by GZA, dated September 30, 2013. This application has been prepared on behalf of the Site operator, Niagara Wind Power, LLC (NWP) an affiliate of First Wind Energy, LLC (First Wind).

We look forward to you approval of this application. If you have any question or comments, or would like to discuss the waiver application, please feel free to contact Ed or Rick at (401) 421-4140 or via email at edward.summerly@gza.com or richard.carlone@gza.com.

Respectfully,

GZA GEOENVIRONMENTAL, INC.

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Attachments Technical Impracticability Waiver Application

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1.00 INTRODUCTION

On behalf of our Client, the Site operator, Niagara Wind Power, LLC (NWP) an affiliate of First Wind Energy, LLC (First Wind), GZA GeoEnvironmental, Inc. (GZA) has prepared this Technical Impracticability (TI) Waiver Application for the Steel Winds I portion of the Tecumseh Redevelopment Site (Site) for the New York State Department of Environmental Conservation (DEC). This report is subject to the limitations contained in Appendix A, and may be subject to modification if additional information is subsequently developed by GZA or any other party.

This TI Waiver Application has been prepared to address applicable requirements of the Brownfields Cleanup Agreement (BCA) for the Site and is based in part on supplemental field studies performed by GZA in summer 2014, in accordance with the DEC approved *TI Waiver Supplemental Field Studies Work Plan* (Work Plan), prepared by GZA, dated September 30, 2013.

2.00 BACKGROUND

The following sections provide a brief description of the Site, and of prior groundwater remedial activities conducted at the Site.

2.10 SITE DESCRIPTION

Tecumseh Redevelopment, Inc. (Tecumseh) owns approximately 1,100 acres of land at 1951 Hamburg Turnpike, as shown on Figure 1 – *Locus Plan*. The property was formerly used for the production of steel, coke and related products by Bethlehem Steel Corporation (BSC). Steel production on the Tecumseh property was discontinued in 1983 and the coke ovens ceased activity in 2000. Tecumseh acquired the property, along with other BSC assets, out of bankruptcy in 2003.

In September 2006, BQ Energy entered into a long-term lease agreement with Tecumseh to construct and operate wind turbines and supporting power generation equipment and infrastructure on an approximately 29-acre parcel of the Tecumseh property, subsequently referred to as the Steel Winds Site. BQ Energy and the DEC also entered into a Brownfields Cleanup Agreement (BCA) for the Steel Winds Site. The Site is wholly contained within the Slag Fill Area (SFA) Zones 3 and 4 of the Tecumseh property bordered by Lake Erie to the west, Smokes Creek to the south, and former industrial lands of BSC to the north and east, as shown on Figure 1. NWP operates the eight wind turbines installed at the Site.

The Brownfield Cleanup Program (BCP) was successful in achieving the remedial objectives established for the Steel Winds Site. The Site Management Plan (SMP) and Final Engineering Report (FER) were approved by DEC in December 2007. DEC issued a Certificate of Completion (COC) for the Site on December 18, 2007.

The remedial activities conducted at the Site include:

- Excavation and off-site disposal of impacted slag fill from the eight wind turbine foundations and interconnecting utility trenches;
- In-situ enhanced biodegradation of residual volatile organic compounds (VOCs), including benzene, toluene, total xylenes, and naphthalene, using oxygen release compound (ORC®) socks within the saturated soil and groundwater in the vicinity of Wind Tower-01 (WT-01) and associated groundwater quality monitoring. The WT-01 vicinity area of concern (AOC) is approximately 1.3 acres, as shown on Figure 2 (Exploration Location Plan); and,
- Installation of a soil cover system (12 inch thick soil cap).

As described in the 2014 Periodic Review Report (PRR) for the Site, prepared by GZA and dated July 1, 2014, the institutional and engineering controls (IC/EC), i.e., land use restrictions and a soil cap, are in compliance with the SMP. The ICs/ECs currently in place mitigate potential Site related impacts to human health. As such, human health exposure is not discussed further in this TI Waiver Application.

2.20 SUMMARY OF PROPOSED MODIFICATION TO THE GROUNDWATER REMEDY

In November 2011, Benchmark Environmental Engineering and Science, PLLC (Benchmark) submitted an Operation, Monitoring and Maintenance Request for Modification (OM&M Request) to the DEC for the Site, prepared on behalf of First Wind. The OM&M Request was submitted to the Department, as a petition requesting a change in the then ongoing ORC® sock groundwater remedy for the WT-01 portion of the Site.

The DEC provided comments to the OM&M Request on April 10, 2012 and GZA responded to these comments on May 2, 2012 on behalf of First Wind. In this response letter, GZA stated that a TI Waiver Application would be submitted for the Site, once remedies at the broader Bethlehem Steel Site had been implemented. On May 31, 2012, DEC provided a follow up letter requesting that the TI Waiver Application be submitted by April 1, 2014. In a June 22, 2012 email, GZA requested that the submittal date be moved to November 1, 2014 because some of the field work involved in preparing the evaluation requires sampling within Smokes Creek and Lake Erie, which is most appropriately conducted in summer. The Department granted this request in a May 1, 2013 email. In response, GZA submitted to September 2013 Work Plan, which was subsequently approved by the Department in a February 24, 2014 letter.

3.00 SUMMARY OF SUPPLEMENTAL FIELD ACTIVITIES

The following sections describe the results of supplement field activities performed by GZA in the summer of 2014, in accordance with the approved Work Plan, to support submittal of this TI Waiver Application. GZA validated and qualified groundwater, surface water, sediment and pore water data using a modified Tier I/Tier II data validation approach, in general accordance with applicable guidance. A data usability report is provided in Appendix B. Laboratory certificates are attached as Appendix C.

3.10 GROUNDWATER DATA COLLECTION

GZA collected groundwater samples from the eight (8) monitoring wells (WT1-02, WT1-05, WT1-04, MWN-01B, MWN-01, BCP-ORC-1, BCP-ORC-2, and WT1-06)[1] within the WT-01 AOC between June 25, 2014 and June 26, 2014. A field duplicate sample was collected and is associated with MWN-01B. Samples were packed in coolers with ice immediately following collection, and shipped overnight to Spectrum Analytical in Agawam, Rhode Island for the following laboratory analysis:

- CP-51 Soil Cleanup Guidance list (CP-51 list) VOCs via USEPA Method 8260B,
- Base-Neutral semi-VOCs (SVOCs) via USEPA Method 8270C,
- Methane, ethane and ethene via USEPA Method RSK 175,
- Dissolved iron via USEPA Method 6010B,
- Nitrate via USEPA Method 353.2,
- Sulfate via USEPA Method 300.0,
- Alkalinity via USEPA 2320B, and
- Total organic carbon (TOC) via USEPA Method 5310/9060.

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The following tables show the volume of water purged and the number of well volumes removed from each well after a constant head was established following EPA Low Flow purge and sample collection protocols. In general, groundwater purge rates were within 500(±) millimeter per minute (ml/min). Water quality parameters were monitored throughout purging process with a water quality meter equipped with a flow through cell. Stabilized parameters are presented in Table 1. WT-01 vicinity groundwater geochemistry is discussed in Section 5.

[1] This is the same suite of monitoring wells required in the SMP for the Annual Site-wide Monitoring Program.

Monitoring Well ID	Cumulative Volume Purged (gallons)	Well Volumes (#)
MWN-01	10	2.3
MWN-01B	10	3.5
BCP-ORC-01	5	0.5
BCP-ORC-02	8	1.6
WT1-02	5	1.1
WT1-04	20	11.2
WT1-05	20	13.3
WT1-06	20	10.5

As part of the groundwater sampling event, static groundwater level measurements were collected from top of riser of the monitoring prior to purging, and are listed in the table below. Monitoring point elevation data was available from previous groundwater monitoring reports completed by Benchmark or a supplemental survey conducted by GZA. From this data, groundwater flow directions were estimated and are shown on Figure 3. Note that Figure 3 also includes groundwater elevations based on data collected as part of the June 2014 Site-wide long-term monitoring round, which was conducted concurrently with the supplemental sampling round. Based on the available information, groundwater flow is generally in a southerly direction towards Smokes Creek or in a westerly direction towards Lake Erie.

Monitoring Well Location	Well Screen Depth (ft bgs)	Top of Riser Elevation (ft.)	Groundwater Depth (ft.)	Groundwater Elevation (ft.)
MWN-01	7-17	585.14	15.4	569.7
MWN-01B	19-29	587.13	16.4	570.8
BCP-ORC-01	22-32	591.97	19.4	572.6
BCP-ORC-02	27-37	598.09	27.6	570.5
WT1-02	26-36	600.78	28.0	572.8
WT1-04	14-24	586.45	13.9	572.6
WT1-05	10-20	584.41	12.7	571.7
WT1-06	20-30	593.20	20.8	572.6

The analytical test results for the groundwater samples were compared to NYSDEC Class GA criteria presented in the Division of Water Technical and Operational Guidance Series (TOGS 1.1.1), dated October 1993, revised June 1998, errata January 1999 and amended April 2000.

3.20 GROUNDWATER SAMPLING AND ANALYSIS

Groundwater sampling results are summarized below by well. Results are summarized in Table 2.

- MWN-01: Nine (9) VOCs were detected above method detection limits of which six (6) exceeded their respective DEC Class GA standards, as follows.

    - Benzene at 37 parts per billion (ppb);
    - Toluene at 7.8 ppb;
    - m,p-Xylene at 17 ppb;
    - o-Xylene at 14 ppb;
    - Total Xylene at 31 ppb; and
    - 1,2,4 Trimethylbenzene at 6.3 ppb.

    Naphthalene was also detected at a concentration of 310 ppb, which exceeds its respective groundwater guidance value of 10 ppb. There is no Class GA standard value for this compound.

    Ten (10) SVOCs were detected above method detection limits of which two (2) exceeded their respective guidance values, as follows.

    - Fluorene at 76 ppb; and
    - Phenanthrene at 99 ppb, which was obtained from a secondary dilution analysis.

    Other parameters detected include:

    - Methane at a 370 ppb;
    - Ethane at 4.3 ppb;
    - Dissolved Iron at 31.9 ppb;
    - Sulfate at 200 parts per million (ppm);
    - Alkalinity at 190 ppm; and
    - Total Organic Carbon (TOC) at 6.8 ppm.

- MWN-01B: Ten (10) VOCs were detected above method detection limits of which seven (7) exceeded their respective NYSDEC Class GA criteria, as follows. MWN-01B had a field duplicate associated with it, results of the field duplicate are reported in parenthesis.

- Benzene at 85 (88) ppb;
- Toluene at 24 (24) ppb;
- m,p-Xylene at 15(16) ppb;
- o-Xylene at 9.8 (9.9) ppb;
- Total Xylene at 25 (26) ppb;
- 1,3,5 Trimethylbenzene at 5.7 (5.4) ppb; and
- 1,2,4 Trimethylbenzene at 8.4 (7.9) ppb.

Naphthalene was detected at a concentration of 1,200 (750) ppb, which exceeds its respective guidance value of 10 ppb.

Ten (10) SVOCs were detected above method detection limits of which one (1) exceeded its respective guidance value, as follows.

- Phenanthrene at 67 (68) ppb.

Other parameters detected include:

- Methane at a 3,500 (2,300) ppb;
- Ethane at 2.9 (2.9) ppb;
- Dissolved Iron at 48.7 (48.1) ppb;
- Sulfate at 130 (130) ppm;
- Alkalinity at 150 (150) ppm; and
- Total Organic Carbon at 9.0 (9.0) ppm.

- BCP-ORC-01: Seven (7) VOCs were detected above method detection limits of which one (1) exceeded its respective NYSDEC Class GA criteria, as follows.

  - Benzene at 9.5 ppb.

  Naphthalene was detected at a concentration of 120 ppb, which exceeds its respective guidance value of 10 ppb.

  Ten (10) SVOCs were detected above method detection limits, but below their respective NYSDEC Class GA criteria or guidance values.

  Other parameters detected include:

  - Methane at a 310 ppb;
  - Dissolved Iron at 55.1 ppb;
  - Sulfate at 150 ppm;
  - Alkalinity at 220 ppm; and
  - Total Organic Carbon at 8.0 ppm.

- BCP-ORC-02: Six (6) VOCs were detected above method detection limits of which one (1) exceeded its respective NYSDEC Class GA criteria, as follows.

    - Benzene at 9.3 ppb.

    Naphthalene was detected at a concentration of 48 ppb, which exceeds its respective guidance value of 10 ppb. This concentration was obtained from a secondary dilution analysis.

    Eight (8) SVOCs were detected above method detection limits but below their respective NYSDEC Class GA criteria or guidance values.

    Other parameters detected include:

    - Methane at a 190 ppb;
    - Dissolved Iron at 35.4 ppb;
    - Sulfate at 220 ppm;
    - Alkalinity at 280 ppm; and
    - Total Organic Carbon at 6.4 ppm.

- WT1-02: Nine (9) VOCs were detected above method detection limits of which two (2) exceeded their respective NYSDEC Class GA criteria, as follows.

    - Benzene at 16 ppb; and
    - Total Xylene at 11 ppb;

    Naphthalene was detected at a concentration of 29 ppb, which exceeds its respective guidance value of 10 ppb.

    Ten (10) SVOCs were detected above method detection limits but below their respective NYSDEC Class GA criteria or guidance values.

    Other parameters detected include:

    - Methane at a 36 ppb;
    - Dissolved Iron at 49.7 ppb;
    - Sulfate at 170 ppm;
    - Alkalinity at 370 ppm; and
    - Total Organic Carbon at 5.8 ppm.

- WT1-04: Nine (9) VOCs were detected above method detection limits of which five (5) exceeded their respective NYSDEC Class GA criteria, as follows.

    - Benzene at 23 ppb;
    - m,p-Xylene at 12 ppb;

- o-Xylene at 9.2 ppb;
- Total Xylene at 21 ppb; and
- 1,3,5-Trimethylbenzene at 5.1 ppb.

Naphthalene was detected at a concentration of 61 ppb, which exceeds its respective guidance value of 10 ppb.

Ten (10) SVOCs were detected above method detection limits but below their respective NYSDEC Class GA criteria or guidance values.

Other parameters detected include:

- Methane at a 98 ppb;
- Ethane at 1.2 ppb;
- Dissolved Iron at 33.1 ppb;
- Sulfate at 130 ppm;
- Alkalinity at 260 ppm; and
- Total Organic Carbon at 4.8 ppm.

- WT1-05: Nine (9) VOCs were detected above method detection limits of which one (1) exceeded its respective NYSDEC Class GA criteria, as follows.

  - Benzene at 11 ppb;

  Naphthalene was detected at a concentration of 86 ppb, which exceeds its respective guidance value of 10 ppb.

  Ten (10) SVOCs were detected above method detection limits but below their respective NYSDEC Class GA criteria or guidance values.

  Other parameters detected include:

  - Methane at a 260 ppb;
  - Dissolved Iron at 31.0 ppb;
  - Sulfate at 170 ppm;
  - Nitrogen at 0.39 ppm;
  - Alkalinity at 190 ppm; and
  - Total Organic Carbon at 5.5 ppm.

- WT1-06: Nine (9) VOCs were detected above method detection limits of which five (5) exceeded their respective NYSDEC Class GA criteria, as follows.

  - Benzene at 42 ppb;
  - Toluene at 8.3 ppb;
  - m,p-Xylene at 17 ppb;

- o-Xylene at 13 ppb; and
- Total Xylene at 31 ppb.

Naphthalene was detected at a concentration of 200 ppb, which exceeds its respective guidance value of 10 ppb.

Ten (10) SVOCs were detected above method detection limits of which one (1) exceeded its respective guidance value, as follows.

- Phenanthrene at 70 ppb.

Other parameters detected include:

- Methane at a 490 ppb;
- Ethane at 4.1 ppb;
- Dissolved Iron at 33.1 ppb;
- Sulfate at 190 ppm;
- Alkalinity at 200 ppm; and
- Total Organic Carbon at 7.3 ppm.

This VOC and SVOC data is consistent with previous groundwater monitoring conducted at the Site. Note that the majority of VOCs and SVOCs detected at the Site are present at relatively low concentrations and/or are equivalent to background levels, with the exception of benzene and naphthalene. As such, benzene and naphthalene are considered to be the primary groundwater contaminants of concern (COCs) from the WT-01 AOC.

3.30 SURFACE WATER SAMPLING

On August 6, 2014, GZA collected surface water samples SW-1 through SW-4 (from Smokes Creek) and SW-5 through SW-8 (from Lake Erie), as shown on Figure 2. Surface water samples were collected approximately 7 feet from shore, at the approximate center of the water column as measured on the date of collection, using an extendable dip pole. Dedicated disposable sampling cups were used at each location. Surface water samples were analyzed for

- CP-51 list VOCs via EPA Method 8260; and
- Base-neutral SVOCs via EPA Method 8270c

Analytical results are shown in Table 3. As shown, only benzene and naphthalene were detected in one and four of the eight sample locations, respectively. Benzene was reported at a maximum concentration of 1.1 ppb which is below the RL of 5 ppb, so this value is considered an estimate and was J flagged. Naphthalene was reported at a maximum concentration of 12 ppb All VOC detects were below applicable water quality screening benchmarks..

3.40 PORE WATER SAMPLING

On July 16, 2014, three passive diffusive sampling bags were buried at sampling locations PZ-2, 3, and 4, in Smokes Creek and left in place for three weeks. GZA returned to the Site on August 6, 2014 to collect the passive diffusive bags found that each bag had been displaced by the strong stream currents. As an alternative sample collection method, the bottom 18 inches of ½-inch steel pipes were perforated (to create a well screen) and driven five feet into the sediment approximately five to seven feet from shore in Smokes Creek. A peristaltic pump was used to collect pore water samples and the pipes were then removed after sampling. Pore water samples were not collected at the proposed sampling locations along Lake Erie due to the presence of a solid slag shelf which the steel rods could not penetrate. Pore water samples were collected at locations PW-2 through PW-4 and analyzed for CP-51 list VOCs via EPA method 8260

Pore water sample results are shown in Table 4. DEC Class GA groundwater standards/guidance value exceedences observed are:

- PZ–2-none;
- PZ–3 (field duplicate value noted in parentheses)-Benzene at 31 ppb (32 ppb), Naphthalene at 95 ppb (100 ppb), Toluene at 6.2 ppb (6.4 ppb), Xylenes at 24 ppb (25 ppb) and Trimethylbenzene at 5.0 ppb (field duplicate only); and
- PZ–4-Benzene at 30 ppb, Naphthalene at 180 ppb, and mixed Xylene at 21 ppb.

Generally, pore water samples collected from Smokes Creek were consistent with groundwater results from WT1-04 and WT1-05, which are located in close proximity to Smokes Creek.

3.50 SEDIMENT SAMPLING

On July 16, 2014 and August 6, 2014, GZA collected five sediment samples designated SED-2 through SED-4, SED-6 and SED-7. Sediment sampling was initially attempted using a sediment core sampling device; sediment recovery was low and GZA subsequently collected the samples using a shovel. Sediment aliquots were collected from an approximately 3-foot by 3-foot area and composited into a stainless-steel mixing bowl. Samples were analyzed for the following parameters:

- CP-51 list VOCs via EPA Method 8260. Samples were collected using EPA Method 5035;
- Base-neutral SVOCs via EPA Method 8270c; and
- TOC via Lloyd Kahn method.

SED–2, SED-3, and SED–4 were collected from the channel of Smokes Creek. A solid slag shelf exists along the Smokes Creek shoreline extending one to five feet into Smokes Creek, and then drops off into the stream channel. Sediment collected from Smokes Creek

was generally silt with organic matter, some fine to coarse sand and fine to coarse gravel, with trace amounts of slag, cinder, and clinker debris.

SED–6 and SED–7 were collected from Lake Erie approximately 20 to 30 feet from the shoreline. As stated above, a solid slag shelf extends out into Lake Erie and is covered with half a foot to one foot of accumulated sediment. Sediment collected from Smokes Creek were generally fine to coarse Sand with some fine to coarse gravel, few cobbles, little silt and organic matter with trace amounts of slag, cinder, and clinker debris.

Sediment analytical results are shown in Table 3. As shown, a number of VOCs (primarily BTEX compounds and naphthalene) and a number of SVOCs (primarily PAHs) were observed in the sediment samples, primarily in the samples collected from Smokes Creek. Detected VOC values were generally low, except for naphthalene which was detected at 1,500 ppm in SED-2 and 2,200 ppm in SED-4. SVOC results were generally between 200 and 1,500 ppm. There were no observed exceedances of DEC's Class C Freshwater Sediment Guidance Values in any of the five sediment samples collected. Total Organic Carbon was ranged between 2,000 and 30,000 ppm as shown in Table 5.

3.60 QUALITY ASSURANCE/QUALITY CONTROL

During the supplement sampling round, non-dedicated reusable equipment (i.e., sediment sampler) was decontaminated by scrubbing/washing with a laboratory grade detergent (e.g., alconox) to remove visible contamination, followed by potable (tap) water and analyte-free (deionized organic free) water rinses. Equipment was then wiped dry with clean paper towels, prior to reuse.

Quality Assurance and Quality Control (QA/QC) samples collected during the supplemental sampling round consisted of:

- Trip blanks - one trip blank per cooler, were analyzed and all results were not detected;
- Equipment blanks were collected for the sediment sampler, surface water dip pole sampler and a clean stainless-steel piezometer by pouring deionized water over the equipment and collecting the rinse water in laboratory provided containers. All equipment blank results were not detected, except bis(2-ethylhexyl)phthalate which was detected below the quantitation limit in the equipment blank for samples SED-2, SED-3, SED-4 and SED-31. This parameter was detected at a low concentration (1.4 ppb), below the quantitation limit. As such, we do not consider this a QA/QC issue; and
- One blind duplicate was collected for each media and are they shown in the relevant tables. Blind duplicate results are discussed further in the DUSR attached as Appendix B.

As discussed in Appendix B, no major QA/QC issued were noted with the supplemental sampling laboratory data.

4.00 SUMMARY OF CURRENT TECUMSEH REDEVELOPMENT CMS AREA CONDITIONS

The following sections provide a brief summary of current groundwater conditions as described in the *Comprehensive Groundwater Quality Assessment Report* (GQA Report) for the 1,100 acre Tecumseh Redevelopment CMS Area, dated August 2013 and prepared by Benchmark. This information provides context on the condition of the area surrounding the WT-01 AOC with which to evaluate the significance of Site-specific findings.

4.10 BACKGROUND

In February/March 2012, as approved by DEC, Benchmark conducted groundwater sampling at 132 locations on the Tecumseh Redevelopment Site. The purpose of this study was to evaluate changes in groundwater conditions, as groundwater data presented in the Site's draft Corrective Measures Study (CMS) was collected in 1999/2000. This study culminated in submittal of the GQA Report to DEC in August 2013.

4.20 GQA REPORT SUMMARY

The GQA report concluded that while groundwater conditions had generally improved at the Tecumseh property, mass loadings of COCs to Smokes Creek and Lake Erie from onsite groundwater are significant; in particular benzene, naphthalene and phenolics are prevalent in groundwater across the property. Benchmark attributed the COCs in groundwater to numerous solid waste management units (SWMUs) previously identified on the property. Benchmark divided the Tecumseh property into multiple groundwater discharge subareas based on groundwater contours presented in the GQA Report. The WT-01 AOC is primarily located in watershed area 3A (which discharges to Smokes Creek), with a small portion located in subarea 4A (which discharges to Lake Erie).

Concentrations of benzene at the Tecumseh property were generally between 1 and 100 ppb. However, benzene concentrations over a significant portion of the Tecumseh property were between 10,000 and 40,000 ppb, which is approximately three orders of magnitude higher than benzene concentrations observed in the WT-01 AOC, which are generally similar to upgradient concentrations observed in the GQA Report (approximately 30 to 40 ppb), except in well MWN-01B, where a concentration of 85 ppb was observed during GZA's supplement field investigation.

Concentrations of naphthalene observed in the GQA Report were generally below 500 ppb, with limited areas as high as 20,000 ppb. Concentrations upgradient of the WT-01 vicinity ranged between 18 and 350 ppb, which is comparable to the WT-01 vicinity, except in well MWN-01B, where a concentration of 1,200 ppb was observed during GZA's supplement field investigation.

4.30 BENZENE AND NAPHTHALENE MASS LOADINGS FROM GQA REPORT

Benchmark calculated contaminant mass loadings, including benzene and naphthalene (the two primary COCs from the WT-01 AOC), from the Tecumsuh property to Smokes Creek and Lake Erie. Mass loadings from the WT-01 sub-watersheds described above and the property as a whole are summarized below. Note that we have combined mass loadings from the slag fill and sand geologic units in the below table.

Summary of Benzene and Naphthalene Mass Loadings from GQA Report

Watershed	Area (acres)	Benzene Mass Loading (lb/year)	Benzene Percentage	Naphthalene Mass Loading (lb/year)	Naphthalene Percentage
Subarea 3A (Smokes Creek)	45	8.9	0.5%	81.5	34.8%
Subarea 4A (Lake Erie)	385	7.6	0.4%	79.5	34.0%
Smokes Creek	76	1739.6	95.0%	110.4	47.2%
Lake Erie	485	11.6	0.6%	118.3	50.6%
Ship Canal	24	80.2	4.4%	5.58	2.4%
Entire Site	**585**	**1831.5**	-	**234**	-

As shown, the Tecumseh property as a whole contributes significant benzene and naphthalene loadings to Smokes Creek and Lake Erie. The watershed areas that include the 1.3 acre WT-01 AOC, which makes up approximately 0.3% of the total combined watershed area, contribute approximately 0.9% of the total benzene loading from the Site. Based on this data the contribution of benzene from the WT-01 AOC is considered insignificant, compared to the contribution from the Site as a whole.

Naphthalene loading from the Tecumseh property is also significant, though the total naphthalene loading is less than the total benzene loading, as shown in the table above. The sub-watersheds which include the WT-01 vicinity make up approximately 69% of the Tecumseh property total naphthalene discharge to Smokes Creek and Lake Erie. An evaluation of naphthalene mass loading from the WT-01 vicinity is provided in Section 5.50.

5.00 GEOHYDROLOGIC EVALUATION

The following sections detail geohydrolygic conditions at the WT-01 AOC. This section includes an evaluation of groundwater naphthalene loadings to Smokes Creek and Lake Erie from the WT-01 AOC and its relative contribution compared to the Tecumseh redevelopment property.

5.10 SUBSURFACE SOIL CONDITIONS

Based upon information provided in the *Site Investigation/Remedial Alternatives Report/Interim Remedial Measures Report*, the subsurface soils in the vicinity of the WT-1 AOC consist of the following:

- Fill/slag layer starting at ground surface and ranging in depth from 15 feet to >30 feet. This stratum is a highly variable mixture composed predominately of sand, silt, slag, construction/demolition debris, and coke/coal fines.
- Underlying the slag/fill layer is a natural stratum of sand/silty sand. Most explorations were advanced to approximately 30 feet below grade and terminated in this layer.
- One exploration, MWN-01 penetrated the sand layer and encountered a layer of silty clay, underlain by a layer of till (a dense, poorly sorted glacial deposit with particles typically ranging in size from clay up to cobbles and boulders, generally with low hydraulic conductivity). In summary, the soil strata observed at borehole MWN-01 are:
    - Fill/slag from 0 to 25 feet below grade
    - Sand/sandy silt from approximately 25 feet to 35 feet below grade
    - Silty clay, approximately 35 to 40 feet below grade
    - Glacial Till, approximately 40 to 50 feet below grade (terminating at bedrock)
- As described in the GQA, the silty clay and glacial till layers generally act as an aquitard and the shallow overburden aquifer is made up of the fill/slag and sand/sandy silt units.

The large percentages of fines (*i.e.*, silt and clay) present in subsurface fill and soils significantly limit the effectiveness of some remedial options. In the *Site Investigation/Remedial Alternatives Report/Interim Remedial Measures Report,* Benchmark notes that subsurface drilling was difficult using a hollow stem auger and that boreholes took approximately double the normal time to drill; this increased effort required for drilling was accounted for in GZA's remedial cost estimates presented in Section 7, where applicable.

Based on our understanding of the Site, non-aqueous phase coal tar wastes are likely present in the vadose zone within the AOC (due to the placement of coal-tar impacted

sediments from Smokes Creek within the area of concern) and are leaching contaminants (primarily benzene and naphthalene) to the groundwater. This represents a diffuse and recalcitrant source, distributed over a large geographic area (the WT-1 area is approximately 1.3 acres).

5.20 GEOCHEMICAL EVALUATION

As described in the OM&M Request and GZA's May 2, 2012 letter, the ORC® sock remedy has not been effective in reducing VOC concentrations in groundwater in the vicinity of WT-01. Based on GZA's evaluation of observed Site conditions, the ORC® remedy was likely unsuccessful due to the following Site specific geochemical factors:

- Oxidation-Reduction potential (ORP) data collected from the WT-01 vicinity is strongly electronegative (baseline readings generally less than -200 mV). Following ORC® sock deployment, ORP performance data did not demonstrate a significant, persistent increase in ORP values as typically occurs when an oxygen releasing compound is used, i.e., ORP values remained strongly electronegative following ORC® sock deployment. This persistently low ORP data are not encouraging, as they suggest that a significant sink for oxidants (high natural or anthropogenic soil and groundwater oxygen demand), such as organic laden dredge materials (which were reportedly used as fill in this area from dredging of Smokes Creek), persists at the AOC. Typically, the ORC® amendment results in an increase in ORP values, as conditions shift from chemically reducing to chemically oxidizing. The fact that ORP values were not significantly and consistently increased by the ORC® amendment indicates that it is unlikely to result in the desired aerobic mineralization.
- Baseline Chemical Oxygen Demand (COD) data collected from ORC® sock deployment locations ranged from about 23 milligrams per liter (mg/L, BCP-ORC-2) to about 47 mg/L (BCP-ORC-1). COD performance data for these well locations did not demonstrate a significant, persistent decrease in these values. The fact that concentrations did not decrease suggests that the ORC® socks may not have sufficient oxygen loading to satisfy the natural oxygen demand of the subsurface materials.
- The baseline pH values at the ORC® sock deployment locations ranged from about 11.0 S.U. (BCP-ORC-1) to 11.3 S.U. (WT1-02). Given that most soil bacteria prefer pH ranges closer to neutrality, the caustic nature of the groundwater likely is inhibitory to indigenous soil bacteria. Aerobic mineralization using oxidants is a microbially mediated process. Importantly, ORC® is alkaline and resulted in an even further increase in pH (up to a full pH unit, which is equivalent to a 10X increase in alkalinity) at all sock well deployment locations, further exacerbating the caustic groundwater condition; and
- The subsurface geology of the area is extremely heterogeneous, i.e. is made up of a mixture of granular fill, steel slag debris and dredge spoils, which likely leads to preferential pathways for groundwater and contaminant movement in the subsurface, leading to a low area of influence for the ORC® wells.

Field screening results from the supplement groundwater sampling described in Section 3, are consistent with the historical data described above.

The presence of methane[2] in groundwater may suggest modest petroleum hydrocarbon biodegradation by alkaline-tolerant microbes. However, it is more likely that AOC methane is predominantly due to organic carbon (TOC) fermentation and carbon dioxide reduction. Monitoring well MWN-01B, with the lowest alkalinity (150 mg/L) and highest TOC (9.0 mg/L), also has the highest methane concentration (2.3-3.5 mg/L). TOC groundwater concentrations at the Site are elevated (4.8-9.0 mg/L) compared to typical background TOC for western New York (median values < 1 mg/L)[3]. This is likely due to dredge spoils mixed with the slag fill. The elevated naphthalene (1,200 ppb) at MWN-01B is further evidence suggesting dredge spoil in this vicinity.

The total alkalinity of a groundwater system indicates the water's capacity to neutralize acid. High alkalinity is typical of groundwater at sites filled with steel slag waste. Weathering of calcium silicates within the slag result in groundwater dominated by calcium and carbonate or hydroxide ions in equilibrium with precipitated calcium carbonate. This results in elevated alkalinity, stabilized high pH, and resistance to neutralization. Alkalinity concentrations above 150 mg/L are common at slag-fill sites, exacerbating attempts to reduce groundwater pH.

The oxidation/reduction potential (a.k.a. redox, ORP, pE, or Eh) of groundwater is a measure of electron activity and indicates the relative tendency of groundwater to accept or transfer electrons. Depletion of electron acceptors oxygen, nitrate, and sulfate, and increased dissolved iron (water-soluble ferrous iron, Fe^{2+}, indicating reduction of the electron acceptor ferric iron, Fe^{3+}) indicate progressively lower redox conditions. In near-neutral pH groundwater, these analyses correspond to decreasing bio-availability of electron acceptors, with a corresponding decrease in petroleum hydrocarbon biodegradation. Due to the high pH, high alkalinity, and low redox potentials, groundwater concentrations of nitrate, sulfate, and dissolved iron are unlikely to correspond to microbial-mediated electron transfer. Instead, these analytes are controlled by pH and ORP. Under Site conditions, nitrogen is expected to exist as dissolved nitrogen gas or ammonia, with anticipated low nitrate levels. Low levels of dissolved iron are likely due to groundwater dominated by iron hydroxide and oxyhydroxide species, which have very low aqueous solubility at high pH. Conversely, the elevated sulfate levels seen in Site monitoring wells are likely due to the fact that sulfate is the dominant sulfur species at high pH.

[2] Ethene, which is reported as part of the RSK-175 dissolved gases SOP, is not an important marker for petroleum hydrocarbon biodegradation. Ethane can be an indicator for moderate petroleum hydrocarbon biodegradation. However, the ppb ethane concentrations seen at the Site are unlikely to indicate significant biodegradation.

[3] Eckhardt, D.A.V., Reddy, J.E., and Tamulonis, K.L., 2008. Ground-water quality in western New York, 2006: U.S. Geological Survey Open-File Report 2008-1140, http://pubs.usgs.gov/ofr/2008/1140

5.30 GROUNDWATER FLOW

Based on groundwater elevation data from the June 2014 monitoring round, groundwater in the vicinity of WT-1 flows in a south-southwesterly direction toward Smokes Creek and Lake Erie. Inferred groundwater flow directions from the Steel Winds Site as a whole is shown on Figure 3. Depth to groundwater in the WT-01 AOC was approximately 15 to 20 feet below grade in June 2014.

5.40 HYDRAULIC CONDUCTIVITY TESTING

On July 15, 2014, GZA conducted hydraulic conductivity testing on four overburden wells within the WT-01 AOC (BCP-ORC-1, MWN-01B, WT01-04 and WT01-05). Rising head tests were conducting using a solid 1.5-inch diameter 5-foot long rod Teflon slug and a programmable In-Situ Troll data logger. Note that in the Work Plan, we anticipated conducting pneumatic hydraulic conductivity testing. However, on the test day, the pneumatic hydraulic conductivity test apparatus did not function correctly and a Teflon slug was substituted. Data collected from rising head slug tests was analyzed using the Bower & Rice Method. Hydraulic conductivity test calculations are provided in Appendix D and are summarized in the below table. As shown multiple tests were performed in each borehole:

Well	Screen Depth (Feet bgs)	Geologic Unit	Estimated Hydraulic Conductivity (Feet/Day)	Average Hydraulic Conductivity (Feet/Day)
BCP-ORC-1	22-32	Sand/Silty Sand	1.5	1.45
			1.4	
MWN-01B	22.24-32.24	Sand/Silty Sand	9.0	9.05
			9.1	
WT01-04	14-24	Sand/Silty Sand	5.2	4.8
			4.4	
WT01-05	10-20	Fill/Slag	53	45.7
			48	
			36	

The above results indicate that the fill/slag has a hydraulic conductivity approximately one order of magnitude higher than the underlying sand/silty sand unit, which is consistent with the hydraulic conductivity results presented by Benchmark in the GQA Report.

5.50 WT-01 AOC NAPTHALENE MASS LOADING EVALUATION

GZA evaluated the naphthalene mass loading from the WT-01 vicinity. Mass Loading calculations are provided in Appendix E and are summarized below.

Geologic Unit	Hydraulic Conductivity (Feet/Day)	Hydraulic Gradient[c] (Feet/Feet)	Discharge Zone Length[d] (Feet)	Aquifer Thickness (Feet)	Naphthalene Concentration (mg/L)	Naphthalene Loading (lb/Year)
Fill/Slag	46[a]	0.0018	350	10	0.3[e]	2.0
Sand/Silty Sand	5[b]	0.0016	350	10	1.2[f]	0.8
Total from WT-01 AOC						**2.8**
Total From Tecumseh Site						**234**
WT-01 AOC Percent of Tecumseh Site						**1.2%**

Notes:
a-Average hydraulic conductivity of WT01-05
b-Average hydraulic conductivity of WT01-04, BCP-ORC-1 and MWN-01B
c-From hydraulic gradient segment 6 presented in Appendix B of GQA Report
d-Combined discharge length to Smokes Creek and Lake Erie
e-Maximum June 2014 concentration from fill/slag geologic unit wells (from MWN-01)
f- Maximum June 2014 concentration from sand/silty sand unit wells (from MWN-01B)

As shown, naphthalene mass loadings represent 1.2% of the Site-wide total and are deemed insignificant, compared to the remainder of the Site. Note that GZA used conservative values (maximum detected concentrations from June 2014, etc.) for each of the two geologic units evaluated (fill/slag and sand/silty sand). Similar to Benchmark's approach in the GQA Report, we have assumed that the underlying silty clay geologic unit forms an aquitard and only the shallow aquifer mass loadings were evaluated.

GZA also evaluated the anticipated pore water naphthalene concentration taking into account groundwater concentrations and dilution between the WT-01 vicinity and the discharge zone to Smokes Creek and compared these values to actual pore water concentrations. This calculation is provided in Appendix E.

The calculated pore water concentration of approximately 0.31 mg/L was approximately 1.75 times higher than the maximum actual naphthalene concentration in pore water (0.18 mg/L). Given the large number of assumptions used to develop this estimate, we believe the estimated and actual pore water concentrations are in good agreement and the pore water samples collected are likely representative of actual pore water conditions.

6.00 FISH AND WILDLIFE RESOURCES IMPACT ANALYSIS

GZA performed a Fish and Wildlife Resource Impact Analysis (FWRIA) in accordance with DER 10 (Technical Guidance for Site Investigation and Remediation, dated May 2010) Ch. 3.10.1. The historical use (until 1983) of the Site for steel plant operations has eliminated the majority of native species and the Site has been developed as a wind energy facility. The surrounding property is vacant, and the surface contains slag/fill, residual demolition debris, and is mainly populated by low-lying vegetation and small stature early successional trees (e.g., eastern cottonwood and poplar), providing little or no wildlife

habitat or food value. As stated above, the banks of both Lake Erie and Smokes Creek have historically been filled with slag debris which has consolidated into a solid slag shelf in many places, especially in Lake Erie. Steel mill debris, including slag, concrete and rebar are present on the banks of Smokes Creek/Lake Erie and a steel cofferdam forms part of the Smokes Creek bank adjacent to the WT-01 AOC. Smokes Creek is generally turbid and of poor quality. Representative photographs of Smokes Creek and Lake Erie in the vicinity to the AOC are provided in Appendix F. This FWRIA focuses on potential exposure of ecological receptors to groundwater contaminants discharging to the shore of Lake Erie and Smoke Creek.

6.10 AQUATIC HABITAT CHARACTERIZATION

Based on information provided by the DEC Environmental Resource Mapper (ERM), the near-shore (within one-quarter mile) portion of Lake Erie[4] and the lower reach of Smokes Creek[5] are classified as Class C freshwater. Class C waters have a best use designation for primary and secondary contact recreation (although other factors may limit the use for these purposes), fishing, and propagation and survival of fish and wildlife.

GZA reviewed the 2012 Section 305b Water Quality Reports for Niagara River/Lake Erie Basin prepared by the NYS DEC (available at: http://www.dec.ny.gov/chemical/36738.html). The status of water quality of Lake Erie and Smokes Creek proximate to the Site is summarized below.

- Water quality of the portion of Lake Erie adjacent to the Site is considered impaired due to polychlorinated biphenyls (PCBs) in sediment, which have resulted in a fish consumption advisory which is more stringent for some human receptors than state-wide advisories. The potential for resolving the PCB issue for this portion of Lake Erie is considered to be low.

- Aquatic life, recreational uses and aesthetics are stressed in this section of Smokes Creek due to presence of sludge banks, nutrient, silt and pathogen inputs, and possible low dissolved oxygen and high metals concentrations in sediment. These stresses notwithstanding, aquatic life and recreation are considered to be fully supported by water quality conditions in this portion of Smoke Creek. Resolution potential is considered moderate for these water quality issues.

- The ERM also shows habitat of Rare Plants or Animals on and adjacent to the Site. The ERM rare species polygon covers roughly 25 square miles of the northeastern corner of Lake Erie and extends northward on the Niagara River. The rare habitat polygon extends one-half mile landward from the shore of Lake Erie, and thus encompasses the entire Steel Winds I property. GZA submitted a rare species information request to the New York Natural Heritage program on October 17, 2014. Typical response time for information requests is two to four weeks and we

[4] Lake Erie Northeast Shoreline segment 0104-0035.
[5] Smokes Creek, Lower and Minor Tribs, segment 0101-0007

expect a response from the Natural Heritage Program in early to mid-November 2014. Relevant information from this request, if any, will be submitted to the Department as a supplement to this TI Waiver Application.

- Habitat characteristics of Smokes Creek adjacent to the Site, and the affected groundwater discharge zone of Lake Erie have been significantly degraded due to historic and on-going human activities. The shoreline of Lake Erie and the bank of Smokes Creek along the discharge zone were used historically as a dumping site for iron slag from the steel mill operation. As a result of this dumping the littoral zone is dominated by a nearly continuous layer of consolidated, hardened slag. Cobbles and gravel have migrated onto this layer by wave action, and there are pockets of fine sediment in between masses of slag, or in depressions in the slag. The presence of this hardened slag layer limits the aerial extent and depth of habitat for infaunal organisms in the littoral zone. In areas where fine or granular sediments have not accumulated, benthic habitat is limited to epilithic or epiphytic species.

In addition, conditions within Smokes Creek and the proximal portion of Lake Erie have been degraded by contaminants from other sources. PCBs are a known problem for this portion of Lake Erie, and metals in sediment of Smoke Creek may be partially responsible for a stressed aquatic community. Lastly, elevated concentrations of benzene discharge to Smokes Creek with groundwater from the south of the creek, across from the Steel Winds I property.

6.20 POTENTIAL EXPOSURE AND SCREENING-LEVEL ASSESSMENT FOR AQUATIC RECEPTORS

As discussed above, contaminated groundwater from the Steel Winds I property is expected to flow west and south and discharge to Smokes Creek just before is flows into Lake Erie, and to Lake Erie north of the mouth of Smokes Creek. Aquatic receptors may be exposed to groundwater contaminants after discharge has occurred and groundwater has been mixed with surface water. Furthermore, benthic organisms may be exposed to groundwater contaminants that have adsorbed to sediment particulates, and infaunal benthic species[6] may be exposed to dissolved contaminants in sediment pore water prior to significant dilution of the groundwater contaminant concentration by surface water. The depth and area over which exposure to sediment pore water can occur might be limited due to the layer of hardened slag; however, GZA was able to collect sediment and pore water samples from pockets of sediment deposited above or between the slag layers. Therefore, there is some potential for infauna to be exposed to sediment pore water.

A screening level evaluation of potential risk was performed by comparing analytical results to regulatory standards or guidance values intended to be protective of aquatic receptors. Data usability considerations addressed in this assessment are: 1) whether reporting limits (RLs) for non-detect results were low enough to evaluate whether the

[6] That is, benthic species that burrow below the sediment/surface water interface.

contaminant was present at potentially harmful levels, and 2) the proportion of analytes for which a screening value is not available. For risk assessment, one half of the RL is commonly used to represent estimated contaminant concentrations for non-detect results. For this screening assessment, non-detect results with reporting limits RL that are less than or equal to two times the screening value are considered sufficient to evaluate potential toxicity.

The assessment below discusses the proportion of chemical analyzed for which screening levels were not identified. Qualitative judgments are presented as to whether the lack of screening levels for certain contaminants introduce significant uncertainty into the conclusions drawn from the data.

6.20.01 Surface Water

Table 3 presents surface water analytical results. As described above, among the 59[7] VOCs or SVOCs analyzed, benzene and naphthalene were the only chemicals detected; benzene was detected once (in sample SW-4) and naphthalene was detected in four of the eight sample locations.

Potential toxicity of VOCs and SVOCs in surface water was evaluated by comparing analytical results to New York State Ambient Water Quality Standards and Guidance Values (AWQC) presented in TOGS 1.1.1. If an AWQC was not presented for an analyte, GZA used surface water screening benchmarks available from other widely used sources of ecological benchmarks. Sources of other benchmarks used are presented in the notes for Table 3. For purposes of this report the term "screening value" refers collectively to AWQC and Screening Benchmarks from other sources.

For some contaminants both an AWQC value and a Surface Water Screening Value are presented in Table 5. In those cases the AWQC values were used preferentially in our evaluation of whether contaminant concentrations are high enough to present a potentially significant exposure.

Data Usability

Among the 59 VOCs and SVOCs analyzed, screening values were identified for 35 of the analytes. Among the 35 analytes with available screening levels, 18 were not detected, but had RLs of more than double their benchmark. A moderate degree of uncertainty is introduced to this evaluation because 38 of the 59 chemicals analyzed either did not have an identified screening value, or were non-detect at an elevated RL.

[7] Sixty analytes were reported, however, naphthalene was analyzed as both a VOC and an SVOC, and therefore the total number on chemical analyzed was 59.

Surface Water Screening Assessment

Benzene and naphthalene were the only VOCs or SVOCs detected in surface water samples. None of the detected concentrations exceeded screening levels (screening levels were identified for both benzene and naphthalene). With the previously described limitation regarding the lack of screening values and elevated RLs for many of the contaminants analyzed, these data suggest that there is little potential that VOCs or SVOCs in surface water present a significant risk of toxic effects to aquatic organisms. We also note, as described above, that the WT-01 AOC is not the only source of these contaminants discharging to Smokes Creek and Lake Erie.

6.20.02 Sediment Pore Water

Table 4 presents analytical results for VOCs in pore water samples. As described above, among the 14 VOCs analyzed, seven were detected in samples PZ-3 and PZ-4 (benzene, ethylbenzene, naphthalene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and total xylenes). No VOCS were detected in sample PZ-2.

Contaminants bound to sediment particulates, organic carbon, or complexed with sulfides or other ligands are generally not bioavailable, and therefore, not toxic to organisms exposed to the sediment. Dissolved concentrations of contaminants in pore water are considered a good representation of the degree of exposure, and potential risks from such exposures can be evaluated by comparing dissolved concentrations to surface water screening levels. Therefore, pore water screening was performed by comparing analytical results to the surface water AWQC (use of Surface Water Screening Benchmarks would also be appropriate; however, no Screening Benchmarks were available for those VOCs that did not have AWQC values).

Data Usability

Screening values were not available for six of the 14 VOCs analyzed. The lack of screening values introduces a moderate degree of uncertainty into this assessment. Among the eight VOCs for which screening levels were identified, none had elevated RLs compared to the screening values.

Pore water Screening Assessment

Screening levels were available for all of the seven VOCs detected, as shown in Table 4. Naphthalene was the only contaminant with concentrations above the screening value. Based on these data, naphthalene concentrations in pore water may be high enough to cause toxic effects to exposed sensitive benthic organisms. Note that the pore water samples were heavily sediment laden when purging commenced. The samples visually cleared during purging and likely retained some level of turbidity (water quality readings were not collected as part of pore water sampling). A sheen was also present on the purge

water. This indicates that a portion of the detected naphthalene concentration is likely particulate bound and not bioavailable.

6.20.03 Sediment (Bulk Concentrations)

The screening-level assessment for contaminants in sediment was performed in accordance with the DEC "Screening and Assessment of Contaminated Sediment" dated June 24, 2014, referred to herein as the DEC screening guidance. This document presents a list of Sediment Guidance Values (SGVs) in three ranges: Class A, Class B, and Class C.

According to the DEC screening guidance, freshwater sediment contaminants are categorized as

- Class A if they are below conservative, threshold-effect screening values thus presenting little risk of causing toxic effect, and therefore no further assessment is warranted;
- Class B if the detected concentration falls between conservative, threshold-effect screening values and higher probable effect screening values, therefore additional assessment would be needed to characterize whether toxic effects are likely; and
- Class C if the concentrations exceed the probable effects concentrations, and therefore, there is a higher probability that toxic effects would occur.

As with surface water, if a guidance value was not presented, GZA attempted to identify a Sediment Screening Benchmark from alternative sources of widely used lists of sediment screening values. The Sediment Screening Benchmarks identified were limited to conservative threshold-effect type benchmarks, therefore, these alternate Sediment Screening Benchmarks were considered to be analogous to Class A SGVs. The notes in Table 5 present the sources of the Sediment Screening Benchmark concentrations used.

Table 5 presents results for VOC and SVOC analyses performed on sediment samples. Of the 59 chemicals analyzed, 25 were detected. Samples collected from Smoke Creek (SED-2, SED-3 and SED-4) contained more contaminants with detectable concentrations, at higher concentration than in samples collected from the shore of Lake Erie (SED-6 and SED-7). In addition to evaluating individual PAHs, total PAHs[8] were evaluated in accordance with the DEC guidance. The samples collected from Smokes Creek (SED-2, SED-3 and SED-4) had total PAHs above the Class A SGV; total PAH concentrations in the Lake Erie sediment samples were below the Class A SGV.

Data Usability

Of the 59 VOCs and SVOCs analyzed, screening values were identified for 34 of them. This introduces a moderate degree of uncertainty into this assessment. Elevated RLs were generally not a significant concern for this data set, as there are reported estimated concentrations (i.e., "J" qualified results) for a sub-set of samples (predominately

[8] Calculated as the sum of detected concentrations and one-half the RLs for non-detect results.

in Smokes Creek samples) which are below the screening levels. Therefore, the samples for which results were reported as non-detects (predominately the Lake Erie samples) likely did not have concentrations approaching the screening level. Note that this is not the case for two compounds, dibenzo(a,h)anthracene and hexachlorobenzene, which were not detected in all samples with RLs above their respective benchmarks. However, this does not introduce significant uncertainty into the assessment.

Sediment Screening Assessment

Among the 25 chemicals detected, screening levels were identified for 21, and only four detected contaminants did not have screening levels. Most of the contaminants that exceeded screening values were individual PAHs. In addition, total PAH concentrations in Smokes Creek exceeded the DEC guidance Class A values. As such, total PAH concentrations indicate that Smokes Creek sediments are Class B sediments. The only non-PAH that exceeded a screening level was dibenzofuran; the screening value for dibenzofuran is not a DEC SGV.

For the Lake Erie samples (SED-6 and SED-7), only a few individual PAH compounds exceed the Class A screening levels. However, the total PAH concentrations are below the Class A threshold. The DEC screening guidance presents SGVs for total PAHs, but does not present bulk sediment SGVs for individual PAH compounds; the screening levels for individual PAH compounds presented on Table 5 are Sediment Screening Benchmarks from other sources. In accordance with the DEC sediment guidance, because none of the contaminants detected in SED-6 and SED-7 exceed the Class A limits (including total PAHs), Lake Erie sediment represented by these sample are unlikely to be toxic to aquatic organisms due to these VOCs and SVOCs, and no further action is necessary.

In accordance with the DEC sediment guidance, if total PAH concentrations exceed the Class A threshold, potential risk due to PAHs can be further evaluated using organic carbon normalized concentrations. As discussed, only the portion of the contaminant load dissolved in sediment pore water is bioavailable to exposed benthic organisms, and therefore potential toxic effects are limited to the dissolved portion. PAHs, like most non-polar organic contaminants, have a high affinity for adsorbing to organic carbon in the sediment, and the proportion adsorbed to organic carbon is not bioavailable, and therefore is not toxic.

The equilibrium partitioning evaluation uses the Toxic Unit (TU) approach for PAHs. For this approach a TU for each PAH compound (TU_i) is calculated by dividing the organic carbon normalized SGV (units in ug/g OC) by the organic carbon normalized concentration in the sediment sample. Then, because individual PAH concentrations have the same mode of toxicity, the TU_i values are summed to calculate the TU for total PAHs (TU_t). If the TU_t is less than or equal to 1, that PAHs in that sample are considered to have a low potential for toxicity. If the TU_t is greater than one, PAHs in that sample are considered to be potentially toxic.

The Toxic Unit approach for PAHs is intended to be used for a suite of 34 PAHs. Because only 17 of those PAH compounds were analyzed for this data set, the final TU_t was calculated by multiplying the sum of TU_i values by 7.87.

Table 6 presents organic carbon normalized SGVs for individual PAH compounds developed based on organic carbon partitioning coefficients and water-only toxicity information for each PAH. Table 6 also presents organic carbon normalized PAH concentrations for SED-2, SED-3 and SED-4 using the total organic carbon (TOC) content measured for each sample. Table 6 also presents the TU_t values for each sample. All three Smokes Creek samples have TU_t values greater than 1, therefore, PAH concentrations may be toxic to expose benthic organisms.

6.20.04 Bioaccumulation and Food Web Concerns

Contaminants associated with groundwater from the WT-01 AOC are not bioaccumulative and persistent (e.g., the DEC sediment guidance does not present bioaccumulation-based SGVs). In addition, the portions of Smokes Creek and Lake Erie potentially affected by groundwater discharge are relatively small, and have degraded physical habitat conditions, which are likely to limit the abundance of prey organisms living in sediment.

Based on these considerations, it is GZA's opinion that groundwater contaminants discharging to Smokes Creek and Lake Erie from the WT-01 AOC are not a significant concern for the food web and higher trophic level receptors.

6.30 CONCLUSIONS AND RECOMMENDATIONS

PAHs in sediment and one VOC in pore water (naphthalene), within Smokes Creek, were detected at concentrations that may be harmful to exposed benthic organisms. Naphthalene was detected in pore water above the DEC guidance value and total PAH TU_t values greater than 1 were observed in Smokes Creek sediments. In addition, dibenzofuran was detected in Smokes Creek sediment samples above the screening level.

Although a few individual PAH concentrations in Lake Erie sediment samples exceed screening levels (screening levels for individual PAHs are not included in DEC's guidance) total PAH concentrations in these samples were below the Class A SGV, and no other contaminants exceeded screening levels. As described above, sediment pore water samples could not be collected from the shore of Lake Erie due to consolidated slag material.

Benzene and naphthalene were detected in surface water samples from Smokes Creek at concentrations below the screening levels. None of the contaminants analyzed for were detected in Lake Erie surface water samples.

The physical conditions of the benthic habitat potentially impacted by discharge of groundwater from the WT-01 AOC have been significantly degraded by historic filling and disposal of iron slag and other debris. The nearby portion of Lake Erie has known PCB contamination resulting in fish ingestion advisories. Nutrient and sediment inputs from the Smokes Creek watershed result in a stressed aquatic community, and other sites are known to contribute chemical contaminants to the Creek; in particular high benzene levels that discharge to Smokes Creek from the portion of the Tecumseh property south of Smokes Creek, across from the Steel Winds I Site.

Additional sampling of sediment and sediment pore water from Smokes Creek would allow a better characterization of the magnitude of potential risk posed by groundwater contaminants migrating from the WT-01 AOC. Benthic habitat within the zone of discharge for groundwater from the WT-01 AOC receives contaminants from sources other than WT-01. GZA recommends that additional sediment and sediment pore water samples be collected upstream of the discharge zone and from the discharge zone so that we can characterize the relative contributions of contaminants from WT-01 groundwater and from upstream sources.

Based on the data collected to date, PAHs in sediment and sediment pore water appear to present the greatest potential for risk (among the contaminants of concern for WT-01 pore water). The TU_t values estimated for PAHs in sediment incorporated a conservative adjustment factor of 7.87 because only 17 of the 34 PAHs required for the toxic unit evaluation were analyzed. In GZA's experience, application of such adjustment factors results in conservative estimates of the TU_t. GZA recommends analyses of additional sediment samples for the 34 PAHs to more accurately estimate potential risk using TU_t values.

Naphthalene was the only VOC detected in pore water, and it was detected at concentrations exceeding the screening level. The pore water samples were highly turbid, and it is likely that most of the naphthalene detected was associated with suspended particulates, and thus not bioavailable to exposed benthic organisms. GZA recommends collection of additional pore water samples, and centrifugation to remove particulates prior to chemical analyses of the supernatant.

If DEC agrees that additional sampling is warranted, GZA will prepare a brief supplemental sampling plan for that work and present it to DEC on behalf of our Client.

As discussed above, the DEC ERM indicates that rare species habitat is present in the adjacent portion of Lake Erie and over a one-half mile, landward offset from the shore of Lake Erie (and thus encompassing the Steel Winds I Site). GZA submitted a rare species information request to the New York Natural Heritage Program; a response to that request is expected by mid-November. Once we know which species are associated with the rare species habitat, GZA will prepare a letter report which considers whether the rare species associated with this portion of Lake Erie have territorial or feeding habits that might concentrate their activities at, and exposure to, the Site groundwater discharge zone. If this

is the case, additional work may be warranted to better characterize potential exposure and risk to the rare species.

Assuming that DEC agrees that additional sediment and sediment pore water sampling is warranted as outlined above; the rare species evaluation will be included with the sampling work plan. If warranted, the work plan will include any additional work to better evaluate risk to the rare species.

7.00 REMEDIAL ALTERNATIVE EVALUATION

As described in Section 5.00 the ORC remedy at the WT-01 AOC did not have a significant beneficial effect on groundwater contamination. The Site characterization data indicates that the poor performance of the remedy is primarily due to: 1) the difficult hydrogeologic conditions (e.g., heterogeneous aquifer materials, elevated pH, low Redox conditions, numerous subsurface obstructions, etc.); and 2) the likely presence of non-aqueous phase source material within the sediment/slag matrix, in particular coal tar in dredge spoils from Smokes Creek, which were historically deposited in the area.

This section provides an evaluation of the feasibility of five other remedial approaches that were identified as potentially applicable to the identified Site contaminants in groundwater. To provide a consistent platform for this evaluation we employed the criteria described in DEC's DER-10 (Technical Guidance for Site Investigation and Remediation, dated May 3, 2010) Section 4.2 to evaluate the following five remedial alternatives:

- Monitored Natural Attenuation (MNA);
- Air Sparge Curtain-Well Points with Enhanced Denitrification System;
- Air Sparge Curtain Continuous Trench with Enhanced Denitrification System;
- In-situ Chemical Oxidation (ISCO); and
- Hydrodynamic Groundwater Containment (HGC).

Where applicable, we also utilized guidance provided in EPA's "Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration", dated September 1993.

7.10 DESCRIPTION OF EVALUATION CRITERIA

In evaluating the five alternatives listed above, the following 10 criteria, taken from the above guidance documents, were used:

- Overall protection of human health and the environment
- Conformance with promulgated standards, criteria and guidance
- Source control (from EPA Guidance)

- Compliance with waste management standards (from EPA Guidance)
- Long-term effectiveness and permanence
- Reduction of waste toxicity, mobility, or volume
- Short-term impact and effectiveness
- Implementability;
- Landuse; and
- Cost Effectiveness

The following subsections provide a description of each criteria and its applicability to the WT-01 AOC.

7.10.01 Overall Protection of Human Health and the Environment

Overall protection of human health and the environment is evaluated based on a composite of factors assessed under other evaluation criteria. Those specifically considered are short-term effectiveness, long-term effectiveness and permanence, and compliance with media cleanup standards. For each alternative, it includes:

- How the remedy will eliminate, reduce or control through removal, treatment, containment, engineering controls or institutional controls, any existing or potential human exposures or environmental impacts;
- The ability of each alternative to achieve the remedial objectives;
- How the groundwater contamination is to be eliminated, reduced or controlled;
- How site risks are to be eliminated, reduced or controlled; and
- Consideration of whether an alternative poses any unacceptable short-term risks or cross-media impacts.

The ICs/ECs currently in place mitigate impacts to human health. As such, human health exposure in not discussed further in this evaluation.

7.10.02 Conformance with Promulgated Standards, Criteria and Guidance

An evaluation with respect to the attainability of media cleanup goals is performed to assess how each alternative complies with the applicable cleanup standards, in this case NYDEC's Class GA Groundwater Quality Standards. Our evaluation was limited to groundwater, because that is the primary media of concern within the AOC and the transport mechanism of any potential ongoing release to adjacent surface water and/or sediment.

7.10.03 Source Control (From EPA Guidance)

An evaluation with respect to source control is performed to assess if the alternatives under consideration: 1) directly remediate the contaminant source; or 2) isolate the source from impacting surrounding areas/media. In this case, the source is VOC and naphthalene contaminated dredge spoils from Smokes Creek that were previously deposited in the WT-01 area comingled with slag resulting from the former foundry operations. Monitoring data also demonstrate that contaminated upgradient groundwater is migrating onto the WT-01 Site which is a further source of contaminant input.

Based on our understanding of the Site, non-aqueous phase coal tar wastes are present in the vadose zone within the area of concern and are leaching contaminants to the groundwater. As stated above, this represents a diffuse and recalcitrant source, distributed over a large geographic area (the WT-01 area is approximately 1.3 acres). Given the type of contaminant sources, the physical constraints posed by current Site operations (e.g., wind towers, transformers, high voltage lines and controls, etc.), and difficult subsurface conditions (i.e., slag, kettle bottoms, low permeability dredge spoils), we believe that source control in the unsaturated zone is impractical. However, engineered controls consisting of a 1 foot thick soil cap have been placed to prevent direct exposure to contaminated media. As such, our technology specific evaluation of Source Control provided below focuses on the proposed remedy's ability to isolate the source from impacting surrounding areas/media.

7.10.04 Compliance with Waste Management Standards (From EPA Guidance)

RCRA regulations include provisions for the proper handling and disposal of waste, including remediation wastes. For all alternatives in this evaluation, we have assumed that all remediation derived waste will be handled and disposed of in proper accordance with the RCRA regulations. As such, this criterion is not discussed further in this evaluation.

7.10.05 Long Term Effectiveness and Permanence

Evaluation of long-term effectiveness is made by considering the risks remaining at the Site after the remedy has been implemented, the long term reliability of the remedy, and long term maintainability of the implemented alternative. If contamination will remain on- or off-site after the selected remedy has been implemented, this evaluation will assess the impact of the remaining contamination on any of the following:

i. human exposures;
ii. ecological receptors; or
iii. impacts to the environment.

7.10.06 Reduction of Toxicity, Mobility and Volume

This criterion is an evaluation of the ability of an alternative or remedy to reduce the toxicity, mobility and volume (TMV) of site contamination. Preference should be given to remedies that permanently or significantly reduce the TMV of the contamination at the Site.

7.10.07 Short-Term Impact and Effectiveness

The short-term impact and effectiveness of a remedial alternative is evaluated relative to its effect on human health and the environment during construction and implementation of the remedial action including:

- Risk to the community during implementation of the subject remedial action;
- Risk to workers during implementation of the remedial action;
- Potential for occurrence of adverse environmental impacts as a result of implementation of the remedial action;
- Efficacy of mitigation techniques to be employed, if applicable; and
- Time until remedial response objectives are achieved.

7.10.08 Implementability

The implementability criterion is used to address the technical and administrative feasibility of implementing an alternative, and the availability of various materials and services required during its implementation. The following factors are considered during the implementability analysis:

Technical Feasibility - The relative ease or difficulty of implementing an action. The following items are considered:

- Ability to construct the alternative as a whole (constructability).
- Reliability, or the ability of a technology to meet specified process efficiencies or performance goals without major schedule delays;
- Ease of undertaking future remedial actions that may be required; and
- Ability to monitor the effectiveness of the remedy.

Administrative Feasibility - Activities needed to coordinate with other offices and agencies (e.g., obtaining permits for work in wetlands, off-site activities or rights-of-way for construction).

Availability of Services and Materials - The local availability of the technologies (materials or services) required to implement an alternative. The following items are considered:

- Availability of adequate off-site treatment, storage capacity, and disposal services;
- Availability of necessary equipment and specialists and provisions to ensure any necessary additional resources;
- Availability of technologies under consideration; and

- Availability of services and materials, plus the potential for obtaining competitive bids, which may be particularly important for innovative technologies.

7.10.09 Cost Effectiveness

A remedy is cost effective if its costs are proportional to its overall effectiveness. To evaluate cost effectiveness:

- The overall effectiveness of an alternative or remedy is evaluated according to the above criteria;
- A comparison of the overall effectiveness is then made to the cost of the alternative or remedy; and
- An evaluation is made as to whether the cost is proportional to the overall effectiveness

Cost estimates for each alternative are based on conceptual engineering and analyses, and are expressed in terms of 2014 dollars. The cost estimate for a remedial alternative consists of four principal elements:

- Capital costs - Capital costs consist of direct (construction) and indirect (non-construction and overhead) costs. Direct costs include costs for equipment, labor, and materials incurred to develop, construct and implement a remedial action. Indirect costs are expenditures for engineering, financial, and other services that are not actually a part of construction, but are required to implement a remedial alternative. These items are included in the detailed cost analysis as separate line items. Additionally, a 10% construction contingency has been included in the cost estimates to account for factors that cannot be anticipated or estimated.

- Operation and Maintenance (O&M) Costs - O&M costs refer to post-construction costs necessary to ensure the continued effectiveness of a remedial action. They typically refer to long-term power and material costs (such as the operational costs of a groundwater treatment facility), equipment replacement costs, and long-term monitoring costs.

- Analysis of Present Worth - This assessment is used to evaluate the capital and O&M costs of a remedial alternative on a present worth basis (in today's dollars). This analysis allows the comparison of remedial alternatives on the basis of a single cost representing an amount that, if invested in the base year and disbursed as needed, would be sufficient to cover all costs associated with the remedial action over its planned life. A 7 percent discount rate and a 30-year performance period are assumed for present worth analyses. This allows the user to evaluate the relative costs of various alternatives that may differ significantly in their

capitol and O&M costs, such as comparing the cost of a source control remedy compared with long-term pump and treat remedy.

For the purposes of the present worth analysis year 0 will be considered to be 2014, groundwater collection/treatment/ disposal will be assumed to begin in 2015 and will be fully implemented in the year 2016. The cost estimates for each remedial alternative considered as part of this evaluation are presented on Table 7.

7.10.10 Landuse

This criterion is an evaluation of the current, intended and reasonably anticipated future use of the Site and its surroundings, as it relates to an alternative or remedy, when unrestricted levels would not be achieved. Each alterative assumes that landuse will be unchanged in the future as the wind farm is expected to operate for the forseeable future. As such, this criterion is not discussed further in this evaluation.

7.20 EVALUATION OF ALTERNATIVES

The following subsections provide a brief description of each alternative considered. A comparison of the present worth of each alternative is provided in Table 7.

Note, as discussed above, institutional and engineering controls (a deed restriction and a soil cap) which limit current and future Site use to industrial activities and prohibit groundwater use and prevent direct contact with contaminated media, have already been implemented for the Site and remain in effect. In developing and evaluating remedial alternatives, we have assumed that institutional and engineering controls will remain in effect indefinitely.

7.20.01 Evaluation Criteria Common to all Alternatives

To simplify the alternatives evaluation, the criteria which are substantially similar for all alternatives are grouped together below. Any critical differences between the alternatives are noted.

7.20.01.1 Conformance with Promulgated Standards, Criteria and Guidance

Based on the diffuse and recalcitrant nature of the contamination source, it will be difficult for any technology to remediate groundwater to the DEC Class GA Groundwater Quality Standards throughout the WT-01 AOC. Additionally, there is the possibility that WT-01 is, at least in-part, a downgradient receptor of off-Site contamination from other Solid Waste Management Units (SWMUs) on the Tecumseh property. Because of this, and the fact that existing ICs/ECs prevent on-Site contaminant exposures; we have generally focused on remedial alternatives that control the release of contaminants beyond the downgradient property boundary. During their operation, each alternative, except monitored natural attention, may be able to meet the media cleanup standards at the groundwater

discharge point (i.e., the groundwater aquifer just prior to discharge into Smokes Creek and Lake Erie); however, once each active remedy is terminated, groundwater contaminants will likely rebound to similar concentrations because little reduction in contaminate source mass will have been achieved.

7.20.01.2 Implementibility

All alternatives evaluated are both technically and administratively feasible. While construction of some of the alternatives may be difficult due to the large amount of subsurface debris (steel slag, etc.), we feel that each alternative can be constructed. In addition, each alterative has been implemented at other Sites. All are generally well accepted technologies. Note that the enhanced denitrification systems are innovative; however, they have been implemented successfully at other Sites with aromatic hydrocarbon contaminants and it is GZA's opinion they could be implemented at Steel Winds.

7.20.02 Alternative 1: Monitored Natural Attenuation

This alternative involves the treatment of the groundwater contamination by natural mechanisms over time, i.e., involves no active remediation. Based on the location of the contamination and the low risk to potential receptors, it is our opinion that this is a viable remedial alterative. Under this alternative, monitoring would continue at the Site to ensure that groundwater contamination does not increase over time.

7.20.02.1 Overall Protection of Human Health and the Environment

As stated earlier, based on the existing EC/IC, and the findings of the Fish and Wildlife Resources Impact Analysis presented in Section 6, there is no significant risk posed to humans or the environment[9] for the current groundwater contaminant levels, as long as the ECs/ICs remain in place. Monitoring will continue to ensure that groundwater contamination does not increase significantly over time.

7.20.02.2 Source Control

As stated above, we believe treatment of contaminant source materials in the unsaturated zone is impractical. As such, our evaluation of source control focuses on the proposed remedy's ability to isolate the source from impacting surrounding areas/media. With respect to this criterion, monitored natural attenuation provides no additional controls of the sources of contaminants over those provided by the ECs and ICs already in place at the Site. However, as stated above, under current and anticipated future conditions, the

[9] This statement is based on our current evaluation and understanding of the Site data with respect to ecological screening benchmarks and potential receptors. This opinion is subject to modification based on the results of the proposed supplemental sampling and analysis, and/or the finding of the rare species information request.

existing sources of contaminants do not pose a significant risk to human health or the environment.

7.20.02.3 Long Term Effectiveness and Permanence

Over long periods of time, natural processes are anticipated to reduce contamination levels thru processes such as biodegradation and dilution.

7.20.02.4 Reduction of Waste Toxicity, Mobility, or Volume

Natural processes will reduce contaminant concentrations and mass over time. And since we believe that non-aqueous phase coal tar waste is present, none of the remedies evaluated will be significantly more effective in this category.

7.20.02.5 Short-Term Impact and Effectiveness

This alternative is largely implemented (as a groundwater monitoring program is already in place); as such, short-term effectiveness is high.

7.20.02.6 Cost Effectiveness

A conceptual cost estimate for this alternative is provided in Table 7: note that no capital costs are included in this alternative. The only costs applicable to this alternative are annual groundwater sampling, analysis and reporting, to be conducted for thirty years. The total present worth cost for this alternative is approximately $157,200, as shown in Table 7. Note that this cost will also be incurred for the other alternatives in addition to various forms of performance monitoring which are also included in the other alternatives.

7.20.03 Alternative 2: Air Sparge Curtain Well Points with Enhanced Denitrification System

This alternative involves installation of an approximately 600 feet long air sparge curtain along the groundwater discharge area from the WT-01 AOC, proximate to Smokes Creek and Lake Erie. For the purposes of this evaluation we assumed the air sparge curtain will consist of 20 wells spaced 30 feet apart, each attaining a 15 foot radius of influence. The purpose of the sparge curtain would be to treat groundwater for VOCs and naphthalene prior to its discharge into Smokes Creek and Lake Erie. The air sparge remedial technology uses pressurized air released into the subsurface to: 1) directly volatilize contaminants, 2) reduce groundwater pH[10], and 3) promote aerobic biodegradation (biosparge).

[10] Theoretically, carbon dioxide can accumulate in air-sparged water until it is in equilibrium with the atmosphere. While this pH is not low enough to dissolve calcite and decrease alkalinity, groundwater pH could, theoretically and eventually, approach 8.1 S.U. However, due to the high alkalinity at the Site, pH reduction due to air sparging is unlikely to reach the theoretical 8.1 S.U. within 30 years. The activity of

In addition, a contingency enhanced denitrification system, consisting of periodic injections of aqueous potassium nitrate into the air sparge wells, has been included in this alternative. Many VOC-degrading bacteria can use nitrate as an electron acceptor when oxygen is depleted. As such, an enhanced denitrification system complements a biosparge system. Note that the biological component of this remedy may also be inhibited by the extreme aquifer conditions that inhibited the effectiveness of the ORC program. This may be mitigated by the inclusion of a pH modifier with the denitrification injections. Nitrate injections will also need to be carefully controlled to avoid impacts to the adjacent surface water bodies.

7.20.03.1 Overall Protection of Human Health and the Environment

As stated earlier, based on the existing ECs/ICs and the Fish, and Wildlife Resources Impact Analysis presented in Section 6, there is no significant risk posed to humans or the environment for the current groundwater contaminant levels, if the ECs/ICs remain in place. As the air sparge system would further reduce concentrations migrating from the WT-1 area this would not change. Impacts to air quality or the buildup/migration of vapors from air sparge system are unlikely given the current Site use.

The denitrification system could result in a nitrogen discharge to Lake Erie and Smokes Creek if a large amount of excess chemical is injected into the subsurface. Proper dosing and a spill prevention plan should be in place to prevent direct chemical discharges to Smokes Creek and Lake Erie.

7.20.03.2 Source Control

As stated above, we believe treatment of contaminant source materials in the unsaturated zone is impractical. As such, our evaluation of source control focuses on the proposed remedy's ability to isolate the source from impacting surrounding areas/media. With respect to this criterion, the air sparge could potentially mitigate VOC and naphthalene discharges to the adjacent surface water bodies.

7.20.03.3 Long-Term Effectiveness and Permanence

Because the mass of suspected source material is not reduced by this approach, and no action is taken to limit contaminant migration onto the Site, once the remedial system operation stops (assumed to be 30 years) groundwater conditions will likely return to their present levels.

This alternative may not be fully effective in remediating all aqueous phase contamination passing from the Site to the adjacent surface water bodies. The heterogeneity of the subsurface will likely cause both air and aqueous potassium nitrate to follow preferential pathways, which may leave isolated areas untreated, especially those

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aerobic and facultative aerobic (denitrifying) bacteria does not increase significantly until pH is below ~8.5 S.U.

areas furthest away from well points. In addition, the high oxidant demand of the subsurface will need to be overcome, if significant contaminant mass is to be remediated. The biological treatment element of this remedy may be impeded by the elevated pH as the ongoing ORC remedy has.

7.20.03.4 Reduction of Waste Toxicity, Mobility, or Volume

The contaminant mass to be treated by this alternative is limited to aqueous phase contamination. The treatment process (both the biosparge system and the denitrification system) will irreversibly treat VOCs and naphthalene resulting in non-toxic end products (carbon dioxide and water). The contingency denitrification system will produce some residual potassium nitrate, both in the subsurface and on fouled equipment; any residuals on field equipment would have to be managed properly.

7.20.03.5 Short-Term Impact and Effectiveness

Implementation of this alternative would have limited risks to the community, as ICs are already in place to restrict groundwater use. However, implementation of the denitrification system could produce a significant nitrate loading in Smokes Creek and Lake Erie, which could negatively impact these water bodies. General construction and drilling safety procedures must be observed during implementation, to ensure worker protection. The drilling spoils, compressed air equipment and potassium nitrate could pose a risk to onsite workers, if they are not handled appropriately. Following the start of construction, the remedy could be effective at reducing contaminant concentrations in groundwater discharge to the receiving surface water bodies within approximately 6 months.

7.20.03.6 Cost Effectiveness

A conceptual cost estimate for this alternative is provided in Table 7; as shown, the total present value for this alternative is approximately $2,100,000. This includes capital costs, O&M costs and contingency denitrification system operation costs over a thirty year remedial period.

7.20.04 Alternative 3: Air Sparge Curtain Continuous Trench with Enhanced Denitrification System

This alternative is similar to the air sparge curtain described above, except that sparging will be conducted through a continuous stone trench, which will function as a reactive barrier. This approach has a higher level of certainty in meeting the groundwater discharge standards in that it significantly reduces the potential that contaminated groundwater will pass through the system untreated. This alternative also includes a contingency enhanced denitrification system. Note that the biological component of this remedy may also be inhibited by the extreme aquifer conditions that inhibited the

effectiveness of the ORC program. This may be mitigated by the inclusion of a pH modifier with the denitrification injections.

7.20.04.1 Overall Protection of Human Health and the Environment

As stated earlier, based on the existing ECs/ICs and the Fish and Wildlife Resources Impact Analysis presented in Section 6 there is no significant risk posed to humans or the environment for the current groundwater contaminant levels, if the ECs/ICs remain in place. As the air sparge system would further reduce concentrations migrating from the WT-1 area this would not change. Impacts to air quality or the buildup/migration of vapors from air sparge system are unlikely given the current Site use.

The denitrification system could result in a nitrogen discharge to Lake Erie and Smokes Creek if a large amount of excess chemical is injected into the subsurface. Proper dosing and a spill prevention plan should be in place to prevent direct chemical discharges to Smokes Creek and Lake Erie.

7.20.04.2 Source Control

As with the air sparge curtain, the reactive barrier should effectively mitigate VOC and naphthalene discharges to the adjacent surface water bodies. This approach will have a relatively higher degree of certainty as compared to the air sparge curtain evaluated in Section 7.20.3.

7.20.04.3 Long Term Effectiveness and Permanence

Similar to the sparge curtain technology described above, once the remedial system operation stops (assumed to be 30 years) groundwater conditions will like return to their present levels.

7.20.04.4 Reduction of Waste Toxicity, Mobility, or Volume

Again treatment using this technology is limited to dissolved phase contamination. These processes will irreversibly treat the VOCs and naphthalene, ultimately yielding non-toxic end products (carbon dioxide and water). The contingency denitrification system may produce some residual potassium nitrate, both in the subsurface and on fouled equipment; any residuals on field equipment would have to be managed properly.

7.20.04.5 Short-Term Impact and Effectiveness

Implementation of this alternative would have limited risks to the community, as ICs are already in place to restrict groundwater use. However, implementation of the denitrification system could produce significant nitrate loading in Smokes Creek and Lake Erie, which could negatively impact these water bodies. General

construction safety procedures must be observed during implementation, to ensure worker protection. The trench spoils, compressed air equipment and potassium nitrate could pose a risk to onsite works, if they are not handled appropriately. Following the start of construction, the remedy should be effective at reducing contaminant concentrations in groundwater discharge to the receiving surface water bodies within approximately 6 months.

7.20.04.6 Cost Effectiveness

A conceptual cost estimate for this alternative is provided on Table 7; as shown, the total present value for this alternative is $2,700,000. This includes capital costs, O&M costs and contingency denitrification system operation costs over a thirty year remedial period.

7.20.05 Alternative 4: In-situ Chemical Oxidation

In-situ chemical oxidation (ISCO) consists of injecting chemical oxidants, typically permanganate or Fenton's Reagent (hydrogen peroxide with an iron catalyst), into the subsurface to promote direct oxidative destruction of organic contaminants into non-toxic end products (carbon dioxide, water, chloride, etc.). For this alternative, we have assumed that Fenton's Reagent will be used, based on the contaminants of concern and the subsurface (both soil and groundwater) chemistry. Although in practice, pilot testing of a number of oxidant mixtures would be conducted to select the optimal agent. This alternative assumes a one-time injection program, with 68 injection points, 30 feet on center, with the total injection mass of at least 100,000 pounds of oxidant over the approximately 1.3 acre area.

7.20.05.1 Overall Protection of Human Health and the Environment

As stated earlier, based on the existing ECs/ICs and the Fish and Wildlife Resources Impact Analysis presented in Section 6 there is no significant risk posed to humans or the environment for the current groundwater contaminant levels, if the ECs/ICs remain in place. As ISCO would further reduce concentrations migrating from the WT-01 AOC this would not change. Injection chemicals must be handled properly to ensure worker safety. Due to Fenton's Reagents short half-life, it is unlikely that a significant mass of Fenton's Reagent will be discharged through groundwater to Smokes Creek or Lake Erie. Proper spill prevention controls should be in place to prevent direct chemical discharges to Smokes Creek and Lake Erie.

7.20.05.2 Source Control

Since ISCO is an aqueous phase remedial technology, none of the existing source mass located above the water table will be reduced, and any non-aqueous contaminants below the water table will not be directly oxidized. However, ISCO may effectively mitigate VOC and naphthalene discharges to the adjacent surface water bodies for

a period of time following its application. We believe this approach will have a lower degree of certainty in achieving this reduction as compared to the air sparge curtain trench evaluated above because of heterogeneities in the Site aquifer materials and the development of preferential flow patterns during and following the chemical injections.

7.20.05.3 Long Term Effectiveness and Permanence

Injection of Fenton's reagent will remediate aqueous phase contamination; however, it is not effective in remediating residual non-aqueous phase contaminants below the water table and will not address conditions within the vadose zone. As such, while injections will be performed in the source area, it is unlikely that a significant mass of source material will be removed. Temporary reductions in aqueous phase contaminations will likely be seen; however, contaminant concentrations will likely rebound to current levels as new contaminants dissolve and leach into the aqueous phase from the remaining sources. The heterogeneity of the subsurface will likely cause the injected material to follow preferential pathways, which may leave areas untreated, especially areas furthest away from injection points. In addition the high oxidant demand of the subsurface will need to be overcome if significant reductions in dissolved phase contaminant levels are to be achieved.

7.20.05.4 Reduction of Waste Toxicity, Mobility, or Volume

The total amount of contaminant mass to be treated by this alternative is limited to that which is in the aqueous phase during the relatively short half-life of the injectate. The treatment process will provide permanent destruction of VOCs and naphthalene into nontoxic compounds (carbon dioxide, water, chloride, etc.). Residual Fenton's Reagent on field equipment must be managed properly. As stated earlier, due to Fenton's Reagents short half-life, it is unlikely that residual will persist in the subsurface or be discharged through groundwater into Smokes Creek or Lake Erie.

7.20.05.5 Short-Term Impact and Effectiveness

Implementation of this alternative would have limited risks to the community, as ICs are already in place to restrict groundwater use. The injections must be managed properly, as Fenton's Reagent is highly reactive and could pose a risk to onsite workers. In addition, the reaction of Fenton's Reagent has the potential to produce a large amount of heat in the subsurface, which could also pose a temporary risk to onsite works. General construction and drilling safety procedures must also be observed during implementation, to ensure worker safety.

7.20.05.6 Cost Effectiveness

A conceptual cost estimate for this alternative is provided in Table 7; as shown, total present worth for this alternative is approximately $868,000. This includes capital costs and O&M costs over a thirty year remedial period. Note that this cost

estimate assumes that one round of chemical injections will be sufficient to remediate groundwater to the applicable regulatory standards. As described above, we do not feel that this will be the case, and we believe that this alternative will be ineffective in providing long-term groundwater contaminant reductions.

7.20.06 Alternative 5: Hydrodynamic Groundwater Containment

Hydrodynamic groundwater containment (HGC - commonly referred to as pump and treat) involves the extraction of groundwater, its treatment and discharge of treated water. The treated water is typically discharged back to groundwater, to a surface water body or to a publicly owned wastewater treatment works (POTW). In this case, we have assumed that four perimeter extraction wells installed adjacent to Smokes Creek and Lake Erie, with a combined flow of 40 gallons per minute (GPM), will be sufficient to capture the WT-1 vicinity groundwater plume. For the purposes of this assessment we assumed the groundwater would then be treated with an air stripper and discharged to a POTW. Note, although naphthalene is a semi-volatile compound that is not particularly well suited to air stripping we have assumed that it can be air stripped down to POTW discharge standards.

7.20.06.1 Overall Protection of Human Health and the Environment

As stated earlier, based on the existing ECs/ICs and the Fish and Wildlife Resources Impact Analysis presented in Section 6 there is no significant risk posed to humans or the environment for the current groundwater contaminant levels, if the ECs/ICs remain in place. During operation, the HGC system will prevent, through groundwater capture, the discharge of contaminants to Smokes Creek and Lake Erie. The air stripping process proposed for water treatment does have the potential to release contamination to ambient air. However, if necessary, air controls such as vapor phase activated carbon could be used to prevent discharges over regulatory limits.

7.20.06.2 Source Control

Again a HGC system addresses only aqueous phase contaminants; as such none of the existing source mass located above the water table will be reduced. As with the other active technologies evaluated, the HGC system should effectively mitigate VOC and naphthalene discharges to the adjacent surface water bodies during its operation. We believe this approach will have a high degree of certainty in preventing contaminant discharges to the surface water bodies while it is operated.

7.20.06.3 Long-Term Effectiveness and Permanence

As stated earlier, source remediation and source control are not being implemented as part of this alternative (or any other alternative). As such, once the remedial time frame (assumed to be 30 years) has passed and the system use discontinued, residual contamination, likely similar in magnitude to what exists on site now, will remain.

In this alternative, contaminated groundwater would be extracted from the area of concern, treated with an air stripper and discharge to a POTW. During operation, the system will prevent, through hydrodynamic containment, the discharge of contaminated groundwater to Smokes Creek and Lake Erie.

7.20.06.4 Reduction of Waste Toxicity, Mobility, or Volume

The total amount of contaminant mass to be treated by this alternative is limited to aqueous phase contamination present in extracted groundwater. The HGC system technology will permanently remove contaminants from the environment. Air stripping is a separation technology which does not destroy the contaminants. This treatment process may produce some air contamination, which would be treated should it be shown to have a significant effect on air quality. In addition, treated groundwater, which will contain some residual contamination, will be discharged to a POTW where it will receive additional treatment.

7.20.06.5 Short-Term Impact and Effectiveness

Implementation of this alternative would have limited risks to the community, as institutional controls are already in place to restrict groundwater use. General construction and drilling safety procedures must be observed during implementation, to ensure worker protection. Extracted groundwater and discharged air must also be handled properly to ensure worker safety.

7.20.06.6 Cost Effectiveness

A conceptual cost estimate for this alternative is provided in Table 7; as shown, the total present worth for this alternative is approximately $2,200,000. This includes capital costs and O&M costs over a 30 year remedial period.

7.30 COMPARISON OF ALTERNATIVES

As described above, current Site conditions pose no significant risk to human health or the environment with the existing ECs/ICs in place. As such, it is GZA's opinion that each alternative is equally protective of human health and the environment.

The short-term effectiveness of each alternative evaluated is comparable. Alternatives 2, 3 and 5 (air sparge curtain, air sparge trench, and hydrodynamic groundwater containment) temporarily reduce the discharge of contaminants to the adjacent surface water bodies more than the other alternatives (MNA and ISCO); though they do not reduce the contaminant source mass any more effectively. Once operation of these active remedial systems stops groundwater contaminant levels will likely rebound to current levels.

The long-term effectiveness of alternatives 2, 3 and 5 are similar. During operation of the systems, contaminant concentrations discharged to Smokes Creek and Lake Erie will be

reduced; however, as stated above, once the systems are decommissioned, contaminant levels will rebound. Alternative 4 (ISCO) is unlikely to be significantly effective at reducing discharges from the WT-01 AOC to adjacent surface waters, due to the heterogeneous subsurface geology and geochemistry, as described above. Alternative 1 (MNA) does not reduce contaminant discharges from the WT-01 AOC below their current levels.

The present worth of Alternative 1 is less than one fifth the present worth of the next lowest cost alternative, as shown in the below table.

Remedial Alternative	Estimated Present Worth
Alternative 1: Monitored Natural Attenuation	$157,200
Alternative 2: Air Sparge Curtain Well Points with Enhanced Denitrification System	$2,100,000
Alternative 3: Air Sparge Curtain Continuous Trench with Enhanced Denitrification System	$2,700,000
Alternative 4: ISCO	$868,000
Alternative 5: Hydrodynamic Containment	$2,200,000

As stated in Section 4.1.2 of EPA's "Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration", dated September 1993, the following three conditions should be met for Sites where attainment of media cleanup standards may not be required and a TI waiver is appropriate:

1. Remediation of the release would provide no significant reduction in risks to actual or potential receptors;
2. The release does not occur in, or threaten, current or potential sources of drinking water; and
3. Remediation of the release to media cleanup standards is technically impracticable.

We believe that the WT-01 vicinity Site, meets these three conditions; as such, based on the evaluation criteria and the remedial alternatives feasibility analysis, we believe that MNA coupled with the existing ECs/ICs is the most appropriate option for long-term management of Site conditions. We recommend that the currently semi-annual groundwater monitoring program continue for a period of 2 additional years (i.e., thru June 2016), at which point the frequency should be revaluated.

8.00 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

GZA, in accordance with a DEC approved Work Plan, dated September 30, 2013, completed the above described supplemental groundwater, surface water, sediment and pore water sampling and TI Waiver evaluation. Based on the studies and evaluation

described above, the following summary, conclusions and recommendations have been developed.

- The WT-01 Area of Concern (AOC) is an approximately 1.3 acre portion of the approximately 1,100 Tecumseh Redevelopment CMS Property and a portion of the 29 acre Steel Winds BCA Site.

- Previously implemented Institutional and Engineering Controls (IC/ECs) voluntarily implemented at the Steel Winds Site under the Brownfield Cleanup Program (BCP), including a soil cap and offsite disposal of displaced soil and activity and use limitations, have effectively mitigated potential risks to human health.

- The ORC remedy previously implemented in the WT-01 AOC was not effective in treating VOCs (including naphthalene) contamination in the area, due primarily to the geochemical conditions, i.e., high pH, strongly negative ORP and high COD, as well as the heterogeneous geology (slag fill intermixed with dredge spoils).

- The supplemental field investigations completed by GZA as part of this TI Waiver application process showed a number of compounds above DEC's Class GA groundwater standards in the WT-01 AOC, in particular benzene and naphthalene. Note that other parameters were generally detected at low levels and/or were consistent with observed background levels from the Tecumseh Site. Groundwater results from GZA's supplemental sampling round were generally consistent with prior routine monitoring rounds. Elevated VOC levels (primarily benzene and naphthalene) were also observed in pore-water samples collected from Smokes Creek.. VOCs and SVOCs (primarily benzene, naphthalene and PAHs) were detected in sediment samples collected from Smokes Creek and Lake Erie at concentrations above conservative screening benchmarks. VOCs and SVOCs were not detected in surface water samples collected from Smokes Creek and Lake Erie above applicable water quality standards.

- A *Comprehensive Groundwater Quality Assessment Report* (GQA Report) recently completed by Benchmark showed that benzene concentrations over significant portions of the Tecumseh Property are approximately three orders of magnitude higher than concentrations observed in the WT-01 AOC. The GQA Report also showed that benzene mass discharge to the receiving surface water bodies (i.e., Smokes Creek and Lake Erie) from the watersheds that include the WT-01 AOC were approximately 0.9% of the Site wide total and not considered significant when compared to the Tecumseh Property's mass discharge as a whole.

- The GQA Report shows that naphthalene levels in the WT-01 AOC were generally comparable to the Tecumseh Property, except for the 1,200 ppb

concentration observed in recent samples from monitoring well MW-01B. However, loading calculations prepared by GZA, showed that WT-01 AOC was the source of approximately 1.2% of the Site wide naphthalene mass discharge to the receiving surface water bodies presented by Benchmark in the GQA Report, and again it is GZA's opinion that this is not significant when compared to the Tecumseh Property's total mass discharge.

- Groundwater and soil conditions at the WT-01 AOC are not amenable to remediation generally due to:

    - Strongly electronegative (less than -200 mV) ORP levels;
    - High COD levels in groundwater (generally 20 to 50 mg/L);
    - Elevated pH levels (above 11 S.U);
    - Alkalinity above 150 mg/L;
    - The subsurface geology of the area which is extremely heterogeneous, i.e. is made up of a mixture of granular fill, steel slag debris and dredge spoils, which likely leads to preferential pathways for groundwater and contaminants moving in the subsurface;,; and
    - The presence of non-aqueous phase coal tar wastes in the vadose zone within the WT-01 AOC (due to the placement of coal-tar impacted sediments from Smokes Creek within the AOC) and are leaching contaminants to the groundwater. This represents a diffuse and recalcitrant source, distributed over a large geographic area (the 1.3 acre WT-01 AOC).

- A Fish and Wildlife Resource Impact Analysis (FWRIA) prepared by GZA identified PAHs in sediment, and certain VOCs in pore water within Smokes Creek, at concentrations that may potentially be harmful to exposed aquatic/benthic organisms. Inputs from sources other than the WT-01 pore water likely contributed to the concentrations of PAHs and VOCs measured. Furthermore, comparisons of sediment and pore water data to screening levels likely resulted in a conservative assessment because of the limited number of PAHs reported, and suspended particulates in the pore water samples. For this reason, GZA recommends additional sampling to evaluate the relative contribution from other sources, and to collect data more representative of potential bioavailability and risk. If DEC agrees, GZA will prepare a brief sampling plan for submittal to DEC.

  Also note that an information request has been submitted to the New York Natural Heritage program, as the DEC ERM indicates that rare species habitat is present in Lake Erie adjacent to the Site and over a one-half mile, landward offset from the shore of Lake Erie. The results of this inquiry will be reported to DEC, and if warranted the sampling plan will include additional work to better evaluate potential exposure and risk to the rare species.

- GZA evaluated five potential remedies for the WT-01 AOC using criteria described in DEC's DER-10 (Technical Guidance for Site Investigation and Remediation,

dated May 3, 2010) and EPA's "Guidance for Evaluating Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration", dated September 1993.

- Monitored Natural Attenuation (MNA);
- Air Sparge/biosparge with a contingency enhanced denitrification system;
- Reactive Barrier (Air-sparge/biosparge curtain using a continuous stone trench with a contingency enhanced denitrification injection system);
- In-situ Chemical Oxidation (ISCO); and
- Hydrodynamic Groundwater Containment (HGC).

Based on this evaluation, it is GZA's opinion that active remediation is not warranted or feasible, would not result in significant benefit to the environment relative to the cost, and is technically impracticable.

As described above, the WT-01 vicinity AOC meets the requirements for a Technical Impracticability Waiver and MNA coupled with the existing institutional controls and engineered controls (i.e., gravel surface cap) is the most appropriate currently available option for long-term management of Site conditions. We recommend that the current semi-annual groundwater monitoring program continue for a period of 2 years (thru June of 2016), at which point the frequency should be revaluated.

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TABLES

Table 1
Groundwater Field Screening Results
Technical Impracticability Waiver Work Plan
Steel Winds I
Lackawanna, New York

Parameter	MWN-01 6/26/2014 Result	MWN-01B 6/26/2014 Result	BCP-ORC-01 6/26/2014 Result	BCP-ORC-02 6/26/2014 Result	WT1-02 6/25/2014 Result	WT1-04 6/26/2014 Result	WT1-05 6/25/2014 Result	WT1-06 6/25/2014 Result
pH (units)	9.9	9.8	10.0	9.1	12.0	9.2	11.7	9.6
Temperature (˚C)	11.8	12.2	14.3	15.3	13.4	11.9	11.0	14.7
Specific Conductance (mMhos/cm)	1.3	0.9	1.1	1.6	2.2	1.5	1.1	1.2
Turbidity (NTU)	4.8	5.9	**9.7**	**3.7**	4.4	2.4	1.6	4.7
Dissolved Oxygen	0.0	0.0	4.9	1.35	0.1	0.0	1.1	0.0
Oxygen Reduction Potential (mV)	-231.4	-328.9	-126.8	-157.8	-263.0	-251.3	-205.7	-252.4

Notes:

1. The above readings were collected using a YSI Pro Series with a flow-through cell and represent readings collected immediately prior to well sampling, i.e. were collected when well purging was complete. Depth to water readings show are initial readings, i.e. were collected before well purging began.

Table 2
Groundwater Analytical Results
Technical Impracticability Waiver Work Plan
Steel Winds I
Lackawanna, New York

Chemical Family	Analyte	Units	Regulatory Criteria Class GA groundwater	WT1-02		WT1-05		WT1-06		BCP-ORC-2		BCP-ORC-1		MWN-01		MWN-01B		MWN-01B Dup		WT1-04		Trip Blank 001		Trip Blank 002	
				June 25, 2014		June 25, 2014		June 26, 2014		June 26, 2014		June 26, 2014		June 26, 2014		June 26, 2014		June 26, 2014		June 26, 2014		June 25, 2014		June 25, 2014	
				Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Methyl tert-butyl ether	ug/L	NC	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Benzene	ug/L	1[s]	**16**		**11**		**42**		**9.3**		**9.5**		**37**		**85**		**88**		**23**		5.0	U	5.0	U
VOCs	Toluene	ug/L	5*	3.1	J	2.7	J	**8.3**		1.7	J	0.92	J	**7.8**		**24**		**24**		4.9	J	5.0	U	5.0	U
VOCs	Ethylbenzene	ug/L	5*	0.91	J	0.60	J	1.7	J	5.0	U	5.0	U	1.6	J	1.0	J	1.0	J	1.1	J	5.0	U	5.0	U
VOCs	m,p-Xylene	ug/L	5*	**6.2**		**5.6**		**17**		3.1	J	5.0	U	**17**		**15**		**16**		**12**		5.0	U	5.0	U
VOCs	o-Xylene	ug/L	5*	4.8	J	4.6	J	13		5.0	U	0.78	J	14		**9.8**		**9.9**		**9.2**		5.0	U	5.0	U
VOCs	Xylene (Total)	ug/L	5*	**11**		**10**		**31**		3.1	J	1.4	J	**31**		**25**		**26**		**21**		5.0	U	5.0	U
VOCs	Isopropylbenzene	ug/L	5*	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	1.8	J	1.7	J	5.0	U	5.0	U	5.0	U
VOCs	n-Propylbenzene	ug/L	5*	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	1,3,5-Trimethylbenzene	ug/L	5*	3.0	J	1.7	J	4.6	J	1.0	J	0.73	J	4.8	J	**5.7**		**5.4**		**5.1**		5.0	U	5.0	U
VOCs	tert-Butylbenzene	ug/L	5*	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	1,2,4-Trimethylbenzene	ug/L	5*	1.9	J	1.6	J	4.5	J	0.89	J	0.78	J	**6.3**		**8.2**		**7.9**		3.9	J	5.0	U	5.0	U
VOCs	sec-Butylbenzene	ug/L	5*	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	4-Isopropyltoluene	ug/L	5*	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	n-Butylbenzene	ug/L	5*	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Naphthalene	ug/L	10	**29.0**		**86**		**200**	D	**48**		**120**		**310**	D	**1,200**	DJ[1]	**750**	DJ[1]	**61**		5.0	U	5.0	U
Other	Methane	ug/L	NC	36		260		490		190		310		670		3,500		2,300		98		-	-	-	-
Other	Ethane	ug/L	NC	0.61	U	1.3	U	4.1		1.3	U	1.2	U	4.3		2.9		2.9		1.2		-	-	-	-
Other	Ethene	ug/L	NC	1.6	U	1.6	U	1.5	U	1.6	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	-	-	-	-
SVOCs	Bis(2-chloroethyl)ether	ug/L	1.0[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	1,3-Dichlorobenzene	ug/L	3[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	1,4-Dichlorobenzene	ug/L	3[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	1,2-Dichlorobenzene	ug/L	3[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	2,2´-oxybis(1-Chloropropane)	ug/L	5*[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Hexachloroethane	ug/L	5*[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Nitrobenzene	ug/L	0.4	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Isophorone	ug/L	50	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	1,2,4-Trichlorobenzene	ug/L	5*[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Naphthalene	ug/L	10	9.0	J	**54**		**130**	D	**49**		**74**		**230**	D	**970**	D	**1,200**	D	**66**		-	-	-	-
SVOCs	4-Chloroaniline	ug/L	5*[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Bis(2-chloroethoxy)methane	ug/L	5*[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Hexachlorobutadiene	ug/L	0.5[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	2-Methylnaphthalene	ug/L	NE	4.5	J	9.9	J	35		9.6	J	5.9	J	59		60		60		16		-	-	-	-
SVOCs	Hexachlorocyclopentadiene	ug/L	5*[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	2-Chloronaphthalene	ug/L	10	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	2-Nitroaniline	ug/L	5*[s]	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	-	-	-	-
SVOCs	Dimethylphthalate	ug/L	50	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Acenaphthylene	ug/L	NC	1.3	J	9.4	J	23		7.0	J	4.7	J	47		62		62		5.1	J	-	-	-	-
SVOCs	2,6-Dinitrotoluene	ug/L	5*[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	3-Nitroaniline	ug/L	5*[s]	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	-	-	-	-
SVOCs	Acenaphthene	ug/L	20	1.4	J	2.8	J	9.0	J	2.7	J	1.4	J	17		12	J[1]	19	J[1]	4.9	J	-	-	-	-
SVOCs	Dibenzofuran	ug/L	NC	2.2	J	6.3	J	32		9.2	J	3.0	J	58		32		32		16		-	-	-	-
SVOCs	2,4-Dinitrotoluene	ug/L	5*[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Diethylphthalate	ug/L	50	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	4-Chlorophenyl-phenylether	ug/L	NC	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Fluorene	ug/L	50	7.1	J	11		46		13		5.0	J	**76**		44		44		23		-	-	-	-
SVOCs	4-Nitroaniline	ug/L	5*[s]	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	-	-	-	-
SVOCs	4-Bromophenyl-phenylether	ug/L	NC	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Hexachlorobenzene	ug/L	0.04[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Phenanthrene	ug/L	50	8.5	J	7.9	J	**70**		20		6.2	J	**99**	D	**67**		**68**		**51**		-	-	-	-

Table 2
Groundwater Analytical Results
Technical Impracticability Waiver Work Plan
Steel Winds I
Lackawanna, New York

Chemical Family	Analyte	Units	Regulatory Criteria Class GA groundwater	WT1-02		WT1-05		WT1-06		BCP-ORC-2		BCP-ORC-1		MWN-01		MWN-01B		MWN-01B Dup		WT1-04		Trip Blank 001		Trip Blank 002	
				June 25, 2014		June 25, 2014		June 26, 2014		June 26, 2014		June 26, 2014		June 26, 2014		June 26, 2014		June 26, 2014		June 26, 2014		June 25, 2014		June 25, 2014	
				Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SVOCs	Anthracene	ug/L	50	2.2	J	2.0	J	10		2.8	J	10	U	18		13		13		8.3	J	-	-	-	-
SVOCs	Carbazole	ug/L	NC	3.6	J	7.4	J	25		9.3	J	8.1	J	37		68		68		12		-	-	-	-
SVOCs	Fluoranthene	ug/L	50	5.3	J	2.2	J	9.2	J	3.4	J	1.4	J	16		13		13		12		-	-	-	-
SVOCs	Pyrene	ug/L	50	3.3	J	1.9	J	4.8	J	2.2	J	10	U	8.3	J	6.6	J	7.1	J	6.7	J	-	-	-	-
SVOCs	Butylbenzylphthalate	ug/L	50	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	3,3´-Dichlorobenzidine	ug/L	5*[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Benzo(a)anthracene	ug/L	0.002	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Chrysene	ug/L	0.002	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Bis(2-ethylhexyl)phthalate	ug/L	5.0[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Benzo(b)fluoranthene	ug/L	0.002	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Benzo(k)fluoranthene	ug/L	0.002	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Benzo(a)pyrene	ug/L	ND[s]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Indeno(1,2,3-cd)pyrene	ug/L	0.002	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Dibenzo(a,h)anthracene	ug/L	NC	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
SVOCs	Benzo(g,h,i)perylene	ug/L	NC	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	-	-	-	-
Other	Iron	ug/L	300	49.7		31		33.1		35.4		55.1		31.9		48.7		48.1		33.1		-	-	-	-
Other	Nitrate (As N)	mg/L	10	0.13	U	0.39	B	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	-	-	-	-
Other	Sulfate	mg/L	250[s]	170	B	170	B	190	B	220	B	150	B	200	B	130	B	130	B	130	B	-	-	-	-
Other	Total Alkalinity(As CaCO3)	mg/L	NC	370		190		200		280		220		190		150		150		260		-	-	-	-
Other	Total Organic Carbon	mg/L	NC	5.8	J	5.5	J	7.3	J	6.4	J	8	J	6.8	J	9	J	9	J	4.8	J	-	-	-	-

General Notes:

* Principle organic contaminant standard of 5 ug/L applies to this compound.

[s] Limits are regulatory standards as opposed to guidance value.

NC No ambient water quality standards have been established for any class of water for this compound.

NE The compound is regulated, however there is no criteria established for this class of groundwater water.

"U" Indicates compound was not detected

"B" Indicates compound detected in associated method blank

"D" Indicates sample was analyzed using a dilution

"J" Indicates an estimated value detected below the reporting limit.

"J[1]" Result flagged as estimated due to high relative percent difference value with field duplicate sample.

Indicates exceedence of GA Groundwater Criteria

Table 3
Surface Water Analytical Results
Technical Impracticability Waiver Work Plan
Steel Winds I
Lackawanna, New York

Chemical Family	Analyte	NYS Ambient Water Quality Standard or Guidance Values[1]	Surface Water Screening Benchmarks[2]	SW-1		SW-2		SW-3		Blind Duplicate of SW-3		SW-4		SW-5		SW-6		SW-7		SW-8		Trip Blank		Equipment Blank	
		(ug/L)	(ug/L)	8/6/2014		8/6/2014		8/6/2014		8/6/2014		8/6/2014		8/6/2014		8/6/2014		8/6/2014		8/6/2014		8/6/2014		8/6/2014	
				Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Benzene	210	130 [d]	5.0	U	5.0	U	5.0	U	5.0	U	**1.1**	J	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	n-Butylbenzene	NE	NA	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	sec-Butylbenzene	NE	NA	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Ethylbenzene	17	7.3 [d]	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Isopropylbenzene	2.6	NA	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	p-Isopropyltoluene	NE	NA	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Methyl-Tert-Butyl-Ether	NC	NA	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Naphthalene	13	193 [e]	**12**		5.0	U	**1.8**	J	**1.6**	J	**1.5**	J	**1.7**	J	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	n-Propylbenzene	NE	NA	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Tert-Butylbenzene	NE	NA	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Toluene	100	9.8 [d]	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	1,2,4-Trimethylbenzene	33	NA	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	1,3,5-Trimethylbenzene	NE	NA	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Xylene (mixed)	65	13	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
SVOCs	1,2,4-Trichlorobenzene	5 [s]	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	1,2-Dichlorobenzene	5 [s]	14 [d]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	1,3-Dichlorobenzene	5 [s]	71 [d]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	1,4-Dichlorobenzene	5 [s]	15 [d]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	2,2´-oxybis(1-Chloropropane)	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	2,4-Dinitrotoluene	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	2,6-Dinitrotoluene	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	2-Chloronaphthalene	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	2-Methylnaphthalene	4.7	72 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	2-Nitroaniline	NE	NA	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	NA		20	U
SVOCs	3,3´-Dichlorobenzidine	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	3-Nitroaniline	NE	NA	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	NA		20	U
SVOCs	4-Bromophenyl-phenylether	NC	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	4-Chloroaniline	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	4-Chlorophenyl-phenylether	NC	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	4-Nitroaniline	NE	NA	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	NA		20	U
SVOCs	Acenaphthene	5.3	55.85 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Acenaphthylene	NC	306.9 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Anthracene	3.8	20.73 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Benzo(a)Anthracene	0.03	2.227 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Benzo(a)Pyrene	NE	0.9573 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Benzo(b)Fluoranthene	NE	0.6774 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Benzo(g,h,i)perylene	NC	0.4391 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Benzo(k)Fluoranthene	NE	0.6415 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Bis(2-chloroethoxy)methane	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Bis(2-chloroethyl)ether	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Bis(2-ethylhexyl)phthalate	0.6 [s]	3 [d]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Butylbenzylphthalate	NE	19 [d]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U

Table 3
Surface Water Analytical Results
Technical Impracticability Waiver Work Plan
Steel Winds I
Lackawanna, New York

Chemical Family	Analyte	NYS Ambient Water Quality Standard or Guidance Values[1]	Surface Water Screening Benchmarks[2]	SW-1		SW-2		SW-3		Blind Duplicate of SW-3		SW-4		SW-5		SW-6		SW-7		SW-8		Trip Blank		Equipment Blank	
SVOCs	Carbazole	NC	4 [t]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Chrysene	NE	2.042 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Dibenzo(a,h)Anthracene	NC	0.2825 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Dibenzofuran	NC	4 [p]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Diethylphthalate	NE	210 [d]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Dimethylphthalate	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Fluoranthene	NE	7.109 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Fluorene	0.54	39.3 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Hexachlorobenzene	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Hexachlorobutadiene	1 [s]	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Hexachlorocyclopentadiene	0.45 [s]	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Hexachloroethane	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Indeno(1,2,3-cd)Pyrene	NE	0.275 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Isophorone	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Naphthalene	13	193 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Nitrobenzene	NE	NA	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Phenanthrene	5	19.13 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U
SVOCs	Pyrene	4.6	10.11 [e]	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U

Notes:

1 Indicate New York State Department of Conservation Class C Waterbody Fish Propagation Ambient Water Quality Criteria for freshwater. When available, these values are used preferentially over Surface Water Screening Benchmarks from other sources.

2 Indicate chronic exposure, threshold-effect type screening benchmarks from other widely cited sources of surface water screening values. The sources of these benchmarks are included in the notes below.

NE The compound is regulated, however there is no criteria established for this class of surface water.

NC There are no ambient water quality criteria for any class of water for this compound.

[s] The limits are regulatory standards as opposed to guidelines.

[d] Tier II, Secondary Chronic value from Suter & Tsao, 1996.

[p] These surface water screening benchmarks are from a list of screening values used by the US Environmental Protection Agency (EPA) Region 5. These screening values are intended to be protective of sensitive ecological receptors. The EPA Region 5 screening level document can be found at: http://www.epa.gov/reg5rcra/ca/edql.htm.

[e] Final Chronic Value (FCV) developed in Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures. US Environmental Protection Agency, Office of Research and Development. EPA-600-R-02-013.

[t] Michigan Water Quality Value, Final Chronic Value for the protection of aquatic life. Available at: http://www.michigan.gov/deq/0,1607,7-135-3313_3686_3728-11383--,00.html

U Indicates compound was not detected

J Indicates an estimated value detected below the reporting limit.

BOLD Detected results are shown in bold font

Shading indicates that a screening level was not identified for this analyte.

Shading indicates that the Reporting Limit for the non-detect result is more than two times higher than the screening level.

Table 4
Pore Water Analytical Results
Technical Impracticability Waiver Work Plan
Steel Winds I
Lackawanna, New York

Chemical Family	Analyte	NYS Ambient Water Quality Guidance Values[1]	PZ-2		PZ-3		PZ-31 (Blind Duplicate of Sample PZ-3)		PZ-4		Trip Blank		Equipment Blank	
			8/6/2014		8/6/2014		8/6/2014		8/6/2014		8/6/2014		8/6/2014	
			Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Benzene	210	5.0	U	**31**		**32**		**30**		5.0	U	5.0	U
VOCs	n-Butylbenzene	NC	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	sec-Butylbenzene	NC	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Ethylbenzene	17	5.0	U	**1.3**	J	**1.4**	J	**1.0**	J	5.0	U	5.0	U
VOCs	Isopropylbenzene	2.6	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	p-Isopropyltoluene	NC	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Methyl-Tert-Butyl-Ether	NC	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Naphthalene	13	5.0	U	**95**		**100**		**180**		5.0	U	5.0	U
VOCs	n-Propylbenzene	NC	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Tert-Butylbenzene	NC	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
VOCs	Toluene	100	5.0	U	**6.2**		**6.4**		**5.3**		5.0	U	5.0	U
VOCs	1,2,4-Trimethylbenzene	33	5.0	U	**3.9**	J	**4.2**	J	**3.1**	J	5.0	U	5.0	U
VOCs	1,3,5-Trimethylbenzene*	33	5.0	U	**4.9**	J	**5.0**	J	**3.4**	J	5.0	U	5.0	U
VOCs	Xylene (mixed)	65	5.0	U	**24**		**25**		**21**		5.0	U	5.0	U

Notes:

1	Indicate New York State Department of Conservation Class C Waterbody Fish Propagation Ambient Water Quality Criteria for freshwater.
NC	There are no ambient water quality criteria for any class of water for this compound.
*	Guidance value for 1,2,4-trimethylbenzene.
U	Indicates compound was not detected
J	Indicates an estimated value detected below the reporting limit.
BOLD	Detected results are shown in bold font.
	Shading indicates that a screening level was not identified for this analyte.
	Shading indicates that the detected concentration exceeds the screening level.

Table 5
Sediment Analytical Results
Technical Impracticability Waiver Work Plan
Steel Winds I
Lackawanna, New York

Chemical Family	Analyte	Class A Freshwater Sediment Guidance Values[1]	Class B Freshwater Sediment Guidance Values[1]	Class C Freshwater Sediment Guidance Values[1]	Sediment Screening Benchmarks[2]	SED-2		SED-3		SED-31 (Blind Duplicate of Sample SED-3)		SED-4		SED-6		SED-7		Trip Blank		Equipment Blank	
		(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	6/16/2014		6/16/2014		6/16/2014		6/16/2014		8/6/2014		8/6/2014		6/16/2014		6/16/2014	
						Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Benzene	< 530	530 - 1,900	> 1,900	142 [n]	**7.3**		**1.7**	J	**3.5**	J	**10.0**		3.5	U	3.4	U	5.0	U	5.0	U
VOCs	n-Butylbenzene	NC	NC	NC	NA	3.0	U	5.0	U	4.3	U	5.4	U	3.5	U	3.4	U	5.0	U	5.0	U
VOCs	sec-Butylbenzene	NC	NC	NC	NA	3.0	U	5.0	U	4.3	U	5.4	U	3.5	U	3.4	U	5.0	U	5.0	U
VOCs	Ethylbenzene	< 430	430 - 3,700	> 3,700	175 [n]	**1.2**	J	**0.7**	J	**0.7**	J	**1.4**	J	3.5	U	3.4	U	5.0	U	5.0	U
VOCs	Isopropylbenzene	< 210	210 - 1,800	> 1,800	NA	3.0	U	5.0	U	4.3	U	5.4	U	3.5	U	3.4	U	5.0	U	5.0	U
VOCs	p-Isopropyltoluene	NC	NC	NC	NA	3.0	U	5.0	U	4.3	U	5.4	U	3.5	U	3.4	U	5.0	U	5.0	U
VOCs	Methyl-Tert-Butyl-Ether	NC	NC	NC	NA	3.0	U	5.0	U	4.3	U	5.4	U	3.5	U	3.4	U	5.0	U	5.0	U
VOCs	Naphthalene	NC	NC	NC	176 [g]	**1,500**		**5.0**	J[1]	**31.0**	J[1]	**2,200**		3.5	U	3.4	U	5.0	U	5.0	U
VOCs	n-Propylbenzene	NC	NC	NC	NA	3.0	U	5.0	U	4.3	U	5.4	U	3.5	U	3.4	U	5.0	U	5.0	U
VOCs	Tert-Butylbenzene	NC	NC	NC	NA	3.0	U	**5.0**		4.3	U	5.4	U	3.5	U	3.4	U	5.0	U	5.0	U
VOCs	Toluene	< 930	930 - 4,500	> 4,500	1,220 [n]	**3.1**		**1.0**	J	**1.6**	J	**3.1**	J	3.5	U	3.4	U	5.0	U	5.0	U
VOCs	1,2,4-Trimethylbenzene	< 3,400	3,400 - 30,000	> 30,000	NA	**6.5**		**3.1**	J	**3.9**	J	**4.3**	J	3.5	U	3.4	U	5.0	U	5.0	U
VOCs	1,3,5-Trimethylbenzene	NC	NC	NC	NA	**7.9**		**5.6**		**5.2**		**53.9**	J	3.5	U	3.4	U	5.0	U	5.0	U
VOCs	Xylene (mixed)	< 590	590 - 5,200	> 5,200	NA	**20.0**		**9.4**		**11.0**		**17.0**		3.5	U	3.4	U	5.0	U	5.0	U
SVOCs	1,2,4-Trichlorobenzene	< 35,000	35,00 - 55,000	> 55,000	5,062 [n]	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	1,2-Dichlorobenzene	< 280	280 - 2,500	> 2,500	294 [n]	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	1,3-Dichlorobenzene	< 1,800	1,800 - 7,100	> 7,100	1,315 [n]	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	1,4-Dichlorobenzene	< 720	720 - 3,300	> 3,300	318 [n]	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	2,2´-oxybis(1-Chloropropane)	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	2,4-Dinitrotoluene	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	2,6-Dinitrotoluene	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	2-Chloronaphthalene	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	2-Methylnaphthalene	NC	NC	NC	NA	**520**		**180**	J	**120**	J	**880**		420	U	410	U	NA		10	U
SVOCs	2-Nitroaniline	NC	NC	NC	NA	750	U	1,000	U	820	U	1,100	U	860	U	840	U	NA		20	U
SVOCs	3,3´-Dichlorobenzidine	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	3-Nitroaniline	NC	NC	NC	NA	750	U	1,000	U	820	U	1,100	U	860	U	840	U	NA		20	U
SVOCs	4-Bromophenyl-phenylether	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	4-Chloroaniline	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	4-Chlorophenyl-phenylether	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	4-Nitroaniline	NC	NC	NC	NA	750	U	1,000	U	820	U	1,100	U	860	U	840	U	NA		20	U
SVOCs	Acenaphthene	NC	NC	NC	6.71 [n]	**270**	J	**140**	J	**85**	J	**860**		420	U	410	U	NA		10	U
SVOCs	Acenaphthylene	NC	NC	NC	5.87 [n]	**230**	J	**110**	J	400	U	**310**	J	420	U	410	U	NA		10	U
SVOCs	Anthracene	NC	NC	NC	57.20 [g]	**1,300**		**730**		**660**		**850**		420	U	410	U	NA		10	U
SVOCs	Benzo(a)Anthracene	NC	NC	NC	108 [h]	**310**	J	**300**	J	**300**	J	**520**	J	**88**	J	410	U	NA		10	U
SVOCs	Benzo(a)Pyrene	NC	NC	NC	150 [h]	**290**	J	**300**	J	**320**	J	**570**		420	U	410	U	NA		10	U
SVOCs	Benzo(b)Fluoranthene	NC	NC	NC	10,400 [n]	**470**		**430**	J	**430**		**820**		**100**	J	410	U	NA		10	U
SVOCs	Benzo(g,h,i)perylene	NC	NC	NC	170 [n]	**250**	J	**270**	J	**250**	J	**510**	J	420	U	410	U	NA		10	U
SVOCs	Benzo(k)Fluoranthene	NC	NC	NC	240 [n]	**170**	J	**170**	J	**160**	J	**330**	J	420	U	410	U	NA		10	U
SVOCs	Bis(2-chloroethoxy)methane	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	Bis(2-chloroethyl)ether	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	Bis(2-ethylhexyl)phthalate	< 360,000	> 360,000		182 [n]	**220**	J	510	U	400	U	**420**	J	420	U	410	U	NA		1.4	J
SVOCs	Butylbenzylphthalate	NC	NC	NC	1,970 [n]	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U

Table 5
Sediment Analytical Results
Technical Impracticability Waiver Work Plan
Steel Winds I
Lackawanna, New York

Chemical Family	Analyte	Class A Freshwater Sediment Guidance Values[1]	Class B Freshwater Sediment Guidance Values[1]	Class C Freshwater Sediment Guidance Values[1]	Sediment Screening Benchmarks[2]	SED-2		SED-3		SED-31 (Blind Duplicate of Sample SED-3)		SED-4		SED-6		SED-7		Trip Blank		Equipment Blank	
SVOCs	Carbazole	NC	NC	NC	NA	**310**	J	510	U	**82**	J	**790**		420	U	410	U	NA		10	U
SVOCs	Chrysene	NC	NC	NC	166 [g]	**400**		**300**	J	**310**	J	**620**		**88**	J	410	U	NA		10	U
SVOCs	Dibenzo(a,h)Anthracene	NC	NC	NC	33 [g]	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	Dibenzofuran	NC	NC	NC	449 [n]	**1,100**		**450**	J	**310**	J	**1,700**		420	U	410	U	NA		10	U
SVOCs	Diethylphthalate	NC	NC	NC	295 [n]	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	Dimethylphthalate	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	Fluoranthene	NC	NC	NC	423 [g]	**1,400**		**1,400**		**1,400**		**1,400**		**150**	J	**86**	J	NA		10	U
SVOCs	Fluorene	NC	NC	NC	77 [g]	**1,600**		**740**		**500**		**2,300**		420	U	410	U	NA		10	U
SVOCs	Hexachlorobenzene	NC	NC	NC	20 [n]	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	Hexachlorobutadiene	< 1,200	1,200 - 12,000	> 12,000	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	Hexachlorocyclopentadiene	< 810	810 - 8,100	> 8,100	26.5 [n]	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	Hexachloroethane	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	Indeno(1,2,3-cd)Pyrene	NC	NC	NC	200 [n]	**250**	J	**250**	J	**240**	J	**520**	J	420	U	410	U	NA		10	U
SVOCs	Isophorone	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	Naphthalene	NC	NC	NC	176 [g]	**790**		**220**	J	**140**	J	**1,700**		420	U	410	U	NA		10	U
SVOCs	Nitrobenzene	NC	NC	NC	NA	370	U	510	U	400	U	540	U	420	U	410	U	NA		10	U
SVOCs	Phenanthrene	NC	NC	NC	204 [g]	**6,600**	E	**3,400**		**3,000**		**5,400**		**110**	J	410	U	NA		10	U
SVOCs	Pyrene	NC	NC	NC	195 [g]	**980**		**980**		**990**		**1,100**		**160**	J	**93**	J	NA		10	U
SVOCs	Total PAHs	< 4,000	4,000 - 35,000	> 35,000	1,610 [5]	**16,577**		**9,971**		**8,965**		**18,744**		**948**		**507**					
Other	Total Organic Carbon	NA	NA	NA	NA	29,500	E	30,600	E	30,200	E	36,700	E	2370		10220		NA		NA	

Notes:

NC	No Criteria established
NA	Not Applicable
[1]	Taken from Table 5 of NYSDEC's "Screening and Assessment of Contaminated Sediments", dated June 24, 2014. When available the Class A Sediment values were used preferentially as the screening values for this assessment.
[2]	Conservative, threshold-effect type sediment screening benchmarks from other widely used sources of screening values. These threshold-effect vales are analogous to the Class A Sediment threshold. Sources of these screening values are presented in the notes below.
[n]	Benchmarks taken from a compilation of ecological screening benchmarks from U.S. EPA Region 5, available at http://www.epa.gov/reg5rcra/ca/ESL.pdf.
[g]	Threshold Effect Concentrations (TECs) presented in MacDonald et al. 2000.
U	Indicates compound was not detected
J	Indicates an estimated value detected below the reporting limit.
J[1]	Result flagged as estimated due to high relative percent difference value with field duplicate sample.
E	Indicates the compound concentration exceeded the Calibration Range.
BOLD	Detected results are shown in bold font.
	Shading indicates that a screening level was not identified for this analyte.
	Shading indicates that the Reporting Limit for the non-detect result is more than two times higher than the screening level.
	Shading indicates that the detected concentration exceeds the Class A Sediment threshold value, or if not available, the Sediment Screening Benchmark.

Table 6
Toxicity Unit Evalution
PAHs in Sediment
Techncial Impracticability Waiver Work Plan
Steel Winds I
Lackawanna, New York

Chemical Family	Analyte	Organic Carbon Normalized Sediment Guidance Values[1]	SED-2				SED-3			SED-31 (Blind Duplicate of Sample SED-3)			SED-4		
		ug/gOC	6/16/2014				6/16/2014			6/16/2014			6/16/2014		
			Result		TU_i	Qualifier	Result	TU_i	Qualifier	Result	TU_i	Qualifier	Result	TU_i	Qualifier
VOCs	Naphthalene	385	**1,500**	**11,358**	**0.132**		**5.0**	**0.0004**	J[1]	**31.0**	**0.003**	J[1]	**2,200**	0.156	
SVOCs	2-Chloronaphthalene	385	370	5679	0.065	U	510	0.087	U	400	0.069	U	540	0.076	U
SVOCs	2-Methylnaphthalene	447	**520**	**13187**	**0.039**		**180**	**0.013**	J	**120**	**0.009**	J	**880**	0.054	
SVOCs	Acenaphthene	491	**270**	**14485**	**0.019**	J	**140**	**0.009**	J	**85**	**0.006**	J	**860**	0.048	
SVOCs	Acenaphthylene	452	**230**	**13334**	**0.017**	J	**110**	0.008	J	400	0.059	U	**310**	0.019	J
SVOCs	Anthracene	594	**1300**	**17523**	**0.074**		**730**	**0.040**		**660**	**0.037**		**850**	0.039	
SVOCs	Benzo(a)Anthracene	841	**310**	**24810**	**0.012**	J	**300**	**0.012**	J	**300**	**0.012**	J	**520**	**0.017**	J
SVOCs	Benzo(a)Pyrene	964	**290**	**28438**	**0.010**	J	**300**	**0.010**	J	**320**	**0.011**	J	**570**	0.016	
SVOCs	Benzo(b)Fluoranthene	980	**470**	**28910**	**0.016**		**430**	**0.014**	J	**430**	**0.015**		**820**	**0.023**	
SVOCs	Benzo(g,h,i)perylene	1095	**250**	**32303**	**0.008**	J	**270**	**0.008**	J	**250**	**0.008**	J	**510**	0.013	J
SVOCs	Benzo(k)Fluoranthene	980	**170**	**28910**	**0.006**	J	**170**	**0.006**	J	**160**	**0.005**	J	**330**	0.009	J
SVOCs	Chrysene	843	**400**	**24869**	**0.016**		**300**	**0.012**	J	**310**	**0.012**	J	**620**	**0.020**	
SVOCs	Fluoranthene	708	**1400**	**20886**	**0.067**		**1400**	**0.065**		**1400**	**0.065**		**1400**	**0.054**	
SVOCs	Fluorene	539	**1600**	**15901**	**0.101**		**740**	**0.045**		**500**	**0.031**		**2300**	0.116	
SVOCs	Indeno(1,2,3-cd)Pyrene	1115	**250**	**32893**	**0.008**	J	**250**	**0.007**	J	**240**	**0.007**	J	**520**	0.013	J
SVOCs	Naphthalene	385	**790**	**11358**	**0.070**		**220**	**0.019**	J	**140**	**0.012**	J	**1700**	0.120	
SVOCs	Phenanthrene	597	**6600**	**17612**	**0.375**	E	**3400**	**0.186**		**3000**	**0.166**		**5400**	**0.246**	
SVOCs	Pyrene	698	**980**	**20591**	**0.048**		**980**	**0.046**		**990**	**0.047**		**1100**	**0.043**	
SVOCs	Total PAHs	NA	**15830**				**9920**			**8905**			**18690**		
	TU_t				**8.1**			**4.8**			**4.7**			**7.5**	
Other	Total Organic Carbon		29,500			E	30,600		E	30,200		E	36,700		E

Notes:

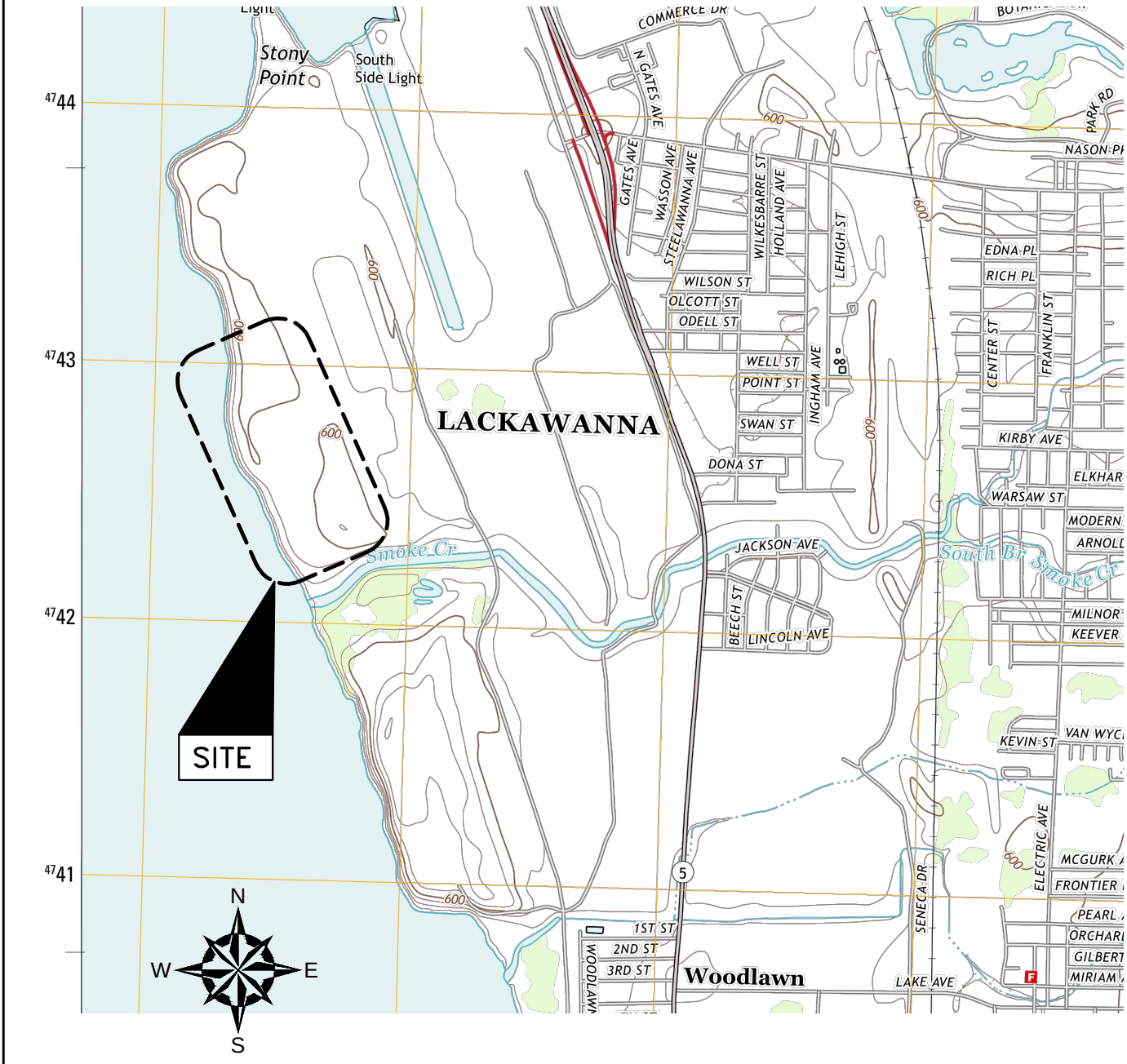
1	These area organic carbon normalized screening values for PAHs from NYSDEC's "Screening and Assessment of Contaminated Sediments", dated June 24, 2014.
TU_i	Toxic Unit for individual PAH compounds. Calculated as the organic carbon normalize SGV / organic carbon normalize concentration detected in the sediment sample. The organic carbon normalize concentrations were calculated as bulk concentration (ug/kg) * Total Organic Carbon (mg/kg) *0.001. For non-detect results, the organic carbon normalize concentration was estimated using one-half the Reporting Limit.
TU_t	Toxic Unit for total PAHs. Calculated as the sum of Tui values * 7.87. The adjustment factor of 7.87 was included because the Toxic Unit approach is intended for use with a suite of 34 PAH compounds; this adjustment is to account for the fact that only 17 PAHs were analyzed for this data set. A TU_t greater than 1 indicates that the PAHs may be toxic to exposed benthic organisms.
U	Indicates compound was not detected
J	Indicates an estimated value detected below the reporting limit.
J^1	Result flagged as estimated due to high relative percent difference value with field duplicate sample.
E	Indicates the compound concentration exceeded the Calibration Range.
BOLD	Detected results are shown in bold font
	Shading indicates that the Reporting Limit for the non-detect result is more than two times higher than the screening level.

Table 7
Conceptual Remedial Cost Estimates
Technical Impracticability Waiver Work Plan
Steel Winds I
Lackawanna, New York

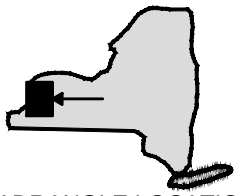
Remedial Alternative	Alternative 1: Monitored Natural Attenuation	Alternative 2: Air Sparge Curtain-Well Points with Enhanced Denitrification System	Alternative 3: Air Sparge Curtain Continuous Trench with Enhanced Denitrification System	Alternative 4: Insitu Chemical Oxidation	Alternative 5: Hydrodynamic Groundwater Containment
Capital Costs	$0	$254,051	$672,929	$533,500	$531,564
Annual Operation and Maintenance Costs	$13,700	$81,800	$93,800	$60,000 first five years, $13,700 thereafter	$175,000
Annual Contingency System Operation Costs	NA	$82,500	$82,500	NA	NA
Net Present Worth of Operation and Maintenance Costs[1]	$157,200	$938,611	$1,076,305	$334,620	$1,690,401
Net Present Worth of Contingency System Operation Costs[1]	NA	$946,643	$946,643	NA	NA
Total Present Worth[2]	$157,200	$2,139,305	$2,695,876	$868,120	$2,221,965

1. Assumes 30-year operation/monitoring period and discount rate of 7%.
2. Includes capital costs, net present worth of operation and maintenance costs, and net present worth of contingency system operation costs.

FIGURES



NEW YORK



QUADRANGLE LOCATION

SOURCE:

BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP:
BUFFALO SE TOPO (2013)

DIGITAL TOPOGRAPHIC MAPS PROVIDED BY USGSSTORE.GOV.

CONTOUR ELEVATIONS REFERENCE NAVD 88,
CONTOURS ARE SHOWN IN FEET AT 10' INTERVALS

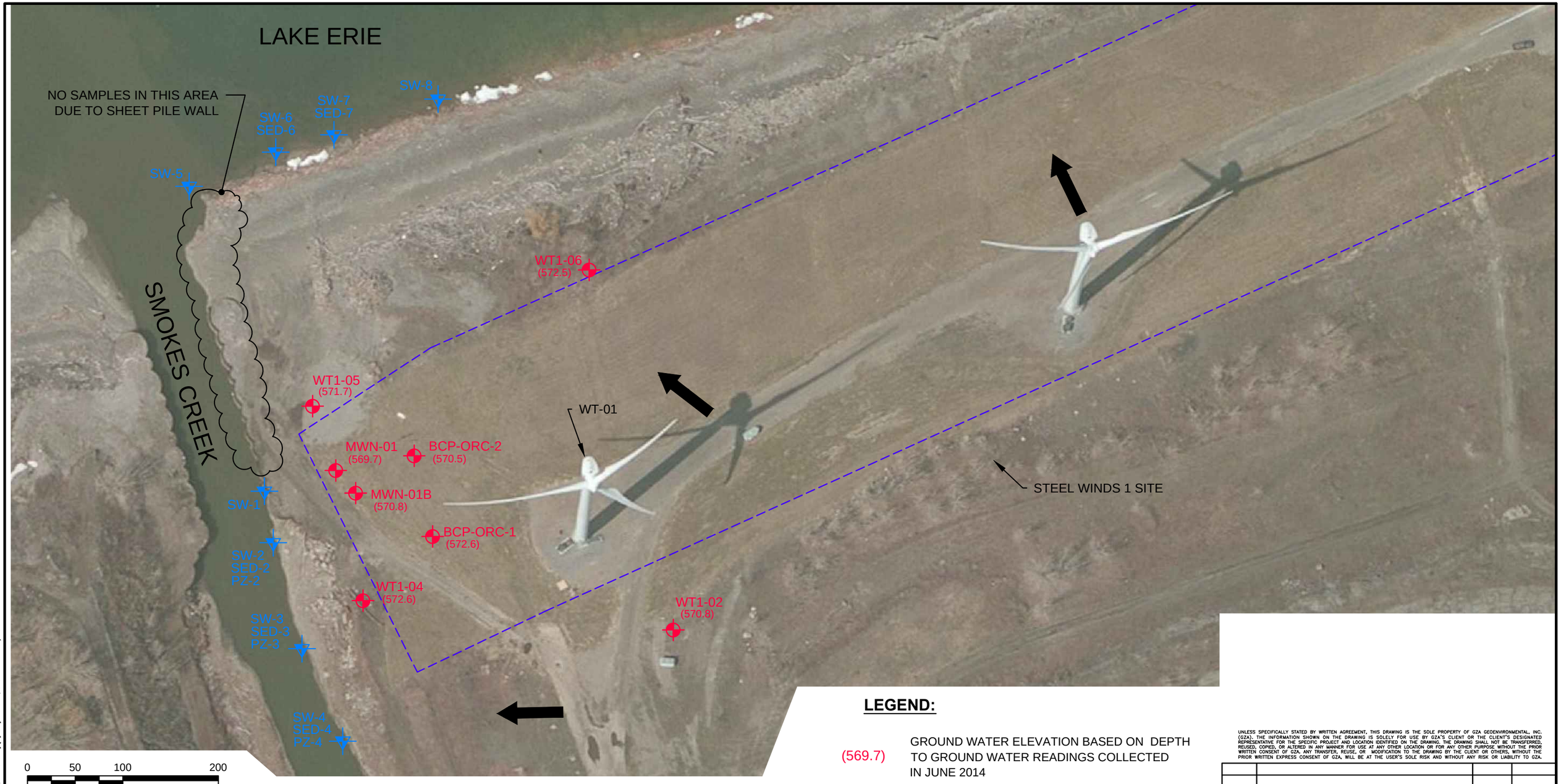
STEEL WINDS I FACILITY
ROUTE 5
LACKAWANNA, NEW YORK

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
FIRST WIND ENERGY, LLC.

TECHNICAL I IMPRACTICABILITY WAIVER WORK PLAN
LOCUS PLAN

PROJ MGR: DJY	REVIEWED BY: RAC	CHECKED BY:	FIGURE 1
DESIGNED BY:	DRAWN BY: GRB	SCALE: AS SHOWN	
DATE: OCTOBER, 2014	PROJECT NO. 03.0033579.07	REVISION NO. 0	SHEET NO. 1 of 3



NOTES:

1. BASE MAP ADAPTED FROM AN AERIAL PHOTO DOWNLOADED FROM GOOGLE EARTH AND FIELD OBSERVATIONS.

2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

LEGEND:

(569.7)	GROUND WATER ELEVATION BASED ON DEPTH TO GROUND WATER READINGS COLLECTED IN JUNE 2014
MWN-01	GROUND WATER SAMPLING LOCATION
	PRESUMED WATER FLOW DIRECTION
	SURFACE WATER, PIEZOMETER AND/OR SEDIMENT SAMPLE LOCATIONS
SW-2	SURFACE WATER SAMPLE LOCATION
SED-2	SEDIMENT SAMPLE LOCATION
PZ-2	TEMPORARY PIEZOMETER SAMPLE LOCATION

NO.	ISSUE/DESCRIPTION	BY	DATE

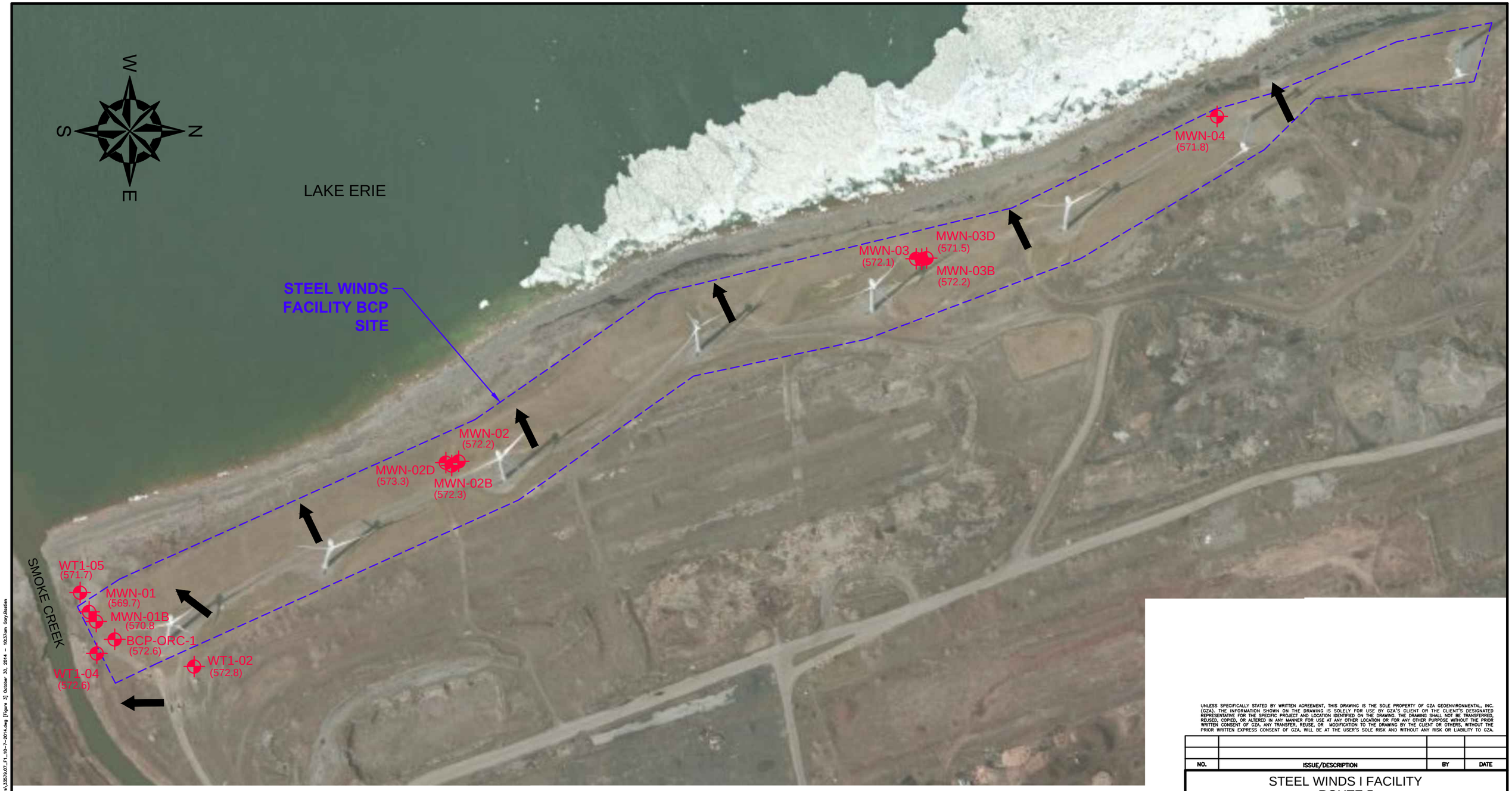
STEEL WINDS I FACILITY
ROUTE 5
LACKAWANNA, NEW YORK

TECHNICAL IMPRACTICABILITY WAIVER WORK APPLICATION
EXPLORATION LOCATION PLAN

PREPARED BY:
GZA GeoEnvironmental of N.Y.
Engineers and Scientists
535 WASHINGTON STREET 11th FLOOR
BUFFALO, NEW YORK 14203
(716) 685-2300

PREPARED FOR:
FIRST WIND ENERGY, LLC.

PROJ MGR: DJT	REVIEWED BY: RAC	CHECKED BY:	FIGURE 2
DESIGNED BY:	DRAWN BY: GRB	SCALE: AS SHOWN	
DATE OCTOBER 2014	PROJECT NO. 03.0033579.07	REVISION NO. 0	SHEET NO. 2 OF 3



LEGEND:

MWN-01 (569.71) — APPROXIMATE LOCATION AND DESIGNATION OF EXISTING MONITORING WELLS SHOWN WITH GROUNDWATER ELEVATIONS MEASURED BY GZA IN JUNE 2014.

PRESUMED WATER FLOW DIRECTION

NOTES:

1. BASE MAP ADAPTED FROM AN AERIAL PHOTO DOWNLOADED FROM GOOGLE EARTH AND FIELD OBSERVATIONS.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

0 50 100 200
SCALE IN FEET

NO.	ISSUE/DESCRIPTION	BY	DATE

STEEL WINDS I FACILITY
ROUTE 5
LACKAWANNA, NEW YORK

TECHNICAL IMPRACTICABILTY WAIVER WORK PLAN
SITE PLAN

PREPARED BY:
GZA GeoEnvironmental of N.Y.
Engineers and Scientists
535 WASHINGTON STREET 11th FLOOR
BUFFALO, NEW YORK 14203
(716) 685-2300

PREPARED FOR:
FIRST WIND ENERGY, LLC.

PROJ MGR: DJT	REVIEWED BY:	CHECKED BY:	FIGURE 3
DESIGNED BY:	DRAWN BY: GRB	SCALE: AS SHOWN	
DATE OCTOBER 2014	PROJECT NO. 03.0033579.07	REVISION NO.	SHEET NO. 3 OF 3

APPENDIX A

LIMITATIONS

GEOHYDROLOGICAL LIMITATIONS

Use of Report

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

Standard of Care

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Proposal for Services and/or Report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).

3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state or federal agency.

4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

Subsurface Conditions

5. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

6. Water level readings have been made, as described in this Report, in and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the Report.

Compliance with Codes and Regulations

7. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.

Screening and Analytical Testing

8. GZA collected environmental samples at the locations identified in the Report. These samples were analyzed for the specific parameters identified in the report. Additional constituents, for which analyses were not conducted, may be present in soil, groundwater, surface water, sediment and/or air. Future Site activities and uses may result in a requirement for additional testing.

9. Our interpretation of field screening and laboratory data is presented in the Report. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.

10. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Report.

Interpretation of Data

11. Our opinions are based on available information as described in the Report, and on our professional judgment. Additional observations made over time, and/or space, may not support the opinions provided in the Report.

Additional Information

12. In the event that the Client or others authorized to use this report obtain additional information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

Additional Services

13. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.

APPENDIX B

DATA USABILITY REPORT

Project No: Steel Winds
Lab Name: Spectrum Analytical, North Kingstown, Rhode Island
Site Name: Steel Winds – Lackawanna, New York
Samples Collected: 8/6/14, 7/17/14, 6/24/14, 6/25/14, and 6/26/14
22 samples
Data packages: N1104, N1400, and N1243
Matrix: Sediment/Aqueous

Semi Volatile Organic Compounds -- Method 8270

Samples Collected (Client IDs):

Data Package N1104 (sample dates: 6/24/14, 6/25/14, and 6/26/14)

WTI-02	WTI-05	WTI-06
BCP-ORC-2	BCP-ORC-1	MWN-01
MWN-01B	WTI-04	

Data Package N1243 (sample dates: 7/17/14)

SED-2	SED-3	SED-4
SED-31		

Data Package N1400 (sample dates: 8/6/14)

SUR-2	SUR-3	SUR-4
SUR-1	SUR-5	SUR-6
SED-6	SUR-7	SED-7
SUR-8		

A modified Tier I/Tier II data validation was performed on the semi volatile organic compounds (SVOCs) analytical data for the aqueous samples collected at the Steel Winds Site in Lackawanna, New York. The laboratory, Spectrum Analytical, North Kingstown prepared and analyzed the samples in accordance with Method 8270.

The data validation was conducted in accordance with *Region I, EPA-New England Environmental Data Review Supplement (April 2013), the National Functional Guidelines (October 2013)*.

The following items were evaluated:

- Chain of custody documents*
- Sample log in documents *
- Preservation and Technical Holding Times*
- GC/MS Tuning NA
- Initial and Continuing Calibration*
- Laboratory Blank Analyses*
- Field Blank Analysis NA
- Matrix Spike/Matrix Spike Duplicate Results*
- Field Duplicate Results*
- Lab Control Samples/Duplicates*

- Internal Standards Performance (Surrogate Recovery)*
- TCL Compound Identification NA
- Compound Quantitation and Reported Quantitation Limits
- Tentatively Identified Compounds NA
- System Performance NA
- Data Completeness*

* - All criteria met for all data packages
NA – Not Applicable/Not Available

Overall Evaluation of Data and Potential Usability Issues

No samples were qualified due to documentation, preservation methods or holding times.

Method blank analysis was provided for each data set. All analytes were non-detect.

Trip blanks were prepared and analyzed along with the samples submitted under each chain of custody. Equipment blanks were prepared and analyzed along with the sediment, surface water and pore water samples.

Matrix spike/matrix spike duplicates (MS/MSD) were not prepared or analyzed.

Two samples were qualified due to results associated with field duplicate analyses.

Lab control samples and duplicates (LCS/LCSD) were prepared and analyzed for all data sets. No results required qualification.

The laboratory's reporting limits (RLs) did not meet the project quantitation limit (PQL) requirements for some of the target analytes. Some samples did not meet the quantitation limits due to dilution.

A review of the chain of custody and laboratory certificates for required parameters and analytes indicates that project-required data completeness has been achieved.

Chain of Custody Documents

The sampling chain of custody documents were properly signed and dated. As reported on the chains of custody, cooler temperatures upon receipt at the laboratory were as follows:

	Cooler Temp.
Samples collected 8/6/2014 Received 8/8/2014 at 10:30	2.6^{o} C
Samples collected 7/17/2014 Received 7/18/2014 at 12:10	4.2 C
Samples collected 6/24/2014 Received 6/25/2014 at 10:17	0.4^{o} C
Samples collected 6/25/2014 Received 6/26/2014 at 10:10	2.8^{o} C
Samples collected 6/26/2014 Received 6/27/2014 at 09:55	3.8^{o} C

Samples were transported by mail courier to the lab after each sampling round. No results were qualified based upon the cooler temperatures.

Sample Log-in Documents

The project narrative for data package N1400 and N1243 indicate that there were no issues with the sample log in.

The project narrative for data package N1104 indicates that the chain of custody did not contain a bottle count for sample WTI-05. No results required qualification.

Preservation and Technical Holding Times

Samples were collected in non-preserved bottles, as required. No results were qualified. All samples were prepared and analyzed within the method holding time.

GC/MS Tuning

GC/MS instrument performance is checked and adjusted by Spectrum Analytical as part of its QA/QC plan and therefore is not included in this validation report.

Continuing Calibration

The project narratives indicate that continuing calibrations were within QC limits. Forms documenting continuing calibration were not included in the data packages. No results were qualified.

Laboratory and Field Blank Analyses

Method blank analysis was provided for each data set. All analytes were non-detect. No results required qualification.

Equipment blanks were provided with the sediment samples. Bis(2-ethylhexyl)phthalate was detected below the quantitation limit in the equipment blank for samples SED-2, SED-3, SED-4 and SED-31. The results for Bis(20ethylhexyl)phthalate were above the equipment blank result and above the quantitation limit for samples SED-2 and SED-4. The result for sample SED-3 was non-detect. No results required qualification.

Field Duplicates

Data Package N1400: Field Duplicate is the duplicate of SUR-3. All of the results were non-detect in both samples. Therefore, no results required qualification.

Data Package N1104: Field Duplicate is the duplicate of MWN-01B. The results with differing values are listed in the table below

Parameter	MWN-01B	Field Duplicate	%RPD
Naphthalene	700	590	17
Acenaphthene	12	19	45
Phenanthrene	67	68	1.5
Pyrene	6.6	7.1	7

The RPD for acenaphthene was greater than 30% in the field duplicate samples. Therefore, the positive result in both samples were qualified as estimated J.

Data Package N1243: SED-31 is the duplicate of SED-3. The results with differing values are listed in the table below

Parameter	SED-3	SED-31	%RPD
Naphthalene	220	140	44
2-methylnaphthalene	180	120	40
Acenaphthylene	110	ND	NA
Acenaphthene	140	85	48
Dibenzofuran	450	310	37
Fluorene	740	500	38
Phenanthrene	3400	3000	13
Anthracene	730	660	10
Carbazole	ND	82	NA
Pyrene	980	990	1
Chrysene	300	310	3
Benzo(k)fluoranthene	170	160	6
Benzo(a)pyrene	300	320	6
Indeno(1,2,3-cd)pyrene	250	240	4
Benzo(g,h,i)perylene	270	250	7

All of the RPD for the field duplicates were below 50%. Therefore no results required qualification. The positive detect for Acenaphthylene in sample SED-3 was less than twice the quantitation limit, therefore the result did not require qualification. The positive detect for Carbazole in sample SED-31 was less than twice the quantitation limit, therefore the result did not require qualification.

Lab Control Samples/Duplicates

LCS/LCSD analysis was completed for all data sets. None of the analytes had %R values outside QC limits. No results required qualification.

Internal Standards Performance (Surrogate Recovery)

The project narratives for data packages N1400 and N1243 indicate that the surrogate recoveries were all within QC limits. Forms documenting internal standard area and retention time were included with each data package. All of the internal standards were within QC criteria. No results were qualified.

The project narrative for data package N1104 indicates that the surrogate recovery was below QC criteria for Terphenyl-d14. Due to the fact that only one surrogate result wa outside QC limits, no sample results were qualified. Forms documenting internal standard area and retention time were included with each data package. All of the internal standards were within QC criteria. No results were qualified.

Compound Quantitation and Reported Quantitation Limits

The laboratory's reporting limits (RLs) did not meet the project quantitation limit (PQL) requirements for target analytes in sediment samples and for certain analytes in surface water and groundwater. In general, elevated RLs appear attributable to observed contamination and we do not believe the elevated RLs are a QA/QC issue. The following samples did not meet the quantitation limits due to dilution: SED-2, WTI-06, MWN-01, and MWN-01B.

Data Completeness

A review of the chain of custody and laboratory certificates for required parameters and analytes indicates that 90 percent project-required data completeness has been achieved.

Table 1 – SVOC Recommendations Summary

Sample ID	Matrix	Action
WTI-02	Aqueous	A
WTI-05	Aqueous	A
WTI-06	Aqueous	A
BCP-ORC-2	Aqueous	A
BCP-ORC-1	Aqueous	A
MWN-01	Aqueous	A
MWN-01B	Aqueous	J
WTI-04	Aqueous	A
SED-2	Sediment	A
SED-3	Sediment	A
SED-4	Sediment	A
SED-31	Sediment	A
SUR-2	Aqueous	A
SUR-3	Aqueous	A
SUR-4	Aqueous	A
SUR-1	Aqueous	A
SUR-5	Aqueous	A
SUR-6	Aqueous	A
SED-6	Sediment	A
SUR-7	Aqueous	A
SED-7	Sediment	A
SUR-8	Aqueous	A

A Accept all results
J Qualify results for Acenaphthene as estimated J due to high RPD in field duplicates

Project No: Steel Winds
Lab Name: Spectrum Analytical, North Kingstown, Rhode Island
Site Name: Steel Winds – Lackawanna, New York
Samples Collected: 8/6/14, 7/17/14, 6/24/14, 6/25/14, and 6/26/14
25 samples
Data packages: N1104, N1400, and N1243
Matrix: Aqueous

Volatile Organic Compounds -- Method 8260

Samples Collected (Client IDs):

Data Package N1104 (sample dates: 6/24/14, 6/25/14, and 6/26/14)

WTI-02	WTI-05	WTI-06
BCP-ORC-2	BCP-ORC-1	MWN-01
MWN-01B	WTI-04	

Data Package N1243 (sample dates: 7/17/14)

SED-2	SED-3	SED-4
SED-31		

Data Package N1400 (sample dates: 8/6/14)

SUR-2	SUR-3	SUR-4
SUR-1	SUR-5	SUR-6
SED-6	SUR-7	SED-7
SUR-8	PW-2	PW-3
PW-4		

A modified Tier I/Tier II data validation was performed on the semi volatile organic compounds (SVOCs) analytical data for the aqueous samples collected at the Steel Winds Site in Lackawanna, New York. The laboratory, Spectrum Analytical, North Kingstown prepared and analyzed the samples in accordance with Method 8270.

The data validation was conducted in accordance with *Region I, EPA-New England Environmental Data Review Supplement (April 2013), and the National Functional Guidelines (October 2013)*.

The following items were evaluated:

- Chain of custody documents *
- Sample log in documents*
- Preservation and Technical Holding Times*
- GC/MS Tuning NA
- Initial and Continuing Calibration*
- Laboratory Blank Analyses*
- Field Blank Analysis
- Matrix spike/Matrix Spike Duplicate Results
- Laboratory Duplicate Analysis NA

- Field Duplicate Results
- Lab Control Samples/Duplicates
- Internal Standards Performance (Surrogate Recovery)*
- TCL Compound Identification NA
- Compound Quantitation and Reported Quantitation Limits*
- Tentatively Identified Compounds NA
- System Performance NA
- Data Completeness*

* - All criteria met for all data packages
NA – Not Applicable/Not Available

Overall Evaluation of Data and Potential Usability Issues

No samples were qualified due to documentation, preservation methods or holding times.

Method blank analysis was provided at the required frequency. No analytes were detected in any laboratory blank samples.

Trip blanks were prepared and analyzed along with the samples submitted under each chain of custody. Equipment blanks were prepared and analyzed along with the sediment, surface water and pore water samples.

Matrix spike/matrix spike duplicates was not performed.

Field duplicates were prepared and analyzed, none of the results required qualification.

Lab control samples and duplicates (LCS/LCSD) were prepared and analyzed at the required frequency. None of the results required qualification.

%R values for all surrogates were inside QC limits for all data packages.

Project quantitation limits were satisfied for all analytes.

A review of the laboratory certificates for required parameters and analytes indicates that project-required completeness has been achieved.

Chain of Custody Documents

The sampling chain of custody documents were properly signed and dated. As reported on the chains of custody, cooler temperatures upon receipt at the laboratory were as follows:

	Cooler Temp.
Samples collected 8/6/2014 Received 8/8/2014 at 10:30	2.6^{o} C
Samples collected 7/17/2014 Received 7/18/2014 at 12:10	4.2 C
Samples collected 6/24/2014 Received 6/25/2014 at 10:17	0.4^{o} C
Samples collected 6/25/2014	2.8^{o} C

Received 6/26/2014 at 10:10	
Samples collected 6/26/2014 Received 6/27/2014 at 09:55	3.8^{o} C

Samples were transported by mail courier to the lab after each sampling round. No results were qualified based upon the cooler temperatures.

Sample Log-in Documents

The project narrative for data package N1400 and N1243 indicate that there were no issues with the sample log in.

The project narrative for data package N1104 indicates that the chain of custody did not contain a bottle count for sample WTI-05. No results required qualification.

Preservation and Technical Holding Times

VOC samples were collected as required per the methods used. All samples were prepared and analyzed within the method holding time.

Initial and Continuing Calibration

The project narratives indicate that continuing calibrations were within QC limits. Forms documenting continuing calibration were not included in the data packages. No results were qualified.

Laboratory Blank Analyses

Method blank analyses was performed. No analytes were detected in any laboratory blank samples.

Field Blank Analyses

A trip blank was prepared and analyzed along with the samples submitted under each chain of custody. All of the results in the trip blanks were non-detect. Equipment blanks were also prepared and analyzed for the sediment, surface water and pore water samples. All of the results were non-detect. No results required qualification.

Laboratory Duplicates

Lab control sample duplicates were prepared and analyzed. All of the RPD results were within quality control criteria. No results required qualification.

Field Duplicates

Data Package N1400: Field Duplicate is the duplicate of SUR-3. The results with differing values are listed in the table below

Parameter	SUR-3	Field Duplicate	%RPD
Naphthalene	1.8	1.6	12

The RPD was less than 30% therefore the results did not require qualification.

Data Package N1400: Field Duplicate2 is the duplicate of PW-3. The results with differing values are listed in the table below

Parameter	PW-3	Field Duplicate	%RPD
Benzene	31	32	3
Toluene	6.2	6.4	3
Ethylbenzene	1.3	1.4	7
m,p-Xylene	13	14	7
Xylene Total	24	25	4
1,3,5-Trimethylbenzene	4.9	5.0	2
1,2,4-Trimethylbenzene	3.9	4.2	7
Naphthalene	95	100	5

All of the RPDs were less than 30% therefore, none of the results required qualification.

Data Package N1104: Field Duplicate is the duplicate of MWN-01B. The results with differing values are listed in the table below

Parameter	MWN-01B	Field Duplicate	%RPD
Benzene	85	88	3
m,p-Xylene	15	16	6
o-Xylene	9.8	9.9	1
Xylene total	25	26	4
Isopropylbenzene	1.8	1.7	6
1,3,5-Trimethylbenzene	5.7	5.4	5
1,2,4-Trimethylbenzene	8.2	7.9	4
Naphthalene	1800	1200	40

The RPD for naphthalene was greater than 30% therefore the positive results in the associated samples were qualified as estimated J.

Data Package N1243: SED-31 is the duplicate of SED-3. The results with differing values are listed in the table below

Parameter	SED-3	SED-31	%RPD
Benzene	1.7	3.5	69
Toluene	1.0	1.6	46
Ethylbenzene	0.67	0.71	6
m,p-Xylene	5.3	6.5	20
o-Xylene	4.2	4.8	13
Xylene total	9.4	11	16
1,3,5-Trimethylbenzene	5.6	5.2	7
1,2,4-Trimethylbenzene	3.1	3.9	23
Naphthalene	ND	31	NA

The result for Naphthalene in sample SED-3 was qualified as estimated UJ due to the difference between field duplicates. The result in sample SED-31 was qualified as estimated J due to the difference between field duplicates. The positive results for benzene in the associated samples were qualified as estimated J due to High RPD in the field duplicates.

Lab Control Samples/Duplicates

LCS/LCSD analysis was completed for all data sets. Analytes with %R and %RPD values outside QC limits were as follows:

Data packages N1400:
LCS/LCSD:

Compound	%R	Qualifier for Positive Results	Qualifier for Non-detects	Samples Associated with LCS/LCSD
Naphthalene	**127**	J	A	SED-6 SED-7

The results in the associated samples were non-detect and were accepted.

Internal Standards Performance (Surrogate Recovery)

The project narrative indicates that all of the surrogate recoveries were within QC limits. No results required qualification.

Compound Quantitation and Reported Quantitation Limits

Project quantitation limits were satisfied for all analytes except for the following samples which did not meet the project quantitation limits due to dilution: WTI-06, MWN-01, and MWN-01B.

Data Completeness

A review of the chain of custody and laboratory certificates for required parameters and analytes indicates that the project-required completeness of 90% has been achieved.

Table 1 –VOC Recommendations Summary

Sample ID	Matrix	Action
WTI-02	Aqueous	A
WTI-05	Aqueous	A
WTI-06	Aqueous	A
BCP-ORC-2	Aqueous	A
BCP-ORC-1	Aqueous	A
MWN-01	Aqueous	A
MWN-01B	Aqueous	J
WTI-04	Aqueous	A
SED-2	Sediment	A
SED-3	Sediment	UJ
SED-4	Sediment	A
SED-31	Sediment	J
SUR-2	Aqueous	A
SUR-3	Aqueous	A
SUR-4	Aqueous	A
SUR-1	Aqueous	A
SUR-5	Aqueous	A
SUR-6	Aqueous	A
SED-6	Sediment	A
SUR-7	Aqueous	A
SED-7	Sediment	A
SUR-8	Aqueous	A
PW-2	Aqueous	A
PW-3	Aqueous	A
PW-4	Aqueous	A

A Accept all results

J Qualify as estimated for naphthalene due to high RPD in field duplicates.
UJ Qualify as estimated for naphthalene due to high RPD in field duplicates.
J^{1} Qualify as estimated for benzene due to high RPD in field duplicates.

APPENDIX C

LABORATORY CERTIFICATES

Report Date:
21-Jul-14 12:55

SPECTRUM ANALYTICAL, INC.
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- [x] Final Report
- [ ] Re-Issued Report
- [ ] Revised Report

Laboratory Report

GZA GeoEnvironmental, Inc.
535 Washington Street, 11th Floor
Buffalo, NY 14203

Work Order: N1104
Project : Steelwinds 1
Project #:

Attn: John Beninati

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
N1104-01	MWN-04-062414	Aqueous	24-Jun-14 10:10	25-Jun-14 10:17
N1104-02	MWN-03B-062414	Aqueous	24-Jun-14 11:50	25-Jun-14 10:17
N1104-03	MWN-03D-062414	Aqueous	24-Jun-14 15:05	25-Jun-14 10:17
N1104-04	MWN-03-062414	Aqueous	24-Jun-14 17:00	25-Jun-14 10:17
N1104-05	TRIP BLANK 001	Aqueous	24-Jun-14 00:00	25-Jun-14 10:17
N1104-06	MWM-02-062514	Aqueous	25-Jun-14 09:25	26-Jun-14 10:10
N1104-07	MWN-02B-062514	Aqueous	25-Jun-14 10:30	26-Jun-14 10:10
N1104-08	MWN-02D-062514	Aqueous	25-Jun-14 11:35	26-Jun-14 10:10
N1104-09	WT1-02-062514	Aqueous	25-Jun-14 13:40	26-Jun-14 10:10
N1104-10	WT1-05-062514	Aqueous	25-Jun-14 15:20	26-Jun-14 10:10
N1104-11	TRIP BLANK 2	Aqueous	25-Jun-14 00:00	26-Jun-14 10:10
N1104-12	WT1-06-062614	Aqueous	26-Jun-14 17:20	27-Jun-14 09:55
N1104-13	BCP-ORC-2-062614	Aqueous	26-Jun-14 16:05	27-Jun-14 09:55
N1104-14	BCP-ORC-1-062614	Aqueous	26-Jun-14 14:50	27-Jun-14 09:55
N1104-15	MWN-01-062614	Aqueous	26-Jun-14 08:35	27-Jun-14 09:55
N1104-16	MWN-01B-062614	Aqueous	26-Jun-14 09:55	27-Jun-14 09:55
N1104-17	WT1-04-062614	Aqueous	26-Jun-14 11:40	27-Jun-14 09:55
N1104-18	FIELD DUPLICATE 062614	Aqueous	26-Jun-14 00:00	27-Jun-14 09:55

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the samples(s) as received. This report may not be reproduced, except in full, without written approval from Spectrum Analytical.

All applicable NELAC or USEPA CLP requirments have been meet.

Spectrum Analytical (Rhode Island) is accredited under the National Environmental Laboratory Approval Program (NELAP) and DoD Environmental Laboratory Accreditation Program (ELAP), holds Organic and Inorganic contracts under the USEPA CLP Program and is certified under several states. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.spectrum-analytical.com.

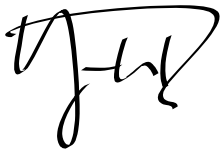
Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

Department of Defense	N/A
Connecticut	PH-0153
Delaware	N/A
Florida	E87664
Maine	2007037
Massachusetts	M-RI907
New Hampshire	2631
New Jersey	RI001
New York	11522
Rhode Island	LAI00301
USDA	P330-08-00023
USEPA - ISM	EP-W-09-039
USEPA - SOM	EP-W-11-033

NELAP ACCREDITED TNI LABORATORY

LABORATORY ACCREDITATION BUREAU ACCREDITED
DoD ELAP
Certificate # L2247 Testing

Authorized by:



Yihai Ding
Laboratory Director

SPECTRUM ANALYTICAL, INC.
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* Data Summary Pack *

646 Camp Ave · North Kingstown, RI 02852-4008 · 401-732-3400 · FAX 401-732-3499
www.spectrum-analytical.com

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Identification and Analytical Requirements Summary

Project Name : Steelwinds 1 **SDG :** N1104

Customer Sample ID	Laboratory Sample ID	Analytical Requirements				
		MSVOA Method #	MSSEMI Method #	GC* Method #	ME	Other
MWN-04-062414	N1104-01	SW8260_W	SW8270_W			
MWN-03B-062414	N1104-02				SW6010_W	
MWN-03D-062414	N1104-03	SW8260_W	SW8270_W		SW6010_W	
MWN-03-062414	N1104-04	SW8260_W	SW8270_W			
TRIP BLANK 001	N1104-05	SW8260_W				
MWM-02-062514	N1104-06	SW8260_W	SW8270_W			
MWN-02B-062514	N1104-07	SW8260_W	SW8270_W		SW6010_W	
MWN-02D-062514	N1104-08				SW6010_W	
WT1-02-062514	N1104-09	SW8260_W	SW8270_W		SW6010_W	SEE DATA
WT1-05-062514	N1104-10	SW8260_W	SW8270_W		SW6010_W	SEE DATA
TRIP BLANK 2	N1104-11	SW8260_W				
WT1-06-062614	N1104-12	SW8260_W	SW8270_W		SW6010_W	SEE DATA
BCP-ORC-2-062614	N1104-13	SW8260_W	SW8270_W		SW6010_W	SEE DATA
BCP-ORC-1-062614	N1104-14	SW8260_W	SW8270_W		SW6010_W	SEE DATA
MWN-01-062614	N1104-15	SW8260_W	SW8270_W		SW6010_W	SEE DATA
MWN-01B-062614	N1104-16	SW8260_W	SW8270_W		SW6010_W	SEE DATA
WT1-04-062614	N1104-17	SW8260_W	SW8270_W		SW6010_W	SEE DATA
FIELD DUPLICATE 062614	N1104-18	SW8260_W	SW8270_W		SW6010_W	SEE DATA

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSVOA

Project Name : Steelwinds 1 **SDG :** N1104

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8260_W					
N1104-01A	AQ	6/24/2014	6/25/2014	NA	7/2/2014
N1104-03A	AQ	6/24/2014	6/25/2014	NA	7/2/2014
N1104-04A	AQ	6/24/2014	6/25/2014	NA	7/2/2014
N1104-05A	AQ	6/24/2014	6/25/2014	NA	7/2/2014
N1104-06A	AQ	6/25/2014	6/26/2014	NA	7/2/2014
N1104-07A	AQ	6/25/2014	6/26/2014	NA	7/2/2014
N1104-07ADL	AQ	6/25/2014	6/26/2014	NA	7/3/2014
N1104-09A	AQ	6/25/2014	6/26/2014	NA	7/3/2014
N1104-10A	AQ	6/25/2014	6/26/2014	NA	7/2/2014
N1104-11A	AQ	6/25/2014	6/26/2014	NA	7/2/2014
N1104-12A	AQ	6/26/2014	6/27/2014	NA	7/2/2014
N1104-12ADL	AQ	6/26/2014	6/27/2014	NA	7/3/2014
N1104-13A	AQ	6/26/2014	6/27/2014	NA	7/3/2014
N1104-14A	AQ	6/26/2014	6/27/2014	NA	7/2/2014
N1104-15A	AQ	6/26/2014	6/27/2014	NA	7/2/2014
N1104-15ADL	AQ	6/26/2014	6/27/2014	NA	7/3/2014
N1104-16A	AQ	6/26/2014	6/27/2014	NA	7/2/2014
N1104-16ADL	AQ	6/26/2014	6/27/2014	NA	7/3/2014
N1104-17A	AQ	6/26/2014	6/27/2014	NA	7/8/2014
N1104-18A	AQ	6/26/2014	6/27/2014	NA	7/3/2014
N1104-18ADL	AQ	6/26/2014	6/27/2014	NA	7/8/2014

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSSEMI

Project Name : Steelwinds 1 **SDG :** N1104

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8270_W					
N1104-01B	AQ	6/24/2014	6/25/2014	6/27/2014	7/11/2014
N1104-03B	AQ	6/24/2014	6/25/2014	6/27/2014	7/11/2014
N1104-04B	AQ	6/24/2014	6/25/2014	6/27/2014	7/11/2014
N1104-06B	AQ	6/25/2014	6/26/2014	6/27/2014	7/11/2014
N1104-07B	AQ	6/25/2014	6/26/2014	6/27/2014	7/11/2014
N1104-07BDL	AQ	6/25/2014	6/26/2014	6/27/2014	7/13/2014
N1104-09F	AQ	6/25/2014	6/26/2014	6/27/2014	7/11/2014
N1104-10F	AQ	6/25/2014	6/26/2014	6/27/2014	7/11/2014
N1104-12E	AQ	6/26/2014	6/27/2014	6/27/2014	7/11/2014
N1104-12EDL	AQ	6/26/2014	6/27/2014	6/27/2014	7/13/2014
N1104-13E	AQ	6/26/2014	6/27/2014	6/27/2014	7/11/2014
N1104-14E	AQ	6/26/2014	6/27/2014	6/27/2014	7/11/2014
N1104-15E	AQ	6/26/2014	6/27/2014	6/27/2014	7/11/2014
N1104-15EDL	AQ	6/26/2014	6/27/2014	6/27/2014	7/13/2014
N1104-16E	AQ	6/26/2014	6/27/2014	6/27/2014	7/11/2014
N1104-16EDL	AQ	6/26/2014	6/27/2014	6/27/2014	7/13/2014
N1104-17E	AQ	6/26/2014	6/27/2014	6/27/2014	7/11/2014
N1104-18E	AQ	6/26/2014	6/27/2014	6/27/2014	7/11/2014
N1104-18EDL	AQ	6/26/2014	6/27/2014	6/27/2014	7/13/2014

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSVOA

Project Name : Steelwinds 1 **SDG :** N1104

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Low/Medium Level	Dil/Conc Factor
SW8260_W					
N1104-01A	AQ	SW8260_W	NA	LOW	1
N1104-03A	AQ	SW8260_W	NA	LOW	1
N1104-04A	AQ	SW8260_W	NA	LOW	1
N1104-05A	AQ	SW8260_W	NA	LOW	1
N1104-06A	AQ	SW8260_W	NA	LOW	1
N1104-07A	AQ	SW8260_W	NA	LOW	1
N1104-07ADL	AQ	SW8260_W	NA	LOW	4
N1104-09A	AQ	SW8260_W	NA	LOW	1
N1104-10A	AQ	SW8260_W	NA	LOW	1
N1104-11A	AQ	SW8260_W	NA	LOW	1
N1104-12A	AQ	SW8260_W	NA	LOW	1
N1104-12ADL	AQ	SW8260_W	NA	LOW	2
N1104-13A	AQ	SW8260_W	NA	LOW	1
N1104-14A	AQ	SW8260_W	NA	LOW	1
N1104-15A	AQ	SW8260_W	NA	LOW	1
N1104-15ADL	AQ	SW8260_W	NA	LOW	4
N1104-16A	AQ	SW8260_W	NA	LOW	1
N1104-16ADL	AQ	SW8260_W	NA	LOW	20
N1104-17A	AQ	SW8260_W	NA	LOW	1
N1104-18A	AQ	SW8260_W	NA	LOW	1
N1104-18ADL	AQ	SW8260_W	NA	LOW	50

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSSEMI

Project Name : Steelwinds 1 **SDG :** N1104

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
SW8270_W					
N1104-01B	AQ	SW8270_W	3550C	N/A	1
N1104-03B	AQ	SW8270_W	3550C	N/A	1
N1104-04B	AQ	SW8270_W	3550C	N/A	1
N1104-06B	AQ	SW8270_W	3550C	N/A	1
N1104-07B	AQ	SW8270_W	3550C	N/A	1
N1104-07BDL	AQ	SW8270_W	3550C	N/A	5
N1104-09F	AQ	SW8270_W	3550C	N/A	1
N1104-10F	AQ	SW8270_W	3550C	N/A	1
N1104-12E	AQ	SW8270_W	3550C	N/A	1
N1104-12EDL	AQ	SW8270_W	3550C	N/A	4
N1104-13E	AQ	SW8270_W	3550C	N/A	1
N1104-14E	AQ	SW8270_W	3550C	N/A	1
N1104-15E	AQ	SW8270_W	3550C	N/A	1
N1104-15EDL	AQ	SW8270_W	3550C	N/A	5
N1104-16E	AQ	SW8270_W	3550C	N/A	1
N1104-16EDL	AQ	SW8270_W	3550C	N/A	20
N1104-17E	AQ	SW8270_W	3550C	N/A	1
N1104-18E	AQ	SW8270_W	3550C	N/A	1
N1104-18EDL	AQ	SW8270_W	3550C	N/A	20

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary ME

Project Name : Steelwinds 1 **SDG :** N1104

Laboratory Sample ID	Matrix	Metals Requested	Date Received By Lab	Date Analyzed
SW6010_W				
N1104-02A	AQ	SW6010_W	6/25/2014	6/27/2014
N1104-03C	AQ	SW6010_W	6/25/2014	6/27/2014
N1104-07C	AQ	SW6010_W	6/26/2014	6/27/2014
N1104-08A	AQ	SW6010_W	6/26/2014	6/27/2014
N1104-09D	AQ	SW6010_W	6/26/2014	6/27/2014
N1104-10D	AQ	SW6010_W	6/26/2014	6/27/2014
N1104-12C	AQ	SW6010_W	6/27/2014	7/2/2014
N1104-13C	AQ	SW6010_W	6/27/2014	7/2/2014
N1104-14C	AQ	SW6010_W	6/27/2014	7/2/2014
N1104-15C	AQ	SW6010_W	6/27/2014	7/2/2014
N1104-16C	AQ	SW6010_W	6/27/2014	7/2/2014
N1104-17C	AQ	SW6010_W	6/27/2014	7/2/2014
N1104-18C	AQ	SW6010_W	6/27/2014	7/2/2014

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: N1104

Client ID: GZA_BUFFALO
Project: Steelwinds 1
WO Name: Steelwinds 1
Location: GZA_STEELWINDS,
Comments: N/A

Case:
SDG:
PO: 03.0033579.40

HC Due: 07/16/14
Fax Due:
Fax Report: ☐

Report Level: ASP-B
Special Program:
EDD: EQuIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
N1104-01A	MWN-04-062414	06/24/2014 10:10	06/25/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-01B	MWN-04-062414	06/24/2014 10:10	06/25/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2
N1104-02A	MWN-03B-062414	06/24/2014 11:50	06/25/2014	Aqueous	SW6010_W	/ As,Ba,Cr,Mn				Y	M2
N1104-03A	MWN-03D-062414	06/24/2014 15:05	06/25/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-03B	MWN-03D-062414	06/24/2014 15:05	06/25/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2
N1104-03C	MWN-03D-062414	06/24/2014 15:05	06/25/2014	Aqueous	SW6010_W	/ Ba,Mn				Y	M2
N1104-04A	MWN-03-062414	06/24/2014 17:00	06/25/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-04B	MWN-03-062414	06/24/2014 17:00	06/25/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2
N1104-05A	TRIP BLANK 001	06/24/2014 00:00	06/25/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-06A	MWM-02-062514	06/25/2014 09:25	06/26/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-06B	MWM-02-062514	06/25/2014 09:25	06/26/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2
N1104-07A	MWN-02B-062514	06/25/2014 10:30	06/26/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-07B	MWN-02B-062514	06/25/2014 10:30	06/26/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2
N1104-07C	MWN-02B-062514	06/25/2014 10:30	06/26/2014	Aqueous	SW6010_W	/ As only				Y	M2
N1104-08A	MWN-02D-062514	06/25/2014 11:35	06/26/2014	Aqueous	SW6010_W	/ As,Ba,Cr				Y	M2
N1104-09A	WT1-02-062514	06/25/2014 13:40	06/26/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-09B	WT1-02-062514	06/25/2014 13:40	06/26/2014	Aqueous	RSK175	/					VOA
N1104-09C	WT1-02-062514	06/25/2014 13:40	06/26/2014	Aqueous	SW9060_TOC_W	/					R22

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

07/21/2014 12:54 Lab Client Rep: Agnes R Huntley

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: N1104

Client ID: GZA_BUFFALO
Project: Steelwinds 1
WO Name: Steelwinds 1
Location: GZA_STEELWINDS,
Comments: N/A

Case:
SDG:

HC Due: 07/16/14
Fax Due:
Fax Report: ☐

PO: 03.0033579.40

Report Level: ASP-B
Special Program:
EDD: EQuIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
N1104-09D	WT1-02-062514	06/25/2014 13:40	06/26/2014	Aqueous	SW6010_W	/ Dissolved Fe only				Y	M2
N1104-09E	WT1-02-062514	06/25/2014 13:40	06/26/2014	Aqueous	E300IC_W	/ NO3,SO4				Y	V2
N1104-09E	WT1-02-062514	06/25/2014 13:40	06/26/2014	Aqueous	SM2320_W	/					V2
N1104-09F	WT1-02-062514	06/25/2014 13:40	06/26/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2
N1104-10A	WT1-05-062514	06/25/2014 15:20	06/26/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-10B	WT1-05-062514	06/25/2014 15:20	06/26/2014	Aqueous	RSK175	/					VOA
N1104-10C	WT1-05-062514	06/25/2014 15:20	06/26/2014	Aqueous	SW9060_TOC_W	/					R22
N1104-10D	WT1-05-062514	06/25/2014 15:20	06/26/2014	Aqueous	SW6010_W	/ Dissolved Fe only				Y	M2
N1104-10E	WT1-05-062514	06/25/2014 15:20	06/26/2014	Aqueous	E300IC_W	/ NO3,SO4				Y	V2
N1104-10E	WT1-05-062514	06/25/2014 15:20	06/26/2014	Aqueous	SM2320_W	/					V2
N1104-10F	WT1-05-062514	06/25/2014 15:20	06/26/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2
N1104-11A	TRIP BLANK 2	06/25/2014 00:00	06/26/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-12A	WT1-06-062614	06/26/2014 17:20	06/27/2014	Aqueous	RSK175	/					VOA
N1104-12A	WT1-06-062614	06/26/2014 17:20	06/27/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-12B	WT1-06-062614	06/26/2014 17:20	06/27/2014	Aqueous	SW9060_TOC_W	/					R22
N1104-12C	WT1-06-062614	06/26/2014 17:20	06/27/2014	Aqueous	SW6010_W	/ Dissolved Fe only				Y	M2
N1104-12D	WT1-06-062614	06/26/2014 17:20	06/27/2014	Aqueous	E300IC_W	/ NO3,SO4				Y	V2
N1104-12D	WT1-06-062614	06/26/2014 17:20	06/27/2014	Aqueous	SM2320_W	/					V2
N1104-12E	WT1-06-062614	06/26/2014 17:20	06/27/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2

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Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: N1104

Client ID: GZA_BUFFALO
Project: Steelwinds 1
WO Name: Steelwinds 1
Location: GZA_STEELWINDS,
Comments: N/A

Case:
SDG:
PO: 03.0033579.40

HC Due: 07/16/14
Fax Due:
Fax Report: ☐

Report Level: ASP-B
Special Program:
EDD: EQuIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
N1104-13A	BCP-ORC-2-062614	06/26/2014 16:05	06/27/2014	Aqueous	RSK175	/					VOA
N1104-13A	BCP-ORC-2-062614	06/26/2014 16:05	06/27/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-13B	BCP-ORC-2-062614	06/26/2014 16:05	06/27/2014	Aqueous	SW9060_TOC_W	/					R22
N1104-13C	BCP-ORC-2-062614	06/26/2014 16:05	06/27/2014	Aqueous	SW6010_W	/ Dissolved Fe only				Y	M2
N1104-13D	BCP-ORC-2-062614	06/26/2014 16:05	06/27/2014	Aqueous	E300IC_W	/ NO3,SO4				Y	V2
N1104-13D	BCP-ORC-2-062614	06/26/2014 16:05	06/27/2014	Aqueous	SM2320_W	/					V2
N1104-13E	BCP-ORC-2-062614	06/26/2014 16:05	06/27/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2
N1104-14A	BCP-ORC-1-062614	06/26/2014 14:50	06/27/2014	Aqueous	RSK175	/					VOA
N1104-14A	BCP-ORC-1-062614	06/26/2014 14:50	06/27/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-14B	BCP-ORC-1-062614	06/26/2014 14:50	06/27/2014	Aqueous	SW9060_TOC_W	/					R22
N1104-14C	BCP-ORC-1-062614	06/26/2014 14:50	06/27/2014	Aqueous	SW6010_W	/ Dissolved Fe only				Y	M2
N1104-14D	BCP-ORC-1-062614	06/26/2014 14:50	06/27/2014	Aqueous	E300IC_W	/ NO3,SO4				Y	V2
N1104-14D	BCP-ORC-1-062614	06/26/2014 14:50	06/27/2014	Aqueous	SM2320_W	/					V2
N1104-14E	BCP-ORC-1-062614	06/26/2014 14:50	06/27/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2
N1104-15A	MWN-01-062614	06/26/2014 08:35	06/27/2014	Aqueous	RSK175	/					VOA
N1104-15A	MWN-01-062614	06/26/2014 08:35	06/27/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-15B	MWN-01-062614	06/26/2014 08:35	06/27/2014	Aqueous	SW9060_TOC_W	/					R22
N1104-15C	MWN-01-062614	06/26/2014 08:35	06/27/2014	Aqueous	SW6010_W	/ Dissolved Fe only				Y	M2
N1104-15D	MWN-01-062614	06/26/2014 08:35	06/27/2014	Aqueous	E300IC_W	/ NO3,SO4				Y	V2
N1104-15D	MWN-01-062614	06/26/2014 08:35	06/27/2014	Aqueous	SM2320_W	/					V2

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: N1104

Client ID: GZA_BUFFALO
Project: Steelwinds 1
WO Name: Steelwinds 1
Location: GZA_STEELWINDS,
Comments: N/A

Case:
SDG:
PO: 03.0033579.40

HC Due: 07/16/14
Fax Due:
Fax Report: ☐

Report Level: ASP-B
Special Program:
EDD: EQuIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
N1104-15E	MWN-01-062614	06/26/2014 08:35	06/27/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2
N1104-16A	MWN-01B-062614	06/26/2014 09:55	06/27/2014	Aqueous	RSK175	/					VOA
N1104-16A	MWN-01B-062614	06/26/2014 09:55	06/27/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-16B	MWN-01B-062614	06/26/2014 09:55	06/27/2014	Aqueous	SW9060_TOC_W	/					R22
N1104-16C	MWN-01B-062614	06/26/2014 09:55	06/27/2014	Aqueous	SW6010_W	/ Dissolved Fe only				Y	M2
N1104-16D	MWN-01B-062614	06/26/2014 09:55	06/27/2014	Aqueous	E300IC_W	/ NO3,SO4				Y	V2
N1104-16D	MWN-01B-062614	06/26/2014 09:55	06/27/2014	Aqueous	SM2320_W	/					V2
N1104-16E	MWN-01B-062614	06/26/2014 09:55	06/27/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2
N1104-17A	WT1-04-062614	06/26/2014 11:40	06/27/2014	Aqueous	RSK175	/					VOA
N1104-17A	WT1-04-062614	06/26/2014 11:40	06/27/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-17B	WT1-04-062614	06/26/2014 11:40	06/27/2014	Aqueous	SW9060_TOC_W	/					R22
N1104-17C	WT1-04-062614	06/26/2014 11:40	06/27/2014	Aqueous	SW6010_W	/ Dissolved Fe only				Y	M2
N1104-17D	WT1-04-062614	06/26/2014 11:40	06/27/2014	Aqueous	E300IC_W	/ NO3,SO4				Y	V2
N1104-17D	WT1-04-062614	06/26/2014 11:40	06/27/2014	Aqueous	SM2320_W	/					V2
N1104-17E	WT1-04-062614	06/26/2014 11:40	06/27/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2
N1104-18A	FIELD DUPLICATE 062614	06/26/2014 00:00	06/27/2014	Aqueous	RSK175	/					VOA
N1104-18A	FIELD DUPLICATE 062614	06/26/2014 00:00	06/27/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1104-18B	FIELD DUPLICATE 062614	06/26/2014 00:00	06/27/2014	Aqueous	SW9060_TOC_W	/					R22
N1104-18C	FIELD DUPLICATE 062614	06/26/2014 00:00	06/27/2014	Aqueous	SW6010_W	/ Dissolved Fe only				Y	M2

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

Lab Client Rep: Agnes R Huntley

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: N1104

Client ID: GZA_BUFFALO
Project: Steelwinds 1
WO Name: Steelwinds 1
Location: GZA_STEELWINDS,
Comments: N/A

Case:
SDG:
PO: 03.0033579.40

HC Due: 07/16/14
Fax Due:
Fax Report: ☐

Report Level: ASP-B
Special Program:
EDD: EQuIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
N1104-18D	FIELD DUPLICATE 062614	06/26/2014 00:00	06/27/2014	Aqueous	E300IC_W	/ NO3,SO4				Y	V2
N1104-18D	FIELD DUPLICATE 062614	06/26/2014 00:00	06/27/2014	Aqueous	SM2320_W	/					V2
N1104-18E	FIELD DUPLICATE 062614	06/26/2014 00:00	06/27/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	V2

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

Lab Client Rep: Agnes R Huntley

* Volatiles *

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : GZA GeoEnvironmental, Inc.

Project: Steelwinds 1

Laboratory Workorder / SDG #: N1104

SW846 8260C, VOC by GC-MS

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code: SW846 8260C

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B

V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V1
Instrument Type: GCMS-VOA

Description: HP5890 II / HP5972
Manufacturer: Hewlett-Packard
Model: 5890 / 5972
GC Column used: 30 m X 0.25 mm ID [1.40 um thickness] DB-624 capillary column.

Instrument Code: V10
Instrument Type: GCMS-VOA
Description: HP7890A
Manufacturer: Agilent
Model: 7890A / 5975C
GC Column used: 30 m X 0.25 mm ID [1.40 um thickness] DB-624 capillary column.

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

Surrogate standard percent recoveries were within the QC limits.

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

The following samples were analyzed at dilution:

MWN-02B-062514 (N1104-07ADL) : Dilution Factor: 4
WT1-06-062614 (N1104-12ADL) : Dilution Factor: 2
MWN-01-062614 (N1104-15ADL) : Dilution Factor: 4
MWN-01B-062614 (N1104-16ADL) : Dilution Factor: 20
FIELD DUPLICATE 062614 (N1104-18ADL) : Dilution Factor: 50

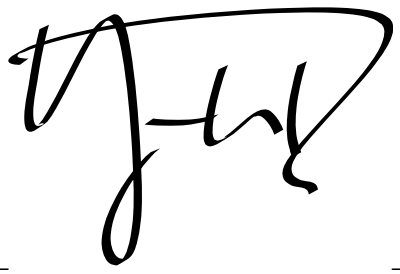
G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

No manual integrations were performed on any sample or standard.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.



Signed:_____ _____

Date:_____7/17/2014_____

Data Flag/Qualifiers (Page 1 of 2):

U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).

J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
- estimated concentration for Tentatively Identified Compound

B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a "trace" concentration below the reporting limit and equal to or above the detection limit.

D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis

E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.

P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.

A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.

* For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.

L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution

RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.

RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.

RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.

MS Matrix Spike.

MSD Matrix Spike Duplicate

DUP Duplicate analysis

SD Serial Dilution

PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

EPA SAMPLE NO.
MWN-04-062414

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-01A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0054.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/25/2014

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-03D-062414

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-03A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0055.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/25/2014

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	0.96	J
179601-23-1	m,p-Xylene	3.0	J
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	3.0	J
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	1.6	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	1.4	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-03-062414

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-04A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0056.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/25/2014

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	
108-88-3	Toluene	1.5	J
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	1.7	J
95-47-6	o-Xylene	1.9	J
1330-20-7	Xylene (Total)	3.7	J
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	1.3	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	0.51	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	9.9	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 001

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-05A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0053.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/25/2014

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWM-02-062514

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-06A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0057.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/26/2014

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	8.9	
108-88-3	Toluene	2.4	J
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	3.8	J
95-47-6	o-Xylene	3.8	J
1330-20-7	Xylene (Total)	7.7	
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	1.9	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	27	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-02B-062514

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-07A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0058.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/26/2014

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	100	
108-88-3	Toluene	15	
100-41-4	Ethylbenzene	0.74	J
179601-23-1	m,p-Xylene	9.0	
95-47-6	o-Xylene	12	
1330-20-7	Xylene (Total)	21	
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	1.9	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	3.3	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	320	E

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-02B-062514DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-07ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6004.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/26/2014

% Moisture: not dec. Date Analyzed: 07/03/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 4.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	20	U
71-43-2	Benzene	98	D
108-88-3	Toluene	14	DJ
100-41-4	Ethylbenzene	20	U
179601-23-1	m,p-Xylene	8.5	DJ
95-47-6	o-Xylene	10	DJ
1330-20-7	Xylene (Total)	19	DJ
98-82-8	Isopropylbenzene	20	U
103-65-1	n-Propylbenzene	20	U
108-67-8	1,3,5-Trimethylbenzene	20	U
98-06-6	tert-Butylbenzene	20	U
95-63-6	1,2,4-Trimethylbenzene	3.2	DJ
135-98-8	sec-Butylbenzene	20	U
99-87-6	4-Isopropyltoluene	20	U
104-51-8	n-Butylbenzene	20	U
91-20-3	Naphthalene	230	D

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WT1-02-062514

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-09A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6005.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/26/2014

% Moisture: not dec. Date Analyzed: 07/03/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	16	
108-88-3	Toluene	3.1	J
100-41-4	Ethylbenzene	0.91	J
179601-23-1	m,p-Xylene	6.2	
95-47-6	o-Xylene	4.8	J
1330-20-7	Xylene (Total)	11	
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	3.0	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	1.9	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	29	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WT1-05-062514

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-10A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0060.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/26/2014

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	11	
108-88-3	Toluene	2.7	J
100-41-4	Ethylbenzene	0.60	J
179601-23-1	m,p-Xylene	5.6	
95-47-6	o-Xylene	4.6	J
1330-20-7	Xylene (Total)	10	
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	1.7	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	1.6	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	86	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 2

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-11A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0052.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/26/2014

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WT1-06-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-12A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0061.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/27/2014

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	42	
108-88-3	Toluene	8.3	
100-41-4	Ethylbenzene	1.7	J
179601-23-1	m,p-Xylene	17	
95-47-6	o-Xylene	13	
1330-20-7	Xylene (Total)	31	
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	4.6	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	4.5	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	240	E

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WT1-06-062614DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-12ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6006.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/27/2014

% Moisture: not dec. Date Analyzed: 07/03/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 2.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	10	U
71-43-2	Benzene	43	D
108-88-3	Toluene	8.0	DJ
100-41-4	Ethylbenzene	1.7	DJ
179601-23-1	m,p-Xylene	17	D
95-47-6	o-Xylene	13	D
1330-20-7	Xylene (Total)	30	D
98-82-8	Isopropylbenzene	10	U
103-65-1	n-Propylbenzene	10	U
108-67-8	1,3,5-Trimethylbenzene	4.4	DJ
98-06-6	tert-Butylbenzene	10	U
95-63-6	1,2,4-Trimethylbenzene	4.5	DJ
135-98-8	sec-Butylbenzene	10	U
99-87-6	4-Isopropyltoluene	10	U
104-51-8	n-Butylbenzene	10	U
91-20-3	Naphthalene	200	D

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BCP-ORC-2-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-13A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6007.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/27/2014

% Moisture: not dec. Date Analyzed: 07/03/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	9.3	
108-88-3	Toluene	1.7	J
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	3.1	J
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	3.1	J
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	0.89	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	48	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BCP-ORC-1-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-14A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0063.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/27/2014

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	9.5	
108-88-3	Toluene	0.92	J
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	0.78	J
1330-20-7	Xylene (Total)	1.4	J
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	0.73	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	0.78	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	120	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-01-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-15A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0064.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/27/2014

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	37	
108-88-3	Toluene	7.8	
100-41-4	Ethylbenzene	1.6	J
179601-23-1	m,p-Xylene	17	
95-47-6	o-Xylene	14	
1330-20-7	Xylene (Total)	31	
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	4.8	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	6.3	
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	400	E

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-01-062614DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-15ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6008.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/27/2014

% Moisture: not dec. Date Analyzed: 07/03/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 4.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	20	U
71-43-2	Benzene	36	D
108-88-3	Toluene	7.5	DJ
100-41-4	Ethylbenzene	20	U
179601-23-1	m,p-Xylene	15	DJ
95-47-6	o-Xylene	12	DJ
1330-20-7	Xylene (Total)	27	D
98-82-8	Isopropylbenzene	20	U
103-65-1	n-Propylbenzene	20	U
108-67-8	1,3,5-Trimethylbenzene	4.6	DJ
98-06-6	tert-Butylbenzene	20	U
95-63-6	1,2,4-Trimethylbenzene	5.6	DJ
135-98-8	sec-Butylbenzene	20	U
99-87-6	4-Isopropyltoluene	20	U
104-51-8	n-Butylbenzene	20	U
91-20-3	Naphthalene	310	D

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-01B-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-16A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0065.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/27/2014

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	85	
108-88-3	Toluene	24	
100-41-4	Ethylbenzene	1.0	J
179601-23-1	m,p-Xylene	15	
95-47-6	o-Xylene	9.8	
1330-20-7	Xylene (Total)	25	
98-82-8	Isopropylbenzene	1.8	J
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.7	
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	8.2	
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	1800	E

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-01B-062614DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-16ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6009.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/27/2014

% Moisture: not dec. Date Analyzed: 07/03/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	100	U
71-43-2	Benzene	74	DJ
108-88-3	Toluene	22	DJ
100-41-4	Ethylbenzene	100	U
179601-23-1	m,p-Xylene	100	U
95-47-6	o-Xylene	100	U
1330-20-7	Xylene (Total)	100	U
98-82-8	Isopropylbenzene	100	U
103-65-1	n-Propylbenzene	100	U
108-67-8	1,3,5-Trimethylbenzene	100	U
98-06-6	tert-Butylbenzene	100	U
95-63-6	1,2,4-Trimethylbenzene	100	U
135-98-8	sec-Butylbenzene	100	U
99-87-6	4-Isopropyltoluene	100	U
104-51-8	n-Butylbenzene	100	U
91-20-3	Naphthalene	1200	D

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WT1-04-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-17A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6051.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/27/2014

% Moisture: not dec. Date Analyzed: 07/08/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	23	
108-88-3	Toluene	4.9	J
100-41-4	Ethylbenzene	1.1	J
179601-23-1	m,p-Xylene	12	
95-47-6	o-Xylene	9.2	
1330-20-7	Xylene (Total)	21	
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.1	
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	3.9	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	61	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FIELD DUPLICATE
062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-18A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6011.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/27/2014

% Moisture: not dec. Date Analyzed: 07/03/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	88	
108-88-3	Toluene	24	
100-41-4	Ethylbenzene	1.0	J
179601-23-1	m,p-Xylene	16	
95-47-6	o-Xylene	9.9	
1330-20-7	Xylene (Total)	26	
98-82-8	Isopropylbenzene	1.7	J
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.4	
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	7.9	
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	1200	E

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FIELD DUPLICATE
062614DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-18ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6052.D

Level: (TRACE/LOW/MED) LOW Date Received: 06/27/2014

% Moisture: not dec. Date Analyzed: 07/08/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	250	U
71-43-2	Benzene	110	DJ
108-88-3	Toluene	250	U
100-41-4	Ethylbenzene	250	U
179601-23-1	m,p-Xylene	250	U
95-47-6	o-Xylene	250	U
1330-20-7	Xylene (Total)	250	U
98-82-8	Isopropylbenzene	250	U
103-65-1	n-Propylbenzene	250	U
108-67-8	1,3,5-Trimethylbenzene	250	U
98-06-6	tert-Butylbenzene	250	U
95-63-6	1,2,4-Trimethylbenzene	250	U
135-98-8	sec-Butylbenzene	250	U
99-87-6	4-Isopropyltoluene	250	U
104-51-8	n-Butylbenzene	250	U
91-20-3	Naphthalene	750	D

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-77913

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-77913

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0047.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-77934

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-77934

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D5997.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/03/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
179601-23-1	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

EPA SAMPLE NO.
MB-77977

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-77977

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6048.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/08/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-77913

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-77913

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0043.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	53	
71-43-2	Benzene	52	
108-88-3	Toluene	53	
100-41-4	Ethylbenzene	51	
179601-23-1	m,p-Xylene	100	
95-47-6	o-Xylene	50	
1330-20-7	Xylene (Total)	150	
98-82-8	Isopropylbenzene	52	
103-65-1	n-Propylbenzene	50	
108-67-8	1,3,5-Trimethylbenzene	51	
98-06-6	tert-Butylbenzene	50	
95-63-6	1,2,4-Trimethylbenzene	52	
135-98-8	sec-Butylbenzene	51	
99-87-6	4-Isopropyltoluene	52	
104-51-8	n-Butylbenzene	53	
91-20-3	Naphthalene	46	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-77934

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-77934

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D5993.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/03/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	45	
71-43-2	Benzene	51	
108-88-3	Toluene	50	
100-41-4	Ethylbenzene	51	
179601-23-1	m,p-Xylene	100	
95-47-6	o-Xylene	49	
1330-20-7	Xylene (Total)	150	
98-82-8	Isopropylbenzene	50	
103-65-1	n-Propylbenzene	50	
108-67-8	1,3,5-Trimethylbenzene	50	
98-06-6	tert-Butylbenzene	48	
95-63-6	1,2,4-Trimethylbenzene	48	
135-98-8	sec-Butylbenzene	50	
99-87-6	4-Isopropyltoluene	50	
104-51-8	n-Butylbenzene	51	
91-20-3	Naphthalene	43	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-77977

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-77977

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6044.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/08/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	45	
71-43-2	Benzene	47	
108-88-3	Toluene	46	
100-41-4	Ethylbenzene	47	
179601-23-1	m,p-Xylene	93	
95-47-6	o-Xylene	47	
1330-20-7	Xylene (Total)	140	
98-82-8	Isopropylbenzene	45	
103-65-1	n-Propylbenzene	45	
108-67-8	1,3,5-Trimethylbenzene	46	
98-06-6	tert-Butylbenzene	44	
95-63-6	1,2,4-Trimethylbenzene	45	
135-98-8	sec-Butylbenzene	45	
99-87-6	4-Isopropyltoluene	46	
104-51-8	n-Butylbenzene	47	
91-20-3	Naphthalene	34	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-77913

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-77913

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V1N0044.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	48	
71-43-2	Benzene	46	
108-88-3	Toluene	46	
100-41-4	Ethylbenzene	46	
179601-23-1	m,p-Xylene	90	
95-47-6	o-Xylene	45	
1330-20-7	Xylene (Total)	140	
98-82-8	Isopropylbenzene	48	
103-65-1	n-Propylbenzene	46	
108-67-8	1,3,5-Trimethylbenzene	48	
98-06-6	tert-Butylbenzene	47	
95-63-6	1,2,4-Trimethylbenzene	49	
135-98-8	sec-Butylbenzene	48	
99-87-6	4-Isopropyltoluene	48	
104-51-8	n-Butylbenzene	49	
91-20-3	Naphthalene	47	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-77977

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-77977

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6045.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/08/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	48	
71-43-2	Benzene	47	
108-88-3	Toluene	46	
100-41-4	Ethylbenzene	46	
179601-23-1	m,p-Xylene	92	
95-47-6	o-Xylene	47	
1330-20-7	Xylene (Total)	140	
98-82-8	Isopropylbenzene	46	
103-65-1	n-Propylbenzene	44	
108-67-8	1,3,5-Trimethylbenzene	46	
98-06-6	tert-Butylbenzene	43	
95-63-6	1,2,4-Trimethylbenzene	45	
135-98-8	sec-Butylbenzene	43	
99-87-6	4-Isopropyltoluene	44	
104-51-8	n-Butylbenzene	46	
91-20-3	Naphthalene	39	

2B - FORM II VOA-2

WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Level: (TRACE or LOW) LOW

	EPA SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
01	LCS-77913	102	107	98	102				0
02	LCSD-77913	101	108	98	99				0
03	MB-77913	101	97	100	95				0
04	TRIP BLANK 2	101	103	100	95				0
05	TRIP BLANK 001	102	101	99	96				0
06	MWN-04-062414	102	102	99	94				0
07	MWN-03D-062414	102	103	100	98				0
08	MWN-03-062414	102	96	99	97				0
09	MWM-02-062514	98	101	99	94				0
10	MWN-02B-062514	98	100	99	100				0
11	WT1-05-062514	99	101	100	99				0
12	WT1-06-062614	101	103	98	98				0
13	BCP-ORC-1-062614	101	103	100	98				0
14	MWN-01-062614	102	102	98	98				0
15	MWN-01B-062614	102	99	96	100				0
16	LCS-77934	97	98	99	95				0
17	MB-77934	96	99	97	89				0
18	MWN-02B-062514DL	97	106	95	93				0
19	WT1-02-062514	100	105	95	92				0

		QC LIMITS
VDMC1	(DBFM) Dibromofluoromethane	(85-115)
VDMC2	(DCE) = 1,2-Dichloroethane-d4	(70-120)
VDMC3	(TOL) = Toluene-d8	(85-120)
VDMC4	(BFB) = Bromofluorobenzene	(75-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

som14.07.15.0901

2B - FORM II VOA-2

WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Level: (TRACE or LOW) LOW

	EPA SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
20	WT1-06-062614DL	95	100	97	92				0
21	BCP-ORC-2-062614	99	108	95	93				0
22	MWN-01-062614DL	97	97	96	92				0
23	MWN-01B-062614DL	99	105	95	92				0
24	FIELD DUPLICATE 062614	98	101	96	94				0
25	LCS-77977	99	96	100	101				0
26	LCSD-77977	102	104	98	103				0
27	MB-77977	101	104	97	91				0
28	WT1-04-062614	103	106	97	95				0
29	FIELD DUPLICATE 062614DL	103	105	98	96				0

		QC LIMITS
VDMC1	(DBFM) Dibromofluoromethane	(85-115)
VDMC2	(DCE) = 1,2-Dichloroethane-d4	(70-120)
VDMC3	(TOL) = Toluene-d8	(85-120)
VDMC4	(BFB) = Bromofluorobenzene	(75-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

som14.07.15.0901

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-77913

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab Sample ID: LCS-77913 LCS Lot No.:

Date Extracted: 07/02/2014 Date Analyzed (1): 07/02/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Methyl tert-butyl ether	50.0000	0.0000	52.9409	106		65 - 125
Benzene	50.0000	0.0000	52.3732	105		80 - 120
Toluene	50.0000	0.0000	53.1145	106		75 - 120
Ethylbenzene	50.0000	0.0000	50.7627	102		75 - 125
m,p-Xylene	100.0000	0.0000	101.6516	102		75 - 130
o-Xylene	50.0000	0.0000	50.3796	101		80 - 120
Xylene (Total)	150.0000	0.0000	152.0312	101		81 - 121
Isopropylbenzene	50.0000	0.0000	52.2291	104		75 - 125
n-Propylbenzene	50.0000	0.0000	49.7709	100		70 - 130
1,3,5-Trimethylbenzene	50.0000	0.0000	51.2926	103		75 - 130
tert-Butylbenzene	50.0000	0.0000	50.0603	100		70 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	51.7792	104		75 - 130
sec-Butylbenzene	50.0000	0.0000	51.2105	102		70 - 125
4-Isopropyltoluene	50.0000	0.0000	51.5059	103		75 - 130
n-Butylbenzene	50.0000	0.0000	52.6576	105		70 - 135
Naphthalene	50.0000	0.0000	46.1138	92		55 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-77934

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab Sample ID: LCS-77934 LCS Lot No.:

Date Extracted: 07/03/2014 Date Analyzed (1): 07/03/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Methyl tert-butyl ether	50.0000	0.0000	44.8154	90		65 - 125
Benzene	50.0000	0.0000	50.7968	102		80 - 120
Toluene	50.0000	0.0000	50.3769	101		75 - 120
Ethylbenzene	50.0000	0.0000	50.7146	101		75 - 125
m,p-Xylene	100.0000	0.0000	102.4659	102		75 - 130
o-Xylene	50.0000	0.0000	49.1332	98		80 - 120
Xylene (Total)	150.0000	0.0000	151.5991	101		81 - 121
Isopropylbenzene	50.0000	0.0000	50.0729	100		75 - 125
n-Propylbenzene	50.0000	0.0000	49.6578	99		70 - 130
1,3,5-Trimethylbenzene	50.0000	0.0000	49.5210	99		75 - 130
tert-Butylbenzene	50.0000	0.0000	47.5311	95		70 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	48.3884	97		75 - 130
sec-Butylbenzene	50.0000	0.0000	50.2922	101		70 - 125
4-Isopropyltoluene	50.0000	0.0000	49.8456	100		75 - 130
n-Butylbenzene	50.0000	0.0000	50.6658	101		70 - 135
Naphthalene	50.0000	0.0000	42.9921	86		55 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-77977

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab Sample ID: LCS-77977 LCS Lot No.:

Date Extracted: 07/08/2014 Date Analyzed (1): 07/08/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Methyl tert-butyl ether	50.0000	0.0000	44.7243	89		65 - 125
Benzene	50.0000	0.0000	47.0001	94		80 - 120
Toluene	50.0000	0.0000	45.7086	91		75 - 120
Ethylbenzene	50.0000	0.0000	46.9579	94		75 - 125
m,p-Xylene	100.0000	0.0000	92.9346	93		75 - 130
o-Xylene	50.0000	0.0000	46.6243	93		80 - 120
Xylene (Total)	150.0000	0.0000	139.5589	93		81 - 121
Isopropylbenzene	50.0000	0.0000	45.4955	91		75 - 125
n-Propylbenzene	50.0000	0.0000	44.5258	89		70 - 130
1,3,5-Trimethylbenzene	50.0000	0.0000	45.9601	92		75 - 130
tert-Butylbenzene	50.0000	0.0000	44.1184	88		70 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	44.9443	90		75 - 130
sec-Butylbenzene	50.0000	0.0000	44.9953	90		70 - 125
4-Isopropyltoluene	50.0000	0.0000	45.8681	92		75 - 130
n-Butylbenzene	50.0000	0.0000	46.5004	93		70 - 135
Naphthalene	50.0000	0.0000	34.2620	69		55 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.
LCSD-77913

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab Sample ID: LCSD-77913 LCS Lot No.:

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	50.0000	47.9739	96		10		40	65 - 125
Benzene	50.0000	45.8976	92		13		40	80 - 120
Toluene	50.0000	46.1212	92		14		40	75 - 120
Ethylbenzene	50.0000	45.7228	91		11		40	75 - 125
m,p-Xylene	100.0000	90.2933	90		13		40	75 - 130
o-Xylene	50.0000	45.3602	91		10		40	80 - 120
Xylene (Total)	150.0000	135.6535	90		12		40	81 - 121
Isopropylbenzene	50.0000	47.7246	95		9		40	75 - 125
n-Propylbenzene	50.0000	46.3910	93		7		40	70 - 130
1,3,5-Trimethylbenzene	50.0000	48.1729	96		7		40	75 - 130
tert-Butylbenzene	50.0000	46.5296	93		7		40	70 - 130
1,2,4-Trimethylbenzene	50.0000	48.7214	97		7		40	75 - 130
sec-Butylbenzene	50.0000	47.8805	96		6		40	70 - 125
4-Isopropyltoluene	50.0000	48.2534	97		6		40	75 - 130
n-Butylbenzene	50.0000	49.2454	98		7		40	70 - 135
Naphthalene	50.0000	46.7094	93		1		40	55 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 16 outside limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.
LCSD-77977

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab Sample ID: LCSD-77977 LCS Lot No.:

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	50.0000	48.0317	96		8		40	65 - 125
Benzene	50.0000	47.1989	94		0		40	80 - 120
Toluene	50.0000	46.1718	92		1		40	75 - 120
Ethylbenzene	50.0000	46.2170	92		2		40	75 - 125
m,p-Xylene	100.0000	92.2073	92		1		40	75 - 130
o-Xylene	50.0000	47.3591	95		2		40	80 - 120
Xylene (Total)	150.0000	139.5664	93		0		40	81 - 121
Isopropylbenzene	50.0000	45.6608	91		0		40	75 - 125
n-Propylbenzene	50.0000	44.3690	89		0		40	70 - 130
1,3,5-Trimethylbenzene	50.0000	45.5655	91		1		40	75 - 130
tert-Butylbenzene	50.0000	42.8985	86		2		40	70 - 130
1,2,4-Trimethylbenzene	50.0000	45.2389	90		0		40	75 - 130
sec-Butylbenzene	50.0000	43.2897	87		3		40	70 - 125
4-Isopropyltoluene	50.0000	44.3735	89		3		40	75 - 130
n-Butylbenzene	50.0000	45.7800	92		1		40	70 - 135
Naphthalene	50.0000	38.5606	77		11		40	55 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 16 outside limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
MB-77913

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab File ID: V1N0047.D Lab Sample ID: MB-77913

Instrument ID: V1

Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 07/02/2014

Level: (TRACE or LOW/MED) LOW Time Analyzed: 10:50

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-77913	LCS-77913	V1N0043.D	9:10
02	LCSD-77913	LCSD-77913	V1N0044.D	9:36
03	TRIP BLANK 2	N1104-11A	V1N0052.D	12:57
04	TRIP BLANK 001	N1104-05A	V1N0053.D	13:22
05	MWN-04-062414	N1104-01A	V1N0054.D	13:47
06	MWN-03D-062414	N1104-03A	V1N0055.D	14:12
07	MWN-03-062414	N1104-04A	V1N0056.D	14:37
08	MWM-02-062514	N1104-06A	V1N0057.D	15:01
09	MWN-02B-062514	N1104-07A	V1N0058.D	15:26
10	WT1-05-062514	N1104-10A	V1N0060.D	16:16
11	WT1-06-062614	N1104-12A	V1N0061.D	16:41
12	BCP-ORC-1-062614	N1104-14A	V1N0063.D	17:30
13	MWN-01-062614	N1104-15A	V1N0064.D	17:55
14	MWN-01B-062614	N1104-16A	V1N0065.D	18:20

COMMENTS:

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
MB-77934

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab File ID: V8D5997.D Lab Sample ID: MB-77934

Instrument ID: V10

Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 07/03/2014

Level: (TRACE or LOW/MED) LOW Time Analyzed: 9:18

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-77934	LCS-77934	V8D5993.D	7:29
02	MWN-02B-062514DL	N1104-07ADL	V8D6004.D	12:30
03	WT1-02-062514	N1104-09A	V8D6005.D	12:57
04	WT1-06-062614DL	N1104-12ADL	V8D6006.D	13:25
05	BCP-ORC-2-062614	N1104-13A	V8D6007.D	13:52
06	MWN-01-062614DL	N1104-15ADL	V8D6008.D	14:19
07	MWN-01B-062614DL	N1104-16ADL	V8D6009.D	14:47
08	FIELD DUPLICATE 062614	N1104-18A	V8D6011.D	15:42

COMMENTS:

som14.07.15.0901

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
MB-77977

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab File ID: V8D6048.D Lab Sample ID: MB-77977

Instrument ID: V10

Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 07/08/2014

Level: (TRACE or LOW/MED) LOW Time Analyzed: 9:35

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-77977	LCS-77977	V8D6044.D	8:13
02	LCSD-77977	LCSD-77977	V8D6045.D	8:40
03	WT1-04-062614	N1104-17A	V8D6051.D	10:57
04	FIELD DUPLICATE 062614DL	N1104-18ADL	V8D6052.D	11:23

COMMENTS:

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 06/26/2014 06/26/2014

EPA Sample No.(VSTD#####): VSTD0501Q Date Analyzed: 07/02/2014

Lab File ID (Standard): V1N0042.D Time Analyzed: 8:28

Instrument ID: V1 Heated Purge: (Y/N) N

		IS1 (S1) AREA	#	RT	#	IS2 (S2) AREA	#	RT	#	IS3 (S3) AREA	#	RT	#
	12 HOUR STD	632860		4.386		457562		7.242		179029		9.821	
	UPPER LIMIT	1265720		4.886		915124		7.742		358058		10.321	
	LOWER LIMIT	316430		3.886		228781		6.742		89515		9.321	
	EPA SAMPLE NO.												
01	LCS-77913	628787		4.384		457883		7.249		186477		9.819	
02	LCSD-77913	639094		4.389		458036		7.245		184436		9.815	
03	MB-77913	567748		4.389		410924		7.245		150090		9.814	
04	TRIP BLANK 2	570362		4.384		405601		7.240		151401		9.819	
05	TRIP BLANK 001	539643		4.395		388246		7.240		142992		9.820	
06	MWN-04-062414	582569		4.390		422946		7.255		155635		9.825	
07	MWN-03D-062414	592389		4.389		425565		7.244		162167		9.814	
08	MWN-03-062414	591386		4.389		429649		7.244		160815		9.824	
09	MWM-02-062514	559442		4.390		399649		7.245		150458		9.825	
10	MWN-02B-062514	590958		4.395		417463		7.250		171487		9.820	
11	WT1-05-062514	562809		4.404		406389		7.260		160357		9.840	

IS1 () = Fluorobenzene
IS2 () = Chlorobenzene-d5
IS3 () = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 06/26/2014 06/26/2014

EPA Sample No.(VSTD#####): VSTD0501Q Date Analyzed: 07/02/2014

Lab File ID (Standard): V1N0042.D Time Analyzed: 8:28

Instrument ID: V1 Heated Purge: (Y/N) N

		IS1 (S1) AREA	#	RT	#	IS2 (S2) AREA	#	RT	#	IS3 (S3) AREA	#	RT	#
	12 HOUR STD	632860		4.386		457562		7.242		179029		9.821	
	UPPER LIMIT	1265720		4.886		915124		7.742		358058		10.321	
	LOWER LIMIT	316430		3.886		228781		6.742		89515		9.321	
	EPA SAMPLE NO.												
12	WT1-06-062614	581546		4.393		426256		7.248		168297		9.818	
13	BCP-ORC-1-062614	609069		4.399		427521		7.245		164607		9.815	
14	MWN-01-062614	585041		4.389		425093		7.244		169807		9.814	
15	MWN-01B-062614	606510		4.394		442699		7.250		184861		9.819	

IS1 () = Fluorobenzene
IS2 () = Chlorobenzene-d5
IS3 () = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 07/01/2014 07/01/2014

EPA Sample No.(VSTD#####): VSTD05010H Date Analyzed: 07/03/2014

Lab File ID (Standard): V8D5992.D Time Analyzed: 6:51

Instrument ID: V10 Heated Purge: (Y/N) N

		IS1 (S1) AREA	#	RT	#	IS2 (S2) AREA	#	RT	#	IS3 (S3) AREA	#	RT	#
	12 HOUR STD	1158830		5.236		902359		8.223		446104		10.725	
	UPPER LIMIT	2317660		5.736		1804718		8.723		892208		11.225	
	LOWER LIMIT	579415		4.736		451180		7.723		223052		10.225	
	EPA SAMPLE NO.												
01	LCS-77934	1108650		5.236		825922		8.226		402140		10.725	
02	MB-77934	1117426		5.239		849923		8.226		332984		10.728	
03	MWN-02B-062514DL	1115341		5.239		859731		8.223		374687		10.728	
04	WT1-02-062514	1102277		5.239		861950		8.226		366791		10.728	
05	WT1-06-062614DL	1035397		5.236		774639		8.223		343328		10.725	
06	BCP-ORC-2-062614	1096098		5.236		848657		8.223		371960		10.728	
07	MWN-01-062614DL	1070469		5.239		818776		8.223		353833		10.728	
08	MWN-01B-062614DL	1095165		5.236		853880		8.223		374113		10.728	
09	FIELD DUPLICATE 062614	1038239		5.239		798852		8.223		383262		10.725	

IS1 () = Fluorobenzene
IS2 () = Chlorobenzene-d5
IS3 () = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 07/07/2014 07/07/2014

EPA Sample No.(VSTD#####): VSTD05010J Date Analyzed: 07/08/2014

Lab File ID (Standard): V8D6043.D Time Analyzed: 7:22

Instrument ID: V10 Heated Purge: (Y/N) N

		IS1 (S1) AREA	#	RT	#	IS2 (S2) AREA	#	RT	#	IS3 (S3) AREA	#	RT	#
	12 HOUR STD	1109482		5.239		889784		8.226		445622		10.725	
	UPPER LIMIT	2218964		5.739		1779568		8.726		891244		11.225	
	LOWER LIMIT	554741		4.739		444892		7.726		222811		10.225	
	EPA SAMPLE NO.												
01	LCS-77977	1137094		5.239		867692		8.223		413187		10.728	
02	LCSD-77977	1161303		5.239		908440		8.223		442009		10.728	
03	MB-77977	1138684		5.239		891521		8.226		328156		10.731	
04	WT1-04-062614	1111930		5.239		877994		8.223		380372		10.728	
05	FIELD DUPLICATE 062614DL	1103269		5.236		855342		8.226		353882		10.728	

IS1 () = Fluorobenzene
IS2 () = Chlorobenzene-d5
IS3 () = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

* Volatiles *

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : GZA GeoEnvironmental, Inc.

Project: Steelwinds 1

Laboratory Workorder / SDG #: N1104

RSK175, Dissolved Gases by GC-FID

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code: RSK175

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B

V. INSTRUMENTATION

The following instrumentation was used to perform

Instrument Code: V7
Instrument Type: GC-FID

Description: HP5890 II
Manufacturer: Hewlett-Packard
Model: 5890

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

N/A.

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

NA.

F. Dilutions:

The following samples were analyzed at dilution:

MWN-01B-062614 (N1104-16ADL) : Dilution Factor: 4
FIELD DUPLICATE 062614 (N1104-18ADL) : Dilution Factor: 4

G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

Where needed, manual integrations were performed to improve data

quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

· M1 peak tailing or fronting
· M2 peak co-elution
· M3 rising or falling baseline
· M4 retention time shift
· M5 miscellaneous - under this category, the justification is explained
· M6 software did not integrate peak
· M7 partial peak integration

The following samples were manually integrated:

LCS-77979 Ethene due to M1

LCSD-77979 Ethene due to M1

WT1-02-062514 (N1104-09B) Methane due to M6

WT1-05-062514 (N1104-10B) Methane due to M6

BCP-ORC-1-062614 (N1104-14A) Methane due to M6

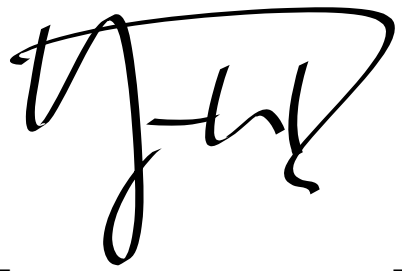
MWN-01-062614 (N1104-15A) Methane due to M6

MWN-01B-062614 (N1104-16A) Methane due to M6

WT1-04-062614 (N1104-17A) Methane due to M6

VSTD005I7 Methane due to M7

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.



Signed:_____ _____

Date:_____7/17/2014_____

Data Flag/Qualifiers (Page 1 of 2):

U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).

J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
- estimated concentration for Tentatively Identified Compound

B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a "trace" concentration below the reporting limit and equal to or above the detection limit.

D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis

E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.

P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.

A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.

* For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.

L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution

RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.

RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.

RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.

MS Matrix Spike.

MSD Matrix Spike Duplicate

DUP Duplicate analysis

SD Serial Dilution

PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: WT1-02-062514
Lab ID: N1104-09
Project: Steelwinds 1
Collection Date: 06/25/14 13:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	36		0.61	µg/L	1	07/07/2014 10:03	77979
Ethane	ND		1.3	µg/L	1	07/07/2014 10:03	77979
Ethene	ND		1.6	µg/L	1	07/07/2014 10:03	77979

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: WT1-05-062514
Lab ID: N1104-10
Project: Steelwinds 1
Collection Date: 06/25/14 15:20

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	260		0.61	µg/L	1	07/07/2014 10:10	77979
Ethane	ND		1.3	µg/L	1	07/07/2014 10:10	77979
Ethene	ND		1.6	µg/L	1	07/07/2014 10:10	77979

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: WT1-06-062614
Lab ID: N1104-12
Project: Steelwinds 1
Collection Date: 06/26/14 17:20

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	490		0.60	µg/L	1	07/07/2014 10:17	77979
Ethane	4.1		1.2	µg/L	1	07/07/2014 10:17	77979
Ethene	ND		1.5	µg/L	1	07/07/2014 10:17	77979

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: BCP-ORC-2-062614
Lab ID: N1104-13
Project: Steelwinds 1
Collection Date: 06/26/14 16:05

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	190		0.61	µg/L	1	07/07/2014 10:24	77979
Ethane	ND		1.3	µg/L	1	07/07/2014 10:24	77979
Ethene	ND		1.6	µg/L	1	07/07/2014 10:24	77979

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.

Client Sample ID: BCP-ORC-1-062614 **Project:** Steelwinds 1

Lab ID: N1104-14 **Collection Date:** 06/26/14 14:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	310		0.60	µg/L	1	07/07/2014 10:33	77979
Ethane	ND		1.2	µg/L	1	07/07/2014 10:33	77979
Ethene	ND		1.5	µg/L	1	07/07/2014 10:33	77979

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quanititation limits

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: MWN-01-062614
Lab ID: N1104-15
Project: Steelwinds 1
Collection Date: 06/26/14 8:35

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	670		0.60	µg/L	1	07/07/2014 10:40	77979
Ethane	4.3		1.2	µg/L	1	07/07/2014 10:40	77979
Ethene	ND		1.5	µg/L	1	07/07/2014 10:40	77979

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: MWN-01B-062614
Lab ID: N1104-16
Project: Steelwinds 1
Collection Date: 06/26/14 9:55

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	2400	E	0.60	µg/L	1	07/07/2014 10:48	77979
Ethane	2.9		1.2	µg/L	1	07/07/2014 10:48	77979
Ethene	ND		1.5	µg/L	1	07/07/2014 10:48	77979

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.

Client Sample ID: MWN-01B-062614 **Project:** Steelwinds 1

Lab ID: N1104-16 **Collection Date:** 06/26/14 9:55

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	3500		2.4	µg/L	4	07/07/2014 12:26	77979
Ethane	ND		4.9	µg/L	4	07/07/2014 12:26	77979
Ethene	ND		6.2	µg/L	4	07/07/2014 12:26	77979

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quanititation limits

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: WT1-04-062614
Lab ID: N1104-17
Project: Steelwinds 1
Collection Date: 06/26/14 11:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	98		0.60	µg/L	1	07/07/2014 10:55	77979
Ethane	1.2		1.2	µg/L	1	07/07/2014 10:55	77979
Ethene	ND		1.5	µg/L	1	07/07/2014 10:55	77979

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: FIELD DUPLICATE 062614
Lab ID: N1104-18
Project: Steelwinds 1
Collection Date: 06/26/14 0:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	2000	E	0.60	µg/L	1	07/07/2014 11:03	77979
Ethane	2.9		1.2	µg/L	1	07/07/2014 11:03	77979
Ethene	ND		1.5	µg/L	1	07/07/2014 11:03	77979

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: FIELD DUPLICATE 062614
Lab ID: N1104-18
Project: Steelwinds 1
Collection Date: 06/26/14 0:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	2300		2.4	µg/L	4	07/07/2014 13:04	77979
Ethane	ND		4.9	µg/L	4	07/07/2014 13:04	77979
Ethene	ND		6.2	µg/L	4	07/07/2014 13:04	77979

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

N1104

CLIENT: GZA GeoEnvironmental, Inc.
Work Order: N1104
Project: Steelwinds 1

ANALYTICAL QC SUMMARY REPORT

RSK175

RSK175 -- Dissolved Gases by GC-FID

Sample ID: **MB-77979** SampType: **MBLK** TestCode: **RSK175** Prep Date: **07/07/14 8:00** Run ID: **V7_140707A**
Client ID: **MB-77979** Batch ID: **77979** Units: **µg/L** Analysis Date: **07/07/14 8:38** SeqNo: **2120545**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	ND	0.35	0.58	0	0	0	0	0	0			
Ethane	ND	0.50	1.2	0	0	0	0	0	0			
Ethene	ND	0.69	1.5	0	0	0	0	0	0			

Sample ID: **LCS-77979** SampType: **LCS** TestCode: **RSK175** Prep Date: **07/07/14 8:00** Run ID: **V7_140707A**
Client ID: **LCS-77979** Batch ID: **77979** Units: **µg/L** Analysis Date: **07/07/14 8:06** SeqNo: **2120593**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	39.01	0.35	0.58	45.00	0	86.7	75	125	0			
Ethane	69.75	0.50	1.2	85.00	0	82.1	75	125	0			
Ethene	81.77	0.69	1.5	79.00	0	104	75	125	0			

Sample ID: **LCSD-77979** SampType: **LCSD** TestCode: **RSK175** Prep Date: **07/07/14 8:00** Run ID: **V7_140707A**
Client ID: **LCSD-77979** Batch ID: **77979** Units: **µg/L** Analysis Date: **07/07/14 8:21** SeqNo: **2120594**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	43.90	0.35	0.58	45.00	0	97.6	75	125	39.01	11.8	30	
Ethane	79.06	0.50	1.2	85.00	0	93.0	75	125	69.75	12.5	30	
Ethene	92.67	0.69	1.5	79.00	0	117	75	125	81.77	12.5	30	

Qualifiers: ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

* Semivolatile Organics *

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : GZA GeoEnvironmental, Inc.

Project: Steelwinds 1

Laboratory Workorder / SDG #: N1104

SW846 8270D, SVOA by GC-MS

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code: SW846 8270D

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW3510C

V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: S6
Instrument Type: GCMS-Semi

Description: HP7890A
Manufacturer: Agilent
Model: 7890A/5973
GC Column used: 30 m X 0.25 mm ID [0.25 um thickness] Rxi-5sil MS capillary column.

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

Surrogate standard percent recoveries were within the QC limits with the following exceptions. Please note that the acceptance criteria allow one surrogate recovery outside of the QC limits per fraction.

MWN-03D-062414 (N1104-03B), recovery is below criteria for Terphenyl-d14 at 21% with criteria of (50-135).

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

The following samples were analyzed at dilution:

MWN-02B-062514 (N1104-07BDL) : Dilution Factor: 5
WT1-06-062614 (N1104-12EDL) : Dilution Factor: 4
MWN-01-062614 (N1104-15EDL) : Dilution Factor: 5

MWN-01B-062614 (N1104-16EDL) : Dilution Factor: 20
FIELD DUPLICATE 062614 (N1104-18EDL) : Dilution Factor: 20

G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

· M1 peak tailing or fronting
· M2 peak co-elution
· M3 rising or falling baseline
· M4 retention time shift
· M5 miscellaneous - under this category, the justification is explained
· M6 software did not integrate peak
· M7 partial peak integration

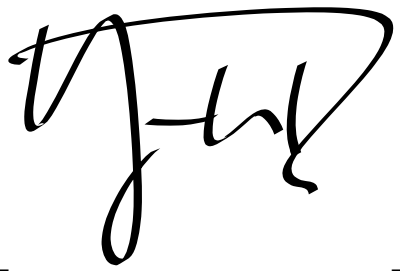
Manual integrations were performed on the following:

LCS-77823 Benzo(a)pyrene due to M6

MWN-01B-062614 (N1104-16E) Naphthalene due to M6

FIELD DUPLICATE 062614 (N1104-18E) Naphthalene due to M6

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.



Signed:_____ _____

Date:_____7/21/2014_____

Data Flag/Qualifiers (Page 1 of 2):

U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).

J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
- estimated concentration for Tentatively Identified Compound

B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a "trace" concentration below the reporting limit and equal to or above the detection limit.

D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis

E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.

P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.

A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.

* For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.

L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution

RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.

RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.

RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.

MS Matrix Spike.

MSD Matrix Spike Duplicate

DUP Duplicate analysis

SD Serial Dilution

PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

EPA SAMPLE NO.
MWN-04-062414

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8438.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/25/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-04-062414

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8438.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/25/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

EPA SAMPLE NO.
MWN-03D-062414

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8439.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/25/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-03D-062414

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8439.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/25/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-03-062414

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8440.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/25/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	13	
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	2.9	J
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	2.2	J
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	1.6	J
132-64-9	Dibenzofuran	2.1	J
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	4.2	J
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	7.8	J
120-12-7	Anthracene	1.2	J
86-74-8	Carbazole	3.1	J
206-44-0	Fluoranthene	3.2	J
129-00-0	Pyrene	1.7	J
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-03-062414

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8440.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/25/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

EPA SAMPLE NO.
MWM-02-062514

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-06B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8441.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/26/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	21	
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	3.6	J
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	2.6	J
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	1.7	J
132-64-9	Dibenzofuran	3.1	J
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	4.8	J
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	5.4	J
120-12-7	Anthracene	10	U
86-74-8	Carbazole	4.1	J
206-44-0	Fluoranthene	1.4	J
129-00-0	Pyrene	1.2	J
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWM-02-062514

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-06B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8441.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/26/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

EPA SAMPLE NO.
MWN-02B-062514

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8442.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/26/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	220	E
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	11	
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	5.6	J
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	8.1	J
132-64-9	Dibenzofuran	6.7	J
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	11	
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	17	
120-12-7	Anthracene	2.8	J
86-74-8	Carbazole	23	
206-44-0	Fluoranthene	4.3	J
129-00-0	Pyrene	2.7	J
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-02B-062514

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8442.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/26/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

EPA SAMPLE NO.
MWN-02B-062514DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-07BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8465.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/26/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/13/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	50	U
541-73-1	1,3-Dichlorobenzene	50	U
106-46-7	1,4-Dichlorobenzene	50	U
95-50-1	1,2-Dichlorobenzene	50	U
108-60-1	2,2´-oxybis(1-Chloropropane)	50	U
67-72-1	Hexachloroethane	50	U
98-95-3	Nitrobenzene	50	U
78-59-1	Isophorone	50	U
120-82-1	1,2,4-Trichlorobenzene	50	U
91-20-3	Naphthalene	220	D
106-47-8	4-Chloroaniline	50	U
111-91-1	Bis(2-chloroethoxy)methane	50	U
87-68-3	Hexachlorobutadiene	50	U
91-57-6	2-Methylnaphthalene	9.2	DJ
77-47-4	Hexachlorocyclopentadiene	50	U
91-58-7	2-Chloronaphthalene	50	U
88-74-4	2-Nitroaniline	100	U
131-11-3	Dimethylphthalate	50	U
208-96-8	Acenaphthylene	50	U
606-20-2	2,6-Dinitrotoluene	50	U
99-09-2	3-Nitroaniline	100	U
83-32-9	Acenaphthene	9.0	DJ
132-64-9	Dibenzofuran	5.7	DJ
121-14-2	2,4-Dinitrotoluene	50	U
84-66-2	Diethylphthalate	50	U
7005-72-3	4-Chlorophenyl-phenylether	50	U
86-73-7	Fluorene	8.7	DJ
100-01-6	4-Nitroaniline	100	U
101-55-3	4-Bromophenyl-phenylether	50	U
118-74-1	Hexachlorobenzene	50	U
85-01-8	Phenanthrene	15	DJ
120-12-7	Anthracene	50	U
86-74-8	Carbazole	19	DJ
206-44-0	Fluoranthene	50	U
129-00-0	Pyrene	50	U
85-68-7	Butylbenzylphthalate	50	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-02B-062514DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-07BDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8465.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/26/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/13/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	50	U
56-55-3	Benzo(a)anthracene	50	U
218-01-9	Chrysene	50	U
117-81-7	Bis(2-ethylhexyl)phthalate	50	U
205-99-2	Benzo(b)fluoranthene	50	U
207-08-9	Benzo(k)fluoranthene	50	U
50-32-8	Benzo(a)pyrene	50	U
193-39-5	Indeno(1,2,3-cd)pyrene	50	U
53-70-3	Dibenzo(a,h)anthracene	50	U
191-24-2	Benzo(g,h,i)perylene	50	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WT1-02-062514

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-09F

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8443.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/26/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	9.0	J
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	4.5	J
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	1.3	J
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	1.4	J
132-64-9	Dibenzofuran	2.2	J
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	7.1	J
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	8.5	J
120-12-7	Anthracene	2.2	J
86-74-8	Carbazole	3.6	J
206-44-0	Fluoranthene	5.3	J
129-00-0	Pyrene	3.3	J
85-68-7	Butylbenzylphthalate	10	U

EPA SAMPLE NO.
WT1-02-062514

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-09F

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8443.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/26/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

EPA SAMPLE NO.
WT1-05-062514

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-10F

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8444.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/26/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	54	
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	9.9	J
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	9.4	J
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	2.8	J
132-64-9	Dibenzofuran	6.3	J
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	11	
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	7.9	J
120-12-7	Anthracene	2.0	J
86-74-8	Carbazole	7.4	J
206-44-0	Fluoranthene	2.2	J
129-00-0	Pyrene	1.9	J
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WT1-05-062514

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-10F

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8444.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/26/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WT1-06-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-12E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8445.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	150	E
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	35	
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	23	
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	9.0	J
132-64-9	Dibenzofuran	32	
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	46	
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	70	
120-12-7	Anthracene	10	
86-74-8	Carbazole	25	
206-44-0	Fluoranthene	9.2	J
129-00-0	Pyrene	4.8	J
85-68-7	Butylbenzylphthalate	10	U

EPA SAMPLE NO.
WT1-06-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-12E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8445.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WT1-06-062614DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-12EDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8466.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/13/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	40	U
541-73-1	1,3-Dichlorobenzene	40	U
106-46-7	1,4-Dichlorobenzene	40	U
95-50-1	1,2-Dichlorobenzene	40	U
108-60-1	2,2´-oxybis(1-Chloropropane)	40	U
67-72-1	Hexachloroethane	40	U
98-95-3	Nitrobenzene	40	U
78-59-1	Isophorone	40	U
120-82-1	1,2,4-Trichlorobenzene	40	U
91-20-3	Naphthalene	130	D
106-47-8	4-Chloroaniline	40	U
111-91-1	Bis(2-chloroethoxy)methane	40	U
87-68-3	Hexachlorobutadiene	40	U
91-57-6	2-Methylnaphthalene	29	DJ
77-47-4	Hexachlorocyclopentadiene	40	U
91-58-7	2-Chloronaphthalene	40	U
88-74-4	2-Nitroaniline	80	U
131-11-3	Dimethylphthalate	40	U
208-96-8	Acenaphthylene	19	DJ
606-20-2	2,6-Dinitrotoluene	40	U
99-09-2	3-Nitroaniline	80	U
83-32-9	Acenaphthene	9.3	DJ
132-64-9	Dibenzofuran	27	DJ
121-14-2	2,4-Dinitrotoluene	40	U
84-66-2	Diethylphthalate	40	U
7005-72-3	4-Chlorophenyl-phenylether	40	U
86-73-7	Fluorene	38	DJ
100-01-6	4-Nitroaniline	80	U
101-55-3	4-Bromophenyl-phenylether	40	U
118-74-1	Hexachlorobenzene	40	U
85-01-8	Phenanthrene	62	D
120-12-7	Anthracene	8.1	DJ
86-74-8	Carbazole	21	DJ
206-44-0	Fluoranthene	7.7	DJ
129-00-0	Pyrene	4.0	DJ
85-68-7	Butylbenzylphthalate	40	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WT1-06-062614DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-12EDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8466.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/13/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	40	U
56-55-3	Benzo(a)anthracene	40	U
218-01-9	Chrysene	40	U
117-81-7	Bis(2-ethylhexyl)phthalate	40	U
205-99-2	Benzo(b)fluoranthene	40	U
207-08-9	Benzo(k)fluoranthene	40	U
50-32-8	Benzo(a)pyrene	40	U
193-39-5	Indeno(1,2,3-cd)pyrene	40	U
53-70-3	Dibenzo(a,h)anthracene	40	U
191-24-2	Benzo(g,h,i)perylene	40	U

EPA SAMPLE NO.
BCP-ORC-2-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-13E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8446.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	49	
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	9.6	J
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	7.0	J
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	2.7	J
132-64-9	Dibenzofuran	9.2	J
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	13	
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	20	
120-12-7	Anthracene	2.8	J
86-74-8	Carbazole	9.3	J
206-44-0	Fluoranthene	3.4	J
129-00-0	Pyrene	2.2	J
85-68-7	Butylbenzylphthalate	10	U

EPA SAMPLE NO.
BCP-ORC-2-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-13E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8446.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

EPA SAMPLE NO.
BCP-ORC-1-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-14E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8447.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	74	
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	5.9	J
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	4.7	J
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	1.4	J
132-64-9	Dibenzofuran	3.0	J
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	5.0	J
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	6.2	J
120-12-7	Anthracene	10	U
86-74-8	Carbazole	8.1	J
206-44-0	Fluoranthene	1.4	J
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BCP-ORC-1-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-14E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8447.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-01-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-15E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8448.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	240	E
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	59	
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	47	
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	17	
132-64-9	Dibenzofuran	58	
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	76	
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	110	E
120-12-7	Anthracene	18	
86-74-8	Carbazole	37	
206-44-0	Fluoranthene	16	
129-00-0	Pyrene	8.3	J
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-01-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-15E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8448.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-01-062614DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-15EDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8467.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/13/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	50	U
541-73-1	1,3-Dichlorobenzene	50	U
106-46-7	1,4-Dichlorobenzene	50	U
95-50-1	1,2-Dichlorobenzene	50	U
108-60-1	2,2´-oxybis(1-Chloropropane)	50	U
67-72-1	Hexachloroethane	50	U
98-95-3	Nitrobenzene	50	U
78-59-1	Isophorone	50	U
120-82-1	1,2,4-Trichlorobenzene	50	U
91-20-3	Naphthalene	230	D
106-47-8	4-Chloroaniline	50	U
111-91-1	Bis(2-chloroethoxy)methane	50	U
87-68-3	Hexachlorobutadiene	50	U
91-57-6	2-Methylnaphthalene	52	D
77-47-4	Hexachlorocyclopentadiene	50	U
91-58-7	2-Chloronaphthalene	50	U
88-74-4	2-Nitroaniline	100	U
131-11-3	Dimethylphthalate	50	U
208-96-8	Acenaphthylene	39	DJ
606-20-2	2,6-Dinitrotoluene	50	U
99-09-2	3-Nitroaniline	100	U
83-32-9	Acenaphthene	16	DJ
132-64-9	Dibenzofuran	50	D
121-14-2	2,4-Dinitrotoluene	50	U
84-66-2	Diethylphthalate	50	U
7005-72-3	4-Chlorophenyl-phenylether	50	U
86-73-7	Fluorene	65	D
100-01-6	4-Nitroaniline	100	U
101-55-3	4-Bromophenyl-phenylether	50	U
118-74-1	Hexachlorobenzene	50	U
85-01-8	Phenanthrene	99	D
120-12-7	Anthracene	13	DJ
86-74-8	Carbazole	32	DJ
206-44-0	Fluoranthene	13	DJ
129-00-0	Pyrene	6.7	DJ
85-68-7	Butylbenzylphthalate	50	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-01-062614DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-15EDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8467.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/13/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	50	U
56-55-3	Benzo(a)anthracene	50	U
218-01-9	Chrysene	50	U
117-81-7	Bis(2-ethylhexyl)phthalate	50	U
205-99-2	Benzo(b)fluoranthene	50	U
207-08-9	Benzo(k)fluoranthene	50	U
50-32-8	Benzo(a)pyrene	50	U
193-39-5	Indeno(1,2,3-cd)pyrene	50	U
53-70-3	Dibenzo(a,h)anthracene	50	U
191-24-2	Benzo(g,h,i)perylene	50	U

EPA SAMPLE NO.
MWN-01B-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-16E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8449.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	700	E
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	60	
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	62	
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	12	
132-64-9	Dibenzofuran	32	
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	44	
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	67	
120-12-7	Anthracene	13	
86-74-8	Carbazole	68	
206-44-0	Fluoranthene	13	
129-00-0	Pyrene	6.6	J
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-01B-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-16E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8449.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

EPA SAMPLE NO.
MWN-01B-062614DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-16EDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8468.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/13/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U
108-60-1	2,2´-oxybis(1-Chloropropane)	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
120-82-1	1,2,4-Trichlorobenzene	200	U
91-20-3	Naphthalene	970	D
106-47-8	4-Chloroaniline	200	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
87-68-3	Hexachlorobutadiene	200	U
91-57-6	2-Methylnaphthalene	46	DJ
77-47-4	Hexachlorocyclopentadiene	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	200	U
208-96-8	Acenaphthylene	48	DJ
606-20-2	2,6-Dinitrotoluene	200	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	200	U
132-64-9	Dibenzofuran	24	DJ
121-14-2	2,4-Dinitrotoluene	200	U
84-66-2	Diethylphthalate	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
86-73-7	Fluorene	35	DJ
100-01-6	4-Nitroaniline	400	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
85-01-8	Phenanthrene	55	DJ
120-12-7	Anthracene	200	U
86-74-8	Carbazole	55	DJ
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
85-68-7	Butylbenzylphthalate	200	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWN-01B-062614DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-16EDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8468.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/13/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-81-7	Bis(2-ethylhexyl)phthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

EPA SAMPLE NO.
WT1-04-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-17E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8450.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	66	
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	16	
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	5.1	J
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	4.9	J
132-64-9	Dibenzofuran	16	
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	23	
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	51	
120-12-7	Anthracene	8.3	J
86-74-8	Carbazole	12	
206-44-0	Fluoranthene	12	
129-00-0	Pyrene	6.7	J
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WT1-04-062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-17E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8450.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FIELD DUPLICATE 062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-18E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8451.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	590	E
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	60	
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	62	
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	19	
132-64-9	Dibenzofuran	32	
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	44	
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	68	
120-12-7	Anthracene	13	
86-74-8	Carbazole	68	
206-44-0	Fluoranthene	13	
129-00-0	Pyrene	7.1	J
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FIELD DUPLICATE 062614

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-18E

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8451.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

EPA SAMPLE NO.
FIELD DUPLICATE
062614DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-18EDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8469.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/13/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U
108-60-1	2,2´-oxybis(1-Chloropropane)	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
120-82-1	1,2,4-Trichlorobenzene	200	U
91-20-3	Naphthalene	1200	D
106-47-8	4-Chloroaniline	200	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
87-68-3	Hexachlorobutadiene	200	U
91-57-6	2-Methylnaphthalene	55	DJ
77-47-4	Hexachlorocyclopentadiene	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	200	U
208-96-8	Acenaphthylene	59	DJ
606-20-2	2,6-Dinitrotoluene	200	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	200	U
132-64-9	Dibenzofuran	31	DJ
121-14-2	2,4-Dinitrotoluene	200	U
84-66-2	Diethylphthalate	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
86-73-7	Fluorene	41	DJ
100-01-6	4-Nitroaniline	400	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
85-01-8	Phenanthrene	67	DJ
120-12-7	Anthracene	200	U
86-74-8	Carbazole	67	DJ
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
85-68-7	Butylbenzylphthalate	200	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FIELD DUPLICATE
062614DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1104-18EDL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8469.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 06/27/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/13/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-81-7	Bis(2-ethylhexyl)phthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

EPA SAMPLE NO.
MB-77823

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-77823

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8421A.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-77823

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-77823

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8421A.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-77823

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-77823

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8419.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	35	
541-73-1	1,3-Dichlorobenzene	33	
106-46-7	1,4-Dichlorobenzene	33	
95-50-1	1,2-Dichlorobenzene	34	
108-60-1	2,2´-oxybis(1-Chloropropane)	36	
67-72-1	Hexachloroethane	33	
98-95-3	Nitrobenzene	37	
78-59-1	Isophorone	38	
120-82-1	1,2,4-Trichlorobenzene	36	
91-20-3	Naphthalene	37	
106-47-8	4-Chloroaniline	36	
111-91-1	Bis(2-chloroethoxy)methane	37	
87-68-3	Hexachlorobutadiene	36	
91-57-6	2-Methylnaphthalene	40	
77-47-4	Hexachlorocyclopentadiene	23	
91-58-7	2-Chloronaphthalene	33	
88-74-4	2-Nitroaniline	34	
131-11-3	Dimethylphthalate	36	
208-96-8	Acenaphthylene	35	
606-20-2	2,6-Dinitrotoluene	36	
99-09-2	3-Nitroaniline	33	
83-32-9	Acenaphthene	34	
132-64-9	Dibenzofuran	35	
121-14-2	2,4-Dinitrotoluene	36	
84-66-2	Diethylphthalate	36	
7005-72-3	4-Chlorophenyl-phenylether	35	
86-73-7	Fluorene	35	
100-01-6	4-Nitroaniline	27	
101-55-3	4-Bromophenyl-phenylether	35	
118-74-1	Hexachlorobenzene	36	
85-01-8	Phenanthrene	35	
120-12-7	Anthracene	34	
86-74-8	Carbazole	33	
206-44-0	Fluoranthene	36	
129-00-0	Pyrene	35	
85-68-7	Butylbenzylphthalate	35	

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-77823

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-77823

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8419.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	27	
56-55-3	Benzo(a)anthracene	36	
218-01-9	Chrysene	36	
117-81-7	Bis(2-ethylhexyl)phthalate	35	
205-99-2	Benzo(b)fluoranthene	36	
207-08-9	Benzo(k)fluoranthene	36	
50-32-8	Benzo(a)pyrene	36	
193-39-5	Indeno(1,2,3-cd)pyrene	37	
53-70-3	Dibenzo(a,h)anthracene	37	
191-24-2	Benzo(g,h,i)perylene	37	

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-77823

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-77823

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8420.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	36	
541-73-1	1,3-Dichlorobenzene	34	
106-46-7	1,4-Dichlorobenzene	33	
95-50-1	1,2-Dichlorobenzene	34	
108-60-1	2,2´-oxybis(1-Chloropropane)	36	
67-72-1	Hexachloroethane	33	
98-95-3	Nitrobenzene	38	
78-59-1	Isophorone	39	
120-82-1	1,2,4-Trichlorobenzene	38	
91-20-3	Naphthalene	38	
106-47-8	4-Chloroaniline	37	
111-91-1	Bis(2-chloroethoxy)methane	38	
87-68-3	Hexachlorobutadiene	37	
91-57-6	2-Methylnaphthalene	42	
77-47-4	Hexachlorocyclopentadiene	31	
91-58-7	2-Chloronaphthalene	34	
88-74-4	2-Nitroaniline	36	
131-11-3	Dimethylphthalate	38	
208-96-8	Acenaphthylene	36	
606-20-2	2,6-Dinitrotoluene	37	
99-09-2	3-Nitroaniline	34	
83-32-9	Acenaphthene	36	
132-64-9	Dibenzofuran	36	
121-14-2	2,4-Dinitrotoluene	38	
84-66-2	Diethylphthalate	38	
7005-72-3	4-Chlorophenyl-phenylether	37	
86-73-7	Fluorene	36	
100-01-6	4-Nitroaniline	29	
101-55-3	4-Bromophenyl-phenylether	36	
118-74-1	Hexachlorobenzene	38	
85-01-8	Phenanthrene	36	
120-12-7	Anthracene	35	
86-74-8	Carbazole	34	
206-44-0	Fluoranthene	37	
129-00-0	Pyrene	36	
85-68-7	Butylbenzylphthalate	36	

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-77823

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-77823

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8420.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/27/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/11/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	31	
56-55-3	Benzo(a)anthracene	38	
218-01-9	Chrysene	38	
117-81-7	Bis(2-ethylhexyl)phthalate	36	
205-99-2	Benzo(b)fluoranthene	38	
207-08-9	Benzo(k)fluoranthene	38	
50-32-8	Benzo(a)pyrene	38	
193-39-5	Indeno(1,2,3-cd)pyrene	39	
53-70-3	Dibenzo(a,h)anthracene	40	
191-24-2	Benzo(g,h,i)perylene	38	

2H - FORM II SV-2

WATER SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

	EPA SAMPLE NO.	SDMC1 (NBZ) #	SDMC2 (FBP) #	SDMC3 (TPH) #	SDMC4 (PHL) #	SDMC5 (2FP) #	SDMC6 (TBP) #			TOT OUT
01	LCS-77823	76	68	70	68	62	70			0
02	LCSD-77823	77	71	75	70	62	72			0
03	MB-77823	74	69	73	67	62	72			0
04	MWN-04-062414	100	94	80						0
05	MWN-03D-062414	78	57	21 *						1
06	MWN-03-062414	92	84	79						0
07	MWM-02-062514	108	97	87						0
08	MWN-02B-062514	101	95	89						0
09	WT1-02-062514	96	87	80						0
10	WT1-05-062514	98	89	84						0
11	WT1-06-062614	91	83	77						0
12	BCP-ORC-2-062614	99	90	80						0
13	BCP-ORC-1-062614	90	82	73						0
14	MWN-01-062614	104	95	90						0
15	MWN-01B-062614	98	89	79						0
16	WT1-04-062614	101	92	94						0

		QC LIMITS
SDMC1	(NBZ) = Nitrobenzene-d5	(40-110)
SDMC2	(FBP) = 2-Fluorobiphenyl	(50-110)
SDMC3	(TPH) = Terphenyl-d14	(50-135)
SDMC4	(PHL) = Phenol-d5	(10-115)
SDMC5	(2FP) = 2-Fluorophenol	(20-110)
SDMC6	(TBP) = 2,4,6-Tribromophenol	(40-125)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D DMC diluted out

som14.07.15.0901

2H - FORM II SV-2

WATER SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

	EPA SAMPLE NO.	SDMC1 (NBZ) #	SDMC2 (FBP) #	SDMC3 (TPH) #	SDMC4 (PHL) #	SDMC5 (2FP) #	SDMC6 (TBP) #			TOT OUT
17	FIELD DUPLICATE 062614	101	88	76						0
18	MWN-02B-062514DL	87	85	78						0
19	WT1-06-062614DL	76	73	67						0
20	MWN-01-062614DL	82	79	73						0
21	MWN-01B-062614DL	72	67	63						0
22	FIELD DUPLICATE 062614DL	86	83	70						0

		QC LIMITS
SDMC1	(NBZ) = Nitrobenzene-d5	(40-110)
SDMC2	(FBP) = 2-Fluorobiphenyl	(50-110)
SDMC3	(TPH) = Terphenyl-d14	(50-135)
SDMC4	(PHL) = Phenol-d5	(10-115)
SDMC5	(2FP) = 2-Fluorophenol	(20-110)
SDMC6	(TBP) = 2,4,6-Tribromophenol	(40-125)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D DMC diluted out

som14.07.15.0901

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-77823

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab Sample ID: LCS-77823 LCS Lot No.: A0101343

Date Extracted: 06/27/2014 Date Analyzed (1): 07/11/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Bis(2-chloroethyl)ether	50.0000	0.0000	35.4379	71		35 - 110
1,3-Dichlorobenzene	50.0000	0.0000	32.6253	65		30 - 100
1,4-Dichlorobenzene	50.0000	0.0000	32.8434	66		30 - 100
1,2-Dichlorobenzene	50.0000	0.0000	33.7056	67		35 - 100
2,2´-oxybis(1-Chloropropan	50.0000	0.0000	35.7866	72		30 - 123
Hexachloroethane	50.0000	0.0000	32.5833	65		30 - 95
Nitrobenzene	50.0000	0.0000	37.3178	75		45 - 110
Isophorone	50.0000	0.0000	38.1445	76		50 - 110
1,2,4-Trichlorobenzene	50.0000	0.0000	36.3950	73		35 - 105
Naphthalene	50.0000	0.0000	36.7739	74		40 - 100
4-Chloroaniline	50.0000	0.0000	35.7526	72		15 - 110
Bis(2-chloroethoxy)methane	50.0000	0.0000	37.2932	75		45 - 105
Hexachlorobutadiene	50.0000	0.0000	35.7884	72		25 - 105
2-Methylnaphthalene	50.0000	0.0000	40.2506	81		45 - 105
Hexachlorocyclopentadiene	50.0000	0.0000	22.7597	46		27 - 147
2-Chloronaphthalene	50.0000	0.0000	33.3274	67		50 - 105
2-Nitroaniline	50.0000	0.0000	34.2608	69		50 - 115
Dimethylphthalate	50.0000	0.0000	35.8731	72		25 - 125
Acenaphthylene	50.0000	0.0000	34.6666	69		50 - 105
2,6-Dinitrotoluene	50.0000	0.0000	36.2817	73		50 - 115
3-Nitroaniline	50.0000	0.0000	32.8608	66		20 - 125
Acenaphthene	50.0000	0.0000	34.3064	69		45 - 110
Dibenzofuran	50.0000	0.0000	34.7667	70		55 - 105
2,4-Dinitrotoluene	50.0000	0.0000	35.8231	72		50 - 120
Diethylphthalate	50.0000	0.0000	36.1885	72		40 - 120
4-Chlorophenyl-phenylether	50.0000	0.0000	35.0890	70		50 - 110
Fluorene	50.0000	0.0000	35.0091	70		50 - 110
4-Nitroaniline	50.0000	0.0000	26.9715	54		35 - 120
4-Bromophenyl-phenylether	50.0000	0.0000	34.7604	70		50 - 115
Hexachlorobenzene	50.0000	0.0000	36.2339	72		50 - 110
Phenanthrene	50.0000	0.0000	34.8237	70		50 - 115
Anthracene	50.0000	0.0000	33.5335	67		55 - 110
Carbazole	50.0000	0.0000	33.0785	66		50 - 115
Fluoranthene	50.0000	0.0000	35.9348	72		55 - 115
Pyrene	50.0000	0.0000	34.8268	70		50 - 130
Butylbenzylphthalate	50.0000	0.0000	34.9754	70		45 - 115
3,3´-Dichlorobenzidine	50.0000	0.0000	27.0627	54		20 - 110
Benzo(a)anthracene	50.0000	0.0000	36.4621	73		55 - 110
Chrysene	50.0000	0.0000	36.2761	73		55 - 110
Bis(2-ethylhexyl)phthalate	50.0000	0.0000	34.6198	69		40 - 125
Benzo(b)fluoranthene	50.0000	0.0000	35.7716	72		45 - 120
Benzo(k)fluoranthene	50.0000	0.0000	36.1584	72		45 - 125
Benzo(a)pyrene	50.0000	0.0000	35.5073	71		55 - 110
Indeno(1,2,3-cd)pyrene	50.0000	0.0000	36.8723	74		45 - 125

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-77823

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab Sample ID: LCS-77823 LCS Lot No.: A0101343

Date Extracted: 06/27/2014 Date Analyzed (1): 07/11/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dibenzo(a,h)anthracene	50.0000	0.0000	37.1464	74		40 - 125
Benzo(g,h,i)perylene	50.0000	0.0000	36.9897	74		40 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 46 outside limits

COMMENTS:

3 - FORM III

WATER LABORATORY CONTROL

SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-77823

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab Sample ID: LCSD-77823 LCS Lot No.: A0101343

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS RPD	QC LIMITS REC.
Bis(2-chloroethyl)ether	50.0000	36.2091	72		1		40	35 - 110
1,3-Dichlorobenzene	50.0000	33.6270	67		3		40	30 - 100
1,4-Dichlorobenzene	50.0000	32.6751	65		2		40	30 - 100
1,2-Dichlorobenzene	50.0000	34.0368	68		1		40	35 - 100
2,2´-oxybis(1-Chloropropan	50.0000	36.0186	72		0		40	30 - 123
Hexachloroethane	50.0000	33.2227	66		2		40	30 - 95
Nitrobenzene	50.0000	37.8606	76		1		40	45 - 110
Isophorone	50.0000	39.2207	78		3		40	50 - 110
1,2,4-Trichlorobenzene	50.0000	37.7026	75		3		40	35 - 105
Naphthalene	50.0000	37.8952	76		3		40	40 - 100
4-Chloroaniline	50.0000	37.4195	75		4		40	15 - 110
Bis(2-chloroethoxy)methane	50.0000	37.8705	76		1		40	45 - 105
Hexachlorobutadiene	50.0000	37.2545	75		4		40	25 - 105
2-Methylnaphthalene	50.0000	41.7121	83		2		40	45 - 105
Hexachlorocyclopentadiene	50.0000	31.2860	63		31		40	27 - 147
2-Chloronaphthalene	50.0000	34.2147	68		1		40	50 - 105
2-Nitroaniline	50.0000	36.4336	73		6		40	50 - 115
Dimethylphthalate	50.0000	37.7885	76		5		40	25 - 125
Acenaphthylene	50.0000	36.1092	72		4		40	50 - 105
2,6-Dinitrotoluene	50.0000	37.4929	75		3		40	50 - 115
3-Nitroaniline	50.0000	33.6960	67		2		40	20 - 125
Acenaphthene	50.0000	35.8480	72		4		40	45 - 110
Dibenzofuran	50.0000	35.9196	72		3		40	55 - 105
2,4-Dinitrotoluene	50.0000	37.5749	75		4		40	50 - 120
Diethylphthalate	50.0000	37.7869	76		5		40	40 - 120
4-Chlorophenyl-phenylether	50.0000	36.5049	73		4		40	50 - 110
Fluorene	50.0000	36.4374	73		4		40	50 - 110
4-Nitroaniline	50.0000	29.1849	58		7		40	35 - 120
4-Bromophenyl-phenylether	50.0000	35.8443	72		3		40	50 - 115
Hexachlorobenzene	50.0000	37.7075	75		4		40	50 - 110
Phenanthrene	50.0000	36.0466	72		3		40	50 - 115
Anthracene	50.0000	35.3349	71		6		40	55 - 110
Carbazole	50.0000	34.1094	68		3		40	50 - 115
Fluoranthene	50.0000	37.3611	75		4		40	55 - 115
Pyrene	50.0000	36.1113	72		3		40	50 - 130
Butylbenzylphthalate	50.0000	36.3184	73		4		40	45 - 115
3,3´-Dichlorobenzidine	50.0000	31.2711	63		15		40	20 - 110
Benzo(a)anthracene	50.0000	38.0378	76		4		40	55 - 110
Chrysene	50.0000	37.5521	75		3		40	55 - 110
Bis(2-ethylhexyl)phthalate	50.0000	36.2565	73		6		40	40 - 125
Benzo(b)fluoranthene	50.0000	37.8258	76		5		40	45 - 120
Benzo(k)fluoranthene	50.0000	37.9047	76		5		40	45 - 125
Benzo(a)pyrene	50.0000	38.2023	76		7		40	55 - 110
Indeno(1,2,3-cd)pyrene	50.0000	38.8240	78		5		40	45 - 125
Dibenzo(a,h)anthracene	50.0000	39.6048	79		7		40	40 - 125
Benzo(g,h,i)perylene	50.0000	38.4993	77		4		40	40 - 125

3 - FORM III

WATER LABORATORY CONTROL

SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-77823

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab Sample ID: LCSD-77823 LCS Lot No.: A0101343

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC #	%RPD #	QC LIMITS RPD	QC LIMITS REC.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 46 outside limits

Spike Recovery: 0 out of 46 outside limits

COMMENTS:

4C - FORM IV SV

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB-77823

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab File ID: S6B8421A.D Lab Sample ID: MB-77823

Instrument ID: S6 Date Extracted: 06/27/2014

Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 07/11/2014

Level: (LOW/MED) LOW Time Analyzed: 12:04

Extraction: (Type) SEPF GPC Cleanup: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS-77823	LCS-77823	S6B8419.D	07/11/2014
02	LCSD-77823	LCSD-77823	S6B8420.D	07/11/2014
03	MWN-04-062414	N1104-01B	S6B8438.D	07/11/2014
04	MWN-03D-062414	N1104-03B	S6B8439.D	07/11/2014
05	MWN-03-062414	N1104-04B	S6B8440.D	07/11/2014
06	MWM-02-062514	N1104-06B	S6B8441.D	07/11/2014
07	MWN-02B-062514	N1104-07B	S6B8442.D	07/11/2014
08	WT1-02-062514	N1104-09F	S6B8443.D	07/11/2014
09	WT1-05-062514	N1104-10F	S6B8444.D	07/11/2014
10	WT1-06-062614	N1104-12E	S6B8445.D	07/11/2014
11	BCP-ORC-2-062614	N1104-13E	S6B8446.D	07/11/2014
12	BCP-ORC-1-062614	N1104-14E	S6B8447.D	07/11/2014
13	MWN-01-062614	N1104-15E	S6B8448.D	07/11/2014
14	MWN-01B-062614	N1104-16E	S6B8449.D	07/11/2014
15	WT1-04-062614	N1104-17E	S6B8450.D	07/11/2014
16	FIELD DUPLICATE 062614	N1104-18E	S6B8451.D	07/11/2014

COMMENTS:

4C - FORM IV SV

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB-77823

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

Lab File ID: S6B8421A.D Lab Sample ID: MB-77823

Instrument ID: S6 Date Extracted: 06/27/2014

Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 07/11/2014

Level: (LOW/MED) LOW Time Analyzed: 12:04

Extraction: (Type) SEPF GPC Cleanup: (Y/N) N

17	MWN-02B-062514DL	N1104-07BDL	S6B8465.D	07/13/2014
18	WT1-06-062614DL	N1104-12EDL	S6B8466.D	07/13/2014
19	MWN-01-062614DL	N1104-15EDL	S6B8467.D	07/13/2014
20	MWN-01B-062614DL	N1104-16EDL	S6B8468.D	07/13/2014
21	FIELD DUPLICATE 062614DL	N1104-18EDL	S6B8469.D	07/13/2014

COMMENTS:

8C - FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

GC Column: Rxi-5sil MS ID: 0.25 (mm) Init. Calib. Date(s): 07/10/2014 07/10/2014

EPA Sample No.(SSTD020##) SSTD0256B Date Analyzed: 07/11/2014

Lab File ID (Standard): S6B8417.D Time Analyzed: 9:58

Instrument ID: S6

		IS1 (DCB) AREA	#	RT	#	IS2 (NPT) AREA	#	RT	#	IS3 (ANT) AREA	#	RT	#
	12 HOUR STD	415784		5.072		1689844		6.147		1116048		7.61	
	UPPER LIMIT	831568		5.572		3379688		6.647		2232096		8.11	
	LOWER LIMIT	207892		4.572		844922		5.647		558024		7.11	
	EPA SAMPLE NO.												
01	LCS-77823	419152		5.072		1569106		6.148		1090176		7.611	
02	LCSD-77823	440718		5.072		1659068		6.147		1157239		7.610	
03	MB-77823	405944		5.072		1507979		6.148		1065306		7.605	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8D - FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

EPA Sample No.(SSTD020##) SSTD0256B Date Analyzed: 07/11/2014

Lab File ID (Standard): S6B8417.D Time Analyzed: 9:58

Instrument ID: S6 GC Column: Rxi-5sil MS ID: 0.25 (mm)

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	2289254		8.838		2415072		11.253		2251198		13.656	
	UPPER LIMIT	4578508		9.338		4830144		11.753		4502396		14.156	
	LOWER LIMIT	1144627		8.338		1207536		10.753		1125599		13.156	
	EPA SAMPLE NO.												
01	LCS-77823	2221091		8.839		2368410		11.259		2201308		13.662	
02	LCSD-77823	2380847		8.838		2541797		11.259		2350237		13.662	
03	MB-77823	2204471		8.839		2365357		11.242		2100978		13.639	

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8C - FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

GC Column: Rxi-5sil MS ID: 0.25 (mm) Init. Calib. Date(s): 07/10/2014 07/10/2014

EPA Sample No.(SSTD020##) SSTD0256C Date Analyzed: 07/11/2014

Lab File ID (Standard): S6B8435.D Time Analyzed: 17:37

Instrument ID: S6

		IS1 (DCB) AREA	#	RT	#	IS2 (NPT) AREA	#	RT	#	IS3 (ANT) AREA	#	RT	#
	12 HOUR STD	377184		5.072		1524447		6.148		1003170		7.611	
	UPPER LIMIT	754368		5.572		3048894		6.648		2006340		8.111	
	LOWER LIMIT	188592		4.572		762224		5.648		501585		7.111	
	EPA SAMPLE NO.												
01	MWN-04-062414	272684		5.066		1054453		6.147		738734		7.605	
02	MWN-03D-062414	261897		5.066		1039541		6.147		737175		7.605	
03	MWN-03-062414	213558		5.066		901710		6.148		644986		7.605	
04	MWM-02-062514	254568		5.066		1023573		6.148		736249		7.605	
05	MWN-02B-062514	359641		5.072		1297310		6.148		852001		7.605	
06	WT1-02-062514	365235		5.066		1372162		6.147		931852		7.605	
07	WT1-05-062514	268421		5.066		1072073		6.147		748081		7.604	
08	WT1-06-062614	212539		5.066		837988		6.147		601665		7.605	
09	BCP-ORC-2-062614	328717		5.066		1225209		6.148		832497		7.605	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8C - FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

GC Column: Rxi-5sil MS ID: 0.25 (mm) Init. Calib. Date(s): 07/10/2014 07/10/2014

EPA Sample No.(SSTD020##) SSTD0256C Date Analyzed: 07/11/2014

Lab File ID (Standard): S6B8435.D Time Analyzed: 17:37

Instrument ID: S6

		IS1 (DCB) AREA	#	RT	#	IS2 (NPT) AREA	#	RT	#	IS3 (ANT) AREA	#	RT	#
	12 HOUR STD	377184		5.072		1524447		6.148		1003170		7.611	
	UPPER LIMIT	754368		5.572		3048894		6.648		2006340		8.111	
	LOWER LIMIT	188592		4.572		762224		5.648		501585		7.111	
	EPA SAMPLE NO.												
10	BCP-ORC-1-062614	272200		5.066		1064581		6.147		740222		7.605	
11	MWN-01-062614	294125		5.066		1133383		6.147		766308		7.604	
12	MWN-01B-062614	244614		5.066		949754		6.153		685093		7.605	
13	WT1-04-062614	299997		5.072		1169965		6.147		823407		7.605	
14	FIELD DUPLICATE 062614	374246		5.066		1381207		6.165		959511		7.611	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8D - FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

EPA Sample No.(SSTD020##) SSTD0256C Date Analyzed: 07/11/2014

Lab File ID (Standard): S6B8435.D Time Analyzed: 17:37

Instrument ID: S6 GC Column: Rxi-5sil MS ID: 0.25 (mm)

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	2069859		8.839		2179343		11.242		2079999		13.633	
	UPPER LIMIT	4139718		9.339		4358686		11.742		4159998		14.133	
	LOWER LIMIT	1034930		8.339		1089672		10.742		1040000		13.133	
	EPA SAMPLE NO.												
01	MWN-04-062414	1553779		8.838		1691793		11.230		1441849		13.621	
02	MWN-03D-062414	1533841		8.833		1650124		11.230		1516665		13.621	
03	MWN-03-062414	1353569		8.839		1513691		11.230		1422646		13.621	
04	MWM-02-062514	1503527		8.839		1663324		11.230		1517490		13.621	
05	MWN-02B-062514	1675183		8.839		1719576		11.230		1464010		13.615	
06	WT1-02-062514	1901261		8.838		2022378		11.230		1876532		13.621	
07	WT1-05-062514	1541512		8.838		1643375		11.224		1524750		13.615	
08	WT1-06-062614	1283237		8.838		1436102		11.224		1351921		13.615	
09	BCP-ORC-2-062614	1687763		8.838		1846305		11.236		1660249		13.627	

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8D - FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

EPA Sample No.(SSTD020##) SSTD0256C Date Analyzed: 07/11/2014

Lab File ID (Standard): S6B8435.D Time Analyzed: 17:37

Instrument ID: S6 GC Column: Rxi-5sil MS ID: 0.25 (mm)

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	2069859		8.839		2179343		11.242		2079999		13.633	
	UPPER LIMIT	4139718		9.339		4358686		11.742		4159998		14.133	
	LOWER LIMIT	1034930		8.339		1089672		10.742		1040000		13.133	
	EPA SAMPLE NO.												
10	BCP-ORC-1-062614	1505670		8.838		1663723		11.224		1482240		13.615	
11	MWN-01-062614	1562100		8.838		1701433		11.224		1593934		13.615	
12	MWN-01B-062614	1411565		8.838		1562726		11.242		1458828		13.633	
13	WT1-04-062614	1720978		8.838		1868634		11.230		1713324		13.627	
14	FIELD DUPLICATE 062614	2005061		8.839		2170538		11.236		1997163		13.633	

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8C - FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

GC Column: Rxi-5sil MS ID: 0.25 (mm) Init. Calib. Date(s): 07/10/2014 07/10/2014

EPA Sample No.(SSTD020##) SSTD0256D Date Analyzed: 07/13/2014

Lab File ID (Standard): S6B8455.D Time Analyzed: 13:54

Instrument ID: S6

		IS1 (DCB) AREA	#	RT	#	IS2 (NPT) AREA	#	RT	#	IS3 (ANT) AREA	#	RT	#
	12 HOUR STD	425514		5.072		1714602		6.147		1125238		7.61	
	UPPER LIMIT	851028		5.572		3429204		6.647		2250476		8.11	
	LOWER LIMIT	212757		4.572		857301		5.647		562619		7.11	
	EPA SAMPLE NO.												
01	MWN-02B-062514DL	424474		5.072		1535366		6.147		1039573		7.604	
02	WT1-06-062614DL	360048		5.072		1437345		6.147		1001156		7.605	
03	MWN-01-062614DL	377044		5.072		1426301		6.147		1015276		7.605	
04	MWN-01B-062614DL	457888		5.072		1704829		6.147		1180772		7.604	
05	FIELD DUPLICATE 062614DL	362690		5.066		1400830		6.147		1009280		7.605	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8D - FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1104 Mod. Ref No.: SDG No.: SN1104

EPA Sample No.(SSTD020##) SSTD0256D Date Analyzed: 07/13/2014

Lab File ID (Standard): S6B8455.D Time Analyzed: 13:54

Instrument ID: S6 GC Column: Rxi-5sil MS ID: 0.25 (mm)

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	2308094		8.838		2417859		11.247		2227513		13.65	
	UPPER LIMIT	4616188		9.338		4835718		11.747		4455026		14.15	
	LOWER LIMIT	1154047		8.338		1208930		10.747		1113757		13.15	
	EPA SAMPLE NO.												
01	MWN-02B-062514DL	2102652		8.838		2162812		11.236		1787062		13.633	
02	WT1-06-062614DL	2013813		8.838		2157026		11.236		1947327		13.627	
03	MWN-01-062614DL	2106893		8.838		2332611		11.236		2134629		13.633	
04	MWN-01B-062614DL	2458470		8.838		2617904		11.236		2210426		13.633	
05	FIELD DUPLICATE 062614DL	2073285		8.838		2249373		11.236		1992604		13.639	

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

* Metals *

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : GZA GeoEnvironmental, Inc.

Project: Steelwinds 1

Laboratory Workorder / SDG #: N1104

SW846 6010C

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code: SW846 6010C

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW3005A

V. INSTRUMENTATION

The following instrumentation was used:

Instrument Code: OPTIMA2
Instrument Type: ICP

Description: Optima 3100 XL
Manufacturer: Perkin-Elmer
Model: 3100 XL

Instrument Code: OPTIMA3
Instrument Type: ICP
Description: Optima ICP-OES
Manufacturer: Perkin-Elmer
Model: 4300 DV

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for laboratory control samples were within the QC limits.

2. Matrix spike (MS):

A matrix spike was not performed on any sample in this SDG.

D. Post Digestion Spike (PDS):

A post-digestion spike was not performed on any sample in this SDG.

E. Duplicate sample:

A duplicate analysis was not performed on any sample in this SDG.

F. Serial Dilution (SD):

A serial dilution was not performed on any sample in this SDG.

G. Samples:

No other unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed: 

Date: 07/14/2014

Data Flag/Qualifiers (Page 1 of 2):

U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).

J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
- estimated concentration for Tentatively Identified Compound

B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a "trace" concentration below the reporting limit and equal to or above the detection limit.

D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis

E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.

P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.

A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.

* For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.

L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution

RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.

RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.

RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.

MS Matrix Spike.

MSD Matrix Spike Duplicate

DUP Duplicate analysis

SD Serial Dilution

PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

BCP-ORC-1-062614

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-14

Level (low/med): MED Date Received: 06/27/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	55.1	B		P

Comments:

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

BCP-ORC-2-062614

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-13

Level (low/med): MED Date Received: 06/27/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	35.4	B		P

Comments:

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

FIELD DUPLICATE 062614

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-18

Level (low/med): MED Date Received: 06/27/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	48.1	B		P

Comments:

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MWN-01-062614

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-15

Level (low/med): MED Date Received: 06/27/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	31.9	B		P

Comments:

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MWN-01B-062614

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-16

Level (low/med): MED Date Received: 06/27/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	48.7	B		P

Comments:

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MWN-02B-062514

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-07

Level (low/med): MED Date Received: 06/26/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	42.1			P

Comments:

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MWN-02D-062514

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-08

Level (low/med): MED Date Received: 06/26/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.3	U		P
7440-39-3	Barium	885			P
7440-47-3	Chromium	4.0	B		P

Comments:

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MWN-03B-062414

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-02

Level (low/med): MED Date Received: 06/25/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	93.1			P
7440-39-3	Barium	933			P
7440-47-3	Chromium	5.3	B		P
7439-96-5	Manganese	382			P

Comments:

U.S. EPA - CLP

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MWN-03D-062414

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-03

Level (low/med): MED Date Received: 06/25/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	1330			P
7439-96-5	Manganese	183			P

Comments:

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

WT1-02-062514

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-09

Level (low/med): MED Date Received: 06/26/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	49.7	B		P

Comments:

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

WT1-04-062614

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-17

Level (low/med): MED Date Received: 06/27/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	33.1	B		P

Comments:

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

WT1-05-062514

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-10

Level (low/med): MED Date Received: 06/26/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	31.0	U		P

Comments:

1

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

WT1-06-062614

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Matrix (soil/water): WATER Lab Sample ID: N1104-12

Level (low/med): MED Date Received: 06/27/2014

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	33.1	B		P

Comments:

7

LABORATORY CONTROL SAMPLE

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.40

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Solid LCS Source:

Aqueous LCS Source:

LCS(D) ID:
LCS-77803

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/Kg) True	Found	C	Limits		%R
Arsenic	455.0	496.25	109.1						
Barium	9100.0	9638.90	105.9						
Chromium	910.0	971.29	106.7						
Iron	4550.0	5003.04	110.0						
Manganese	2270.0	2423.38	106.8						

7

LABORATORY CONTROL SAMPLE

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.40

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Solid LCS Source:

Aqueous LCS Source:

LCS(D) ID:
LCS-77888

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/Kg) True	Found	C	Limits		%R
Arsenic	455.0	471.78	103.7						
Iron	4550.0	4999.83	109.9						

7

LABORATORY CONTROL SAMPLE

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.40

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Solid LCS Source:

Aqueous LCS Source:

LCS(D) ID:
LCSD-77803

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/Kg) True	Found	C	Limits		%R
Arsenic	455.0	488.37	107.3						
Barium	9100.0	9560.74	105.1						
Chromium	910.0	948.57	104.2						
Iron	4550.0	4884.18	107.3						
Manganese	2270.0	2404.49	105.9						

7

LABORATORY CONTROL SAMPLE

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.40

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Solid LCS Source:

Aqueous LCS Source:

LCS(D) ID:
LCSD-77888

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/Kg) True	Found	C	Limits		%R
Arsenic	455.0	459.96	101.1						
Iron	4550.0	4754.15	104.5						

U.S. EPA - CLP

3

BLANKS

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.40

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Preparation Blank Matrix (soil/water): WATER

Method Blank ID: **MB-77888**

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

OPTIMA2_140702A

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 07/02/14 9:16	C	07/02/14 9:42	C	07/02/14 10:16	C	Preparation Blank	C	M
Iron	31.0	U	31.0	U	31.0	U	31.0	U	31.000	U	P

U.S. EPA - CLP

3

BLANKS

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.40

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Preparation Blank Matrix (soil/water): WATER

Method Blank ID: **MB-77803**

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

OPTIMA3_140627B

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 06/27/14 12:32	C	06/27/14 13:01	C	06/27/14 13:39	C	Preparation Blank	C	M
Arsenic	4.3	U	4.3	U	4.3	U	4.3	U	4.300	U	P
Barium	1.1	U	1.1	U	1.5	B	1.3	B	1.100	U	P
Chromium	0.6	U	0.6	U	0.6	U	0.6	U	0.640	U	P
Iron	31.0	U	31.0	U	31.0	U	31.0	U	31.000	U	P
Manganese	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P

U.S. EPA - CLP

3

BLANKS

Lab Name: Spectrum Analytical, Inc. Contract: 03.0033579.40

Lab Code: MITKEM Case No.: SAS No.: SDG No.: SN1104

Preparation Blank Matrix (soil/water): Method Blank ID:

Preparation Blank Concentration Units (ug/L or mg/kg):

OPTIMA3_140627B

	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
Analyte		C	06/27/14 14:16	C		C		C		C	M
Arsenic			4.3	U							P
Barium			1.2	B							P
Chromium			0.6	U							P
Iron			31.0	U							P
Manganese			10.0	U							P

* Wet Chemistry *

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : GZA GeoEnvironmental, Inc.

Project: Steelwinds 1

Laboratory Workorder / SDG #: N1104

EPA 300.0, SM 2320B, SW846 9060A

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code: EPA 300.0, SM 2320B, SW846 9060A

IV. PREPARATION

Samples were prepared following procedures in laboratory test code: EPA 300.0, SM 2320B, SW846 9060A

V. INSTRUMENTATION

The following instrumentation was used:

Instrument Code: IC1
Instrument Type: IC

Description: DX-500
Manufacturer: Dionex
Model: DX-500
GC Column used: 0.25 m X 4 mm ID [um thickness] AS14A-7 capillary column.

Instrument Code: TOC1
Instrument Type: TOC
Description: TOC
Manufacturer: Tekmar Dohrman
Model: Apollo 9000

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

D. Duplicate sample:

No client-requested laboratory duplicate analyses were included in this SDG.

E. Dilutions:

The following samples were analyzed at dilution:

WT1-02-062514 (N1104-09E), dilution factor: 2 for Sulfate
WT1-05-062514 (N1104-10E), dilution factor: 2 for Sulfate
WT1-06-062614 (N1104-12D), dilution factor: 2 for Sulfate
BCP-ORC-2-062614 (N1104-13D), dilution factor: 2 for Sulfate
MWN-01-062614 (N1104-15D), dilution factor: 2 for Sulfate

F. Samples:

No other unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed: 

Date: 07/16/2014

Data Flag/Qualifiers (Page 1 of 2):

U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).

J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
- estimated concentration for Tentatively Identified Compound

B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a "trace" concentration below the reporting limit and equal to or above the detection limit.

D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis

E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.

P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.

A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.

* For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.

L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution

RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.

RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.

RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.

MS Matrix Spike.

MSD Matrix Spike Duplicate

DUP Duplicate analysis

SD Serial Dilution

PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: WT1-02-062514
Lab ID: N1104-09
Project: Steelwinds 1
Collection Date: 06/25/14 13:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	06/26/2014 11:54	77809
Sulfate	170	B	10	mg/L	2	06/26/2014 12:42	77809
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	370		20	mg/L CaCO3	1	06/27/2014 8:33	77825
SW846 9060A -- Total Organic Carbon by combustion							**SW9060_TOC_W**
Organic Carbon, Total	5.8	J	10	mg/L	1	06/27/2014 12:56	77826

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.

Client Sample ID: WT1-05-062514 **Project:** Steelwinds 1

Lab ID: N1104-10 **Collection Date:** 06/25/14 15:20

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Nitrogen, Nitrate (As N)	0.39	B	0.13	mg/L	1	06/26/2014 12:06	77809
Sulfate	170	B	10	mg/L	2	06/26/2014 12:54	77809
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	190		20	mg/L CaCO3	1	06/27/2014 8:39	77825
SW846 9060A -- Total Organic Carbon by combustion							**SW9060_TOC_W**
Organic Carbon, Total	5.5	J	10	mg/L	1	06/27/2014 13:15	77826

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quanititation limits

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: WT1-06-062614
Lab ID: N1104-12
Project: Steelwinds 1
Collection Date: 06/26/14 17:20

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	06/27/2014 15:28	77842
Sulfate	190	B	10	mg/L	2	06/28/2014 8:16	77842
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	200		20	mg/L CaCO3	1	06/30/2014 10:45	77864
SW846 9060A -- Total Organic Carbon by combustion							**SW9060_TOC_W**
Organic Carbon, Total	7.3	J	10	mg/L	1	07/15/2014 12:12	78078

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: BCP-ORC-2-062614
Lab ID: N1104-13
Project: Steelwinds 1
Collection Date: 06/26/14 16:05

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	06/27/2014 15:40	77842
Sulfate	220	B	10	mg/L	2	06/28/2014 8:27	77842
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	280		20	mg/L CaCO3	1	06/30/2014 10:45	77864
SW846 9060A -- Total Organic Carbon by combustion							**SW9060_TOC_W**
Organic Carbon, Total	6.4	J	10	mg/L	1	07/15/2014 12:31	78078

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: BCP-ORC-1-062614
Lab ID: N1104-14
Project: Steelwinds 1
Collection Date: 06/26/14 14:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	06/27/2014 15:51	77842
Sulfate	150	B	5.0	mg/L	1	06/27/2014 15:51	77842
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	220		20	mg/L CaCO3	1	06/30/2014 10:45	77864
SW846 9060A -- Total Organic Carbon by combustion							**SW9060_TOC_W**
Organic Carbon, Total	8.0	J	10	mg/L	1	07/15/2014 12:51	78078

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: MWN-01-062614
Lab ID: N1104-15
Project: Steelwinds 1
Collection Date: 06/26/14 8:35

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	06/27/2014 16:03	77842
Sulfate	200	B	10	mg/L	2	06/28/2014 8:39	77842
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	190		20	mg/L CaCO3	1	06/30/2014 10:45	77864
SW846 9060A -- Total Organic Carbon by combustion							**SW9060_TOC_W**
Organic Carbon, Total	6.8	J	10	mg/L	1	07/15/2014 13:10	78078

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: MWN-01B-062614
Lab ID: N1104-16
Project: Steelwinds 1
Collection Date: 06/26/14 9:55

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	06/27/2014 16:15	77842
Sulfate	130	B	5.0	mg/L	1	06/27/2014 16:15	77842
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	150		20	mg/L CaCO3	1	06/30/2014 10:45	77864
SW846 9060A -- Total Organic Carbon by combustion							**SW9060_TOC_W**
Organic Carbon, Total	9.0	J	10	mg/L	1	07/15/2014 13:29	78078

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: WT1-04-062614
Lab ID: N1104-17
Project: Steelwinds 1
Collection Date: 06/26/14 11:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	06/27/2014 16:26	77842
Sulfate	130	B	5.0	mg/L	1	06/27/2014 16:26	77842
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	260		20	mg/L CaCO3	1	06/30/2014 10:45	77864
SW846 9060A -- Total Organic Carbon by combustion							**SW9060_TOC_W**
Organic Carbon, Total	4.8	J	10	mg/L	1	07/15/2014 13:49	78078

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: GZA GeoEnvironmental, Inc.
Client Sample ID: FIELD DUPLICATE 062614
Lab ID: N1104-18
Project: Steelwinds 1
Collection Date: 06/26/14 0:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	06/27/2014 16:38	77842
Sulfate	130	B	5.0	mg/L	1	06/27/2014 16:38	77842
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	150		20	mg/L CaCO3	1	06/30/2014 11:30	77864
SW846 9060A -- Total Organic Carbon by combustion							**SW9060_TOC_W**
Organic Carbon, Total	9.0	J	10	mg/L	1	07/15/2014 14:08	78078

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

CLIENT: GZA GeoEnvironmental, Inc.
Work Order: N1104
Project: Steelwinds 1

ANALYTICAL QC SUMMARY REPORT

E300IC_W

EPA 300.0 -- Anions by Ion Chromotography (LOW)

Sample ID: **MB-77809** SampType: **MBLK** TestCode: **E300IC_W** Prep Date: **06/26/14 8:45** Run ID: **IC1_140626A**
Client ID: **MB-77809** Batch ID: **77809** Units: **mg/L** Analysis Date: **06/26/14 8:58** SeqNo: **2108908**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	0.1650	0.083	0.13									
Sulfate	0.2234	0.15	5.0									J

Sample ID: **MB-77842** SampType: **MBLK** TestCode: **E300IC_W** Prep Date: **06/27/14 11:00** Run ID: **IC1_140627A**
Client ID: **MB-77842** Batch ID: **77842** Units: **mg/L** Analysis Date: **06/27/14 13:02** SeqNo: **2110068**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	0.2475	0.15	5.0									J

Sample ID: **LCS-77809** SampType: **LCS** TestCode: **E300IC_W** Prep Date: **06/26/14 8:45** Run ID: **IC1_140626A**
Client ID: **LCS-77809** Batch ID: **77809** Units: **mg/L** Analysis Date: **06/26/14 9:10** SeqNo: **2108909**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	0.9207	0.083	0.13	1.000	0	92.1	90	110	0			B
Sulfate	37.64	0.15	5.0	40.00	0	94.1	90	110	0			B

Sample ID: **LCS-77842** SampType: **LCS** TestCode: **E300IC_W** Prep Date: **06/27/14 11:00** Run ID: **IC1_140627A**
Client ID: **LCS-77842** Batch ID: **77842** Units: **mg/L** Analysis Date: **06/27/14 13:13** SeqNo: **2110069**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	36.81	0.15	5.0	40.00	0	92.0	90	110	0			B

Qualifiers: ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

CLIENT: GZA GeoEnvironmental, Inc.
Work Order: N1104
Project: Steelwinds 1

ANALYTICAL QC SUMMARY REPORT

SM2320_W
SM 2320B -- Alkalinity (Total)

Sample ID: **MB-77825** SampType: **MBLK** TestCode: **SM2320_W** Prep Date: **06/27/14 8:15** Run ID: **MANUAL_140627A**
Client ID: **MB-77825** Batch ID: **77825** Units: **mg/L CaCO3** Analysis Date: **06/27/14 8:15** SeqNo: **2109198**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	20	20									

Sample ID: **MB-77864** SampType: **MBLK** TestCode: **SM2320_W** Prep Date: **06/30/14 10:45** Run ID: **MANUAL_140630A**
Client ID: **MB-77864** Batch ID: **77864** Units: **mg/L CaCO3** Analysis Date: **06/30/14 10:45** SeqNo: **2110887**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	20	20									

Sample ID: **LCS-77825** SampType: **LCS** TestCode: **SM2320_W** Prep Date: **06/27/14 8:15** Run ID: **MANUAL_140627A**
Client ID: **LCS-77825** Batch ID: **77825** Units: **mg/L CaCO3** Analysis Date: **06/27/14 8:21** SeqNo: **2109200**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	102.0	20	20	100.0	0	102	80	120	0			

Sample ID: **LCS-77864** SampType: **LCS** TestCode: **SM2320_W** Prep Date: **06/30/14 10:45** Run ID: **MANUAL_140630A**
Client ID: **LCS-77864** Batch ID: **77864** Units: **mg/L CaCO3** Analysis Date: **06/30/14 10:45** SeqNo: **2110888**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	101.0	20	20	100.0	0	101	80	120	0			

Sample ID: **LCSD-77825** SampType: **LCSD** TestCode: **SM2320_W** Prep Date: **06/27/14 8:15** Run ID: **MANUAL_140627A**
Client ID: **LCSD-77825** Batch ID: **77825** Units: **mg/L CaCO3** Analysis Date: **06/27/14 8:27** SeqNo: **2109201**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	101.0	20	20	100.0	0	101	80	120	102.0	0.985	20	

Sample ID: **LCSD-77864** SampType: **LCSD** TestCode: **SM2320_W** Prep Date: **06/30/14 10:45** Run ID: **MANUAL_140630A**
Client ID: **LCSD-77864** Batch ID: **77864** Units: **mg/L CaCO3** Analysis Date: **06/30/14 10:45** SeqNo: **2110889**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	102.0	20	20	100.0	0	102	80	120	101.0	0.985	20	

Qualifiers: ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
m14.07.01.1307 J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

CLIENT: GZA GeoEnvironmental, Inc.
Work Order: N1104
Project: Steelwinds 1

ANALYTICAL QC SUMMARY REPORT

SW9060_TOC_W

SW846 9060A -- Total Organic Carbon by combustion

Sample ID: **MB-77826**	SampType: **MBLK**	TestCode: **SW9060_TOC_W**	Prep Date: **06/27/14 9:58**	Run ID: **TOC1_140627B**
Client ID: **MB-77826**	Batch ID: **77826**	Units: **mg/L**	Analysis Date: **06/27/14 10:50**	SeqNo: **2119955**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	ND	2.0	10									

Sample ID: **MB-78078**	SampType: **MBLK**	TestCode: **SW9060_TOC_W**	Prep Date: **07/15/14 9:11**	Run ID: **TOC1_140715A**
Client ID: **MB-78078**	Batch ID: **78078**	Units: **mg/L**	Analysis Date: **07/15/14 11:08**	SeqNo: **2119929**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	ND	2.0	10									

Sample ID: **LCS-77826**	SampType: **LCS**	TestCode: **SW9060_TOC_W**	Prep Date: **06/27/14 9:58**	Run ID: **TOC1_140627B**
Client ID: **LCS-77826**	Batch ID: **77826**	Units: **mg/L**	Analysis Date: **06/27/14 11:12**	SeqNo: **2119956**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	65.16	2.0	10	60.00	0	109	80	120	0			

Sample ID: **LCS-78078**	SampType: **LCS**	TestCode: **SW9060_TOC_W**	Prep Date: **07/15/14 9:11**	Run ID: **TOC1_140715A**
Client ID: **LCS-78078**	Batch ID: **78078**	Units: **mg/L**	Analysis Date: **07/15/14 11:30**	SeqNo: **2119930**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	58.09	2.0	10	60.00	0	96.8	80	120	0			

Sample ID: **LCSD-77826**	SampType: **LCSD**	TestCode: **SW9060_TOC_W**	Prep Date: **06/27/14 9:58**	Run ID: **TOC1_140627B**
Client ID: **LCSD-77826**	Batch ID: **77826**	Units: **mg/L**	Analysis Date: **06/27/14 11:34**	SeqNo: **2119957**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	62.91	2.0	10	60.00	0	105	80	120	65.16	3.52	20	

Sample ID: **LCSD-78078**	SampType: **LCSD**	TestCode: **SW9060_TOC_W**	Prep Date: **07/15/14 9:11**	Run ID: **TOC1_140715A**
Client ID: **LCSD-78078**	Batch ID: **78078**	Units: **mg/L**	Analysis Date: **07/15/14 11:51**	SeqNo: **2119931**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	58.86	2.0	10	60.00	0	98.1	80	120	58.09	1.32	20	

Qualifiers: ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank

m14.07.01.1307 J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

Report Date:
08-Aug-14 10:26

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

- [x] Final Report
- [ ] Re-Issued Report
- [ ] Revised Report

Laboratory Report

GZA GeoEnvironmental, Inc.
535 Washington Street, 11th Floor
Buffalo, NY 14203

Work Order: N1243
Project : Steelwinds 1
Project #:

Attn: Daniel Troy

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
N1243-01	SED-2	Soil	17-Jul-14 11:45	18-Jul-14 12:10
N1243-02	SED-3	Soil	17-Jul-14 14:45	18-Jul-14 12:10
N1243-03	SED-4	Soil	17-Jul-14 15:45	18-Jul-14 12:10
N1243-04	SED-31	Soil	17-Jul-14 14:45	18-Jul-14 12:10
N1243-05	TRIP BLANK	Aqueous	17-Jul-14 16:15	18-Jul-14 12:10
N1243-06	EQUIP BLANK	Aqueous	17-Jul-14 16:15	18-Jul-14 12:10

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the samples(s) as received. This report may not be reproduced, except in full, without written approval from Spectrum Analytical.

All applicable NELAC or USEPA CLP requirments have been meet.

Spectrum Analytical (Rhode Island) is accredited under the National Environmental Laboratory Approval Program (NELAP) and DoD Environmental Laboratory Accreditation Program (ELAP), holds Organic and Inorganic contracts under the USEPA CLP Program and is certified under several states. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.spectrum-analytical.com.

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

Department of Defense	N/A
Connecticut	PH-0153
Delaware	N/A
Florida	E87664
Maine	2007037
Massachusetts	M-RI907
New Hampshire	2631
New Jersey	RI001
New York	11522
Rhode Island	LAI00301
USDA	P330-08-00023
USEPA - ISM	EP-W-09-039
USEPA - SOM	EP-W-11-033

NELAP ACCREDITED TNI LABORATORY

LABORATORY ACCREDITATION BUREAU ACCREDITED
Certificate # L2247 Testing

Authorized by:

Yihai Ding
Laboratory Director

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

* Data Summary Pack *

646 Camp Ave · North Kingstown, RI 02852-4008 · 401-732-3400 · FAX 401-732-3499
www.spectrum-analytical.com

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Identification and Analytical Requirements Summary

Project Name : Steelwinds 1 **SDG :** N1243

Customer Sample ID	Laboratory Sample ID	Analytical Requirements				
		MSVOA Method #	MSSEMI Method #	GC* Method #	ME	Other
SED-2	N1243-01	SW8260_LOW_S	SW8270_S			SEE DATA
SED-2	N1243-01	SW8260_MED_S				
SED-3	N1243-02	SW8260_LOW_S	SW8270_S			SEE DATA
SED-4	N1243-03	SW8260_LOW_S	SW8270_S			SEE DATA
SED-4	N1243-03	SW8260_MED_S				
SED-31	N1243-04	SW8260_LOW_S	SW8270_S			SEE DATA
TRIP BLANK	N1243-05	SW8260_W				
EQUIP BLANK	N1243-06	SW8260_W	SW8270_W			

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSVOA

Project Name : Steelwinds 1 **SDG :** N1243

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8260_LOW_S					
N1243-01C	SL	7/17/2014	7/18/2014	NA	7/23/2014
N1243-02C	SL	7/17/2014	7/18/2014	NA	7/30/2014
N1243-03C	SL	7/17/2014	7/18/2014	NA	7/23/2014
N1243-04C	SL	7/17/2014	7/18/2014	NA	7/30/2014
SW8260_MED_S					
N1243-01D	SL	7/17/2014	7/18/2014	7/28/2014	7/28/2014
N1243-03D	SL	7/17/2014	7/18/2014	7/28/2014	7/28/2014
SW8260_W					
N1243-05A	AQ	7/17/2014	7/18/2014	NA	7/25/2014
N1243-06A	AQ	7/17/2014	7/18/2014	NA	7/26/2014

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSSEMI

Project Name : Steelwinds 1 **SDG :** N1243

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8270_S					
N1243-01B	SL	7/17/2014	7/18/2014	7/25/2014	7/28/2014
N1243-01BDL	SL	7/17/2014	7/18/2014	7/25/2014	7/29/2014
N1243-02B	SL	7/17/2014	7/18/2014	7/25/2014	7/28/2014
N1243-03B	SL	7/17/2014	7/18/2014	7/25/2014	7/28/2014
N1243-04B	SL	7/17/2014	7/18/2014	7/25/2014	7/28/2014
SW8270_W					
N1243-06B	AQ	7/17/2014	7/18/2014	7/24/2014	7/28/2014

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSVOA

Project Name : Steelwinds 1 **SDG :** N1243

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Low/Medium Level	Dil/Conc Factor
SW8260_LOW_S					
N1243-01C	SL	SW8260_LOW_S	NA	LOW	1
N1243-02C	SL	SW8260_LOW_S	NA	LOW	1
N1243-03C	SL	SW8260_LOW_S	NA	LOW	1
N1243-04C	SL	SW8260_LOW_S	NA	LOW	1
SW8260_MED_S					
N1243-01D	SL	SW8260_MED_S	SW5035_MED_PR	MED	1
N1243-03D	SL	SW8260_MED_S	SW5035_MED_PR	MED	1
SW8260_W					
N1243-05A	AQ	SW8260_W	NA	LOW	1
N1243-06A	AQ	SW8260_W	NA	LOW	1

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSSEMI

Project Name : Steelwinds 1 **SDG :** N1243

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
SW8270_S					
N1243-01B	SL	SW8270_S	3550B	NA	1
N1243-01BDL	SL	SW8270_S	3550B	NA	2
N1243-02B	SL	SW8270_S	3550B	NA	1
N1243-03B	SL	SW8270_S	3550B	NA	1
N1243-04B	SL	SW8270_S	3550B	NA	1
SW8270_W					
N1243-06B	AQ	SW8270_W	3510C	NA	1

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: N1243

Client ID: GZA_BUFFALO
Project: Steelwinds 1
WO Name: Steelwinds 1
Location: GZA_STEELWINDS,
Comments: N/A

Case:
SDG:
PO: NEEDS PO

HC Due: 08/06/14
Fax Due:
Fax Report: ☐

Report Level: ASP-B
Special Program:
EDD: EQuIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
N1243-01A	SED-2	07/17/2014 11:45	07/18/2014	Soil	PMoist	/					S2
N1243-01B	SED-2	07/17/2014 11:45	07/18/2014	Soil	SW8270_S	/ 8270_BN,				Y	S2
N1243-01C	SED-2	07/17/2014 11:45	07/18/2014	Soil	SW8260_LOW_S	/ 8260_STARS/CP-51				Y	VOA
N1243-01D	SED-2	07/17/2014 11:45	07/18/2014	Soil	SW8260_MED_S	/ 8260_STARS/CP-51				Y	VOA
N1243-01E	SED-2	07/17/2014 11:45	07/18/2014	Soil	SW9060_TOC_S	/ SPECTRUM--					SUB
N1243-02A	SED-3	07/17/2014 14:45	07/18/2014	Soil	PMoist	/					S2
N1243-02B	SED-3	07/17/2014 14:45	07/18/2014	Soil	SW8270_S	/ 8270_BN,				Y	S2
N1243-02C	SED-3	07/17/2014 14:45	07/18/2014	Soil	SW8260_LOW_S	/ 8260_STARS/CP-51				Y	VOA
N1243-02D	SED-3	07/17/2014 14:45	07/18/2014	Soil	SW8260_MED_S	/ 8260_STARS/CP-51		Y		Y	VOA
N1243-02E	SED-3	07/17/2014 14:45	07/18/2014	Soil	SW9060_TOC_S	/ SPECTRUM--					SUB
N1243-03A	SED-4	07/17/2014 15:45	07/18/2014	Soil	PMoist	/					S2
N1243-03B	SED-4	07/17/2014 15:45	07/18/2014	Soil	SW8270_S	/ 8270_BN,				Y	S2
N1243-03C	SED-4	07/17/2014 15:45	07/18/2014	Soil	SW8260_LOW_S	/ 8260_STARS/CP-51				Y	VOA
N1243-03D	SED-4	07/17/2014 15:45	07/18/2014	Soil	SW8260_MED_S	/ 8260_STARS/CP-51				Y	VOA
N1243-03E	SED-4	07/17/2014 15:45	07/18/2014	Soil	SW9060_TOC_S	/ SPECTRUM--					SUB
N1243-04A	SED-31	07/17/2014 14:45	07/18/2014	Soil	PMoist	/					S2
N1243-04B	SED-31	07/17/2014 14:45	07/18/2014	Soil	SW8270_S	/ 8270_BN,				Y	S2
N1243-04C	SED-31	07/17/2014 14:45	07/18/2014	Soil	SW8260_LOW_S	/ 8260_STARS/CP-51				Y	VOA

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

07/31/2014 10:12 Lab Client Rep: Agnes R Huntley

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: N1243

Client ID: GZA_BUFFALO
Project: Steelwinds 1
WO Name: Steelwinds 1
Location: GZA_STEELWINDS,
Comments: N/A

Case:
SDG:
PO: NEEDS PO

HC Due: 08/06/14
Fax Due:
Fax Report: ☐

Report Level: ASP-B
Special Program:
EDD: EQuIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
N1243-04D	SED-31	07/17/2014 14:45	07/18/2014	Soil	SW8260_MED_S	/ 8260_STARS/CP-51		Y		Y	VOA
N1243-04E	SED-31	07/17/2014 14:45	07/18/2014	Soil	SW9060_TOC_S	/ SPECTRUM--					SUB
N1243-05A	TRIP BLANK	07/17/2014 16:15	07/18/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1243-06A	EQUIP BLANK	07/17/2014 16:15	07/18/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1243-06B	EQUIP BLANK	07/17/2014 16:15	07/18/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	S2

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

07/31/2014 10:12 Lab Client Rep: Agnes R Huntley

* Volatiles *

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : GZA GeoEnvironmental, Inc.

Project: Steelwinds 1

Laboratory Workorder / SDG #: N1243

SW846 8260C, VOC by GC-MS

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code: SW846 8260C

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B
Soil Samples were prepared following procedures in laboratory test code: SW5035

V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V1
Instrument Type: GCMS-VOA
Description: HP5890 II / HP5972
Manufacturer: Hewlett-Packard
Model: 5890 / 5972
GC Column used: 30 m X 0.25 mm ID [1.40 um thickness] DB-624 capillary column.

Instrument Code: V10
Instrument Type: GCMS-VOA
Description: HP7890A
Manufacturer: Agilent
Model: 7890A / 5975C
GC Column used: 30 m X 0.25 mm ID [1.40 um thickness] DB-624 capillary column.

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

Surrogate standard percent recoveries were within the QC limits.

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

No sample in this SDG required analysis at dilution.

G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

No manual integrations were performed on any sample or standard.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed:_____ _____

Date:_____8/7/2014_____

Data Flag/Qualifiers (Page 1 of 2):

U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).

J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
- estimated concentration for Tentatively Identified Compound

B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a "trace" concentration below the reporting limit and equal to or above the detection limit.

D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis

E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.

P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.

A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.

* For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.

L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution

RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.

RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.

RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.

MS Matrix Spike.

MSD Matrix Spike Duplicate

DUP Duplicate analysis

SD Serial Dilution

PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-2

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-01C

Sample wt/vol: 9.20 (g/mL) G Lab File ID: V1N0299.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/18/2014

% Moisture: not dec. 11 Date Analyzed: 07/23/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	3.0	U
71-43-2	Benzene	7.3	
108-88-3	Toluene	3.1	
100-41-4	Ethylbenzene	1.2	J
179601-23-1	m,p-Xylene	12	
95-47-6	o-Xylene	8.4	
1330-20-7	Xylene (Total)	20	
98-82-8	Isopropylbenzene	3.0	U
103-65-1	n-Propylbenzene	3.0	U
108-67-8	1,3,5-Trimethylbenzene	7.9	
98-06-6	tert-Butylbenzene	3.0	U
95-63-6	1,2,4-Trimethylbenzene	6.5	
135-98-8	sec-Butylbenzene	3.0	U
99-87-6	4-Isopropyltoluene	3.0	U
104-51-8	n-Butylbenzene	3.0	U
91-20-3	Naphthalene	200	E

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-2ME

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-01D

Sample wt/vol: 7.00 (g/mL) G Lab File ID: V8D6427.D

Level: (TRACE/LOW/MED) MED Date Received: 07/18/2014

% Moisture: not dec. 11 Date Analyzed: 07/28/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	230	U
71-43-2	Benzene	34	J
108-88-3	Toluene	31	J
100-41-4	Ethylbenzene	230	U
179601-23-1	m,p-Xylene	85	J
95-47-6	o-Xylene	54	J
1330-20-7	Xylene (Total)	140	J
98-82-8	Isopropylbenzene	230	U
103-65-1	n-Propylbenzene	230	U
108-67-8	1,3,5-Trimethylbenzene	86	J
98-06-6	tert-Butylbenzene	230	U
95-63-6	1,2,4-Trimethylbenzene	68	J
135-98-8	sec-Butylbenzene	230	U
99-87-6	4-Isopropyltoluene	230	U
104-51-8	n-Butylbenzene	230	U
91-20-3	Naphthalene	1500	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-3

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-02C

Sample wt/vol: 7.70 (g/mL) G Lab File ID: V1N0410.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/18/2014

% Moisture: not dec. 35 Date Analyzed: 07/30/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	1.7	J
108-88-3	Toluene	1.0	J
100-41-4	Ethylbenzene	0.67	J
179601-23-1	m,p-Xylene	5.3	
95-47-6	o-Xylene	4.2	J
1330-20-7	Xylene (Total)	9.4	
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.6	
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	3.1	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	J

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-4

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-03C

Sample wt/vol: 7.60 (g/mL) G Lab File ID: V1N0301.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/18/2014

% Moisture: not dec. 39 Date Analyzed: 07/23/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	5.4	U
71-43-2	Benzene	10	
108-88-3	Toluene	3.1	J
100-41-4	Ethylbenzene	1.4	J
179601-23-1	m,p-Xylene	9.9	
95-47-6	o-Xylene	7.4	
1330-20-7	Xylene (Total)	17	
98-82-8	Isopropylbenzene	5.4	U
103-65-1	n-Propylbenzene	5.4	U
108-67-8	1,3,5-Trimethylbenzene	3.9	J
98-06-6	tert-Butylbenzene	5.4	U
95-63-6	1,2,4-Trimethylbenzene	4.3	J
135-98-8	sec-Butylbenzene	5.4	U
99-87-6	4-Isopropyltoluene	5.4	U
104-51-8	n-Butylbenzene	5.4	U
91-20-3	Naphthalene	360	E

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-4ME

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-03D

Sample wt/vol: 7.70 (g/mL) G Lab File ID: V8D6428.D

Level: (TRACE/LOW/MED) MED Date Received: 07/18/2014

% Moisture: not dec. 39 Date Analyzed: 07/28/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	430	U
71-43-2	Benzene	430	U
108-88-3	Toluene	430	U
100-41-4	Ethylbenzene	430	U
179601-23-1	m,p-Xylene	430	U
95-47-6	o-Xylene	430	U
1330-20-7	Xylene (Total)	430	U
98-82-8	Isopropylbenzene	430	U
103-65-1	n-Propylbenzene	430	U
108-67-8	1,3,5-Trimethylbenzene	430	U
98-06-6	tert-Butylbenzene	430	U
95-63-6	1,2,4-Trimethylbenzene	430	U
135-98-8	sec-Butylbenzene	430	U
99-87-6	4-Isopropyltoluene	430	U
104-51-8	n-Butylbenzene	430	U
91-20-3	Naphthalene	2200	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-31

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-04C

Sample wt/vol: 7.10 (g/mL) G Lab File ID: V1N0411.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/18/2014

% Moisture: not dec. 18 Date Analyzed: 07/30/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	4.3	U
71-43-2	Benzene	3.5	J
108-88-3	Toluene	1.6	J
100-41-4	Ethylbenzene	0.71	J
179601-23-1	m,p-Xylene	6.5	
95-47-6	o-Xylene	4.8	
1330-20-7	Xylene (Total)	11	
98-82-8	Isopropylbenzene	4.3	U
103-65-1	n-Propylbenzene	4.3	U
108-67-8	1,3,5-Trimethylbenzene	5.2	
98-06-6	tert-Butylbenzene	4.3	U
95-63-6	1,2,4-Trimethylbenzene	3.9	J
135-98-8	sec-Butylbenzene	4.3	U
99-87-6	4-Isopropyltoluene	4.3	U
104-51-8	n-Butylbenzene	4.3	U
91-20-3	Naphthalene	31	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1243-05A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6390.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/18/2014

% Moisture: not dec. Date Analyzed: 07/25/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIP BLANK

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1243-06A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6403.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/18/2014

% Moisture: not dec. Date Analyzed: 07/26/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-78201

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-78201

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1N0296.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. 0.0 Date Analyzed: 07/23/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-78256

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-78256

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6388.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/25/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	1.0	U
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
179601-23-1	m,p-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
1330-20-7	Xylene (Total)	1.0	U
98-82-8	Isopropylbenzene	1.0	U
103-65-1	n-Propylbenzene	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	U
98-06-6	tert-Butylbenzene	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	U
135-98-8	sec-Butylbenzene	1.0	U
99-87-6	4-Isopropyltoluene	1.0	U
104-51-8	n-Butylbenzene	1.0	U
91-20-3	Naphthalene	1.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-78272

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-78272

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8D6418.D

Level: (TRACE/LOW/MED) MED Date Received:

% Moisture: not dec. 0.0 Date Analyzed: 07/28/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	250	U
71-43-2	Benzene	250	U
108-88-3	Toluene	250	U
100-41-4	Ethylbenzene	250	U
179601-23-1	m,p-Xylene	250	U
95-47-6	o-Xylene	250	U
1330-20-7	Xylene (Total)	250	U
98-82-8	Isopropylbenzene	250	U
103-65-1	n-Propylbenzene	250	U
108-67-8	1,3,5-Trimethylbenzene	250	U
98-06-6	tert-Butylbenzene	250	U
95-63-6	1,2,4-Trimethylbenzene	250	U
135-98-8	sec-Butylbenzene	250	U
99-87-6	4-Isopropyltoluene	250	U
104-51-8	n-Butylbenzene	250	U
91-20-3	Naphthalene	250	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-78324

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-78324

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1N0408.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. 0.0 Date Analyzed: 07/30/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78201

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-78201

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1N0293.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. 0.0 Date Analyzed: 07/23/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	58	
71-43-2	Benzene	56	
108-88-3	Toluene	56	
100-41-4	Ethylbenzene	56	
179601-23-1	m,p-Xylene	110	
95-47-6	o-Xylene	56	
1330-20-7	Xylene (Total)	170	
98-82-8	Isopropylbenzene	58	
103-65-1	n-Propylbenzene	58	
108-67-8	1,3,5-Trimethylbenzene	58	
98-06-6	tert-Butylbenzene	56	
95-63-6	1,2,4-Trimethylbenzene	58	
135-98-8	sec-Butylbenzene	58	
99-87-6	4-Isopropyltoluene	57	
104-51-8	n-Butylbenzene	58	
91-20-3	Naphthalene	53	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78256

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-78256

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6385.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/25/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	49	
71-43-2	Benzene	47	
108-88-3	Toluene	47	
100-41-4	Ethylbenzene	50	
179601-23-1	m,p-Xylene	100	
95-47-6	o-Xylene	50	
1330-20-7	Xylene (Total)	150	
98-82-8	Isopropylbenzene	47	
103-65-1	n-Propylbenzene	50	
108-67-8	1,3,5-Trimethylbenzene	48	
98-06-6	tert-Butylbenzene	45	
95-63-6	1,2,4-Trimethylbenzene	50	
135-98-8	sec-Butylbenzene	49	
99-87-6	4-Isopropyltoluene	51	
104-51-8	n-Butylbenzene	47	
91-20-3	Naphthalene	40	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78272

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-78272

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8D6414.D

Level: (TRACE/LOW/MED) MED Date Received:

% Moisture: not dec. 0.0 Date Analyzed: 07/28/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	2400	
71-43-2	Benzene	2500	
108-88-3	Toluene	2500	
100-41-4	Ethylbenzene	2700	
179601-23-1	m,p-Xylene	5300	
95-47-6	o-Xylene	2600	
1330-20-7	Xylene (Total)	8000	
98-82-8	Isopropylbenzene	2500	
103-65-1	n-Propylbenzene	2600	
108-67-8	1,3,5-Trimethylbenzene	2600	
98-06-6	tert-Butylbenzene	2700	
95-63-6	1,2,4-Trimethylbenzene	2600	
135-98-8	sec-Butylbenzene	2700	
99-87-6	4-Isopropyltoluene	2800	
104-51-8	n-Butylbenzene	2600	
91-20-3	Naphthalene	2000	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78324

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-78324

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1N0405.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. 0.0 Date Analyzed: 07/30/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	52	
71-43-2	Benzene	52	
108-88-3	Toluene	52	
100-41-4	Ethylbenzene	52	
179601-23-1	m,p-Xylene	100	
95-47-6	o-Xylene	51	
1330-20-7	Xylene (Total)	150	
98-82-8	Isopropylbenzene	52	
103-65-1	n-Propylbenzene	53	
108-67-8	1,3,5-Trimethylbenzene	53	
98-06-6	tert-Butylbenzene	51	
95-63-6	1,2,4-Trimethylbenzene	53	
135-98-8	sec-Butylbenzene	53	
99-87-6	4-Isopropyltoluene	51	
104-51-8	n-Butylbenzene	53	
91-20-3	Naphthalene	48	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-78256

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-78256

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D6386.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/25/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	51	
71-43-2	Benzene	49	
108-88-3	Toluene	48	
100-41-4	Ethylbenzene	51	
179601-23-1	m,p-Xylene	100	
95-47-6	o-Xylene	51	
1330-20-7	Xylene (Total)	150	
98-82-8	Isopropylbenzene	47	
103-65-1	n-Propylbenzene	47	
108-67-8	1,3,5-Trimethylbenzene	47	
98-06-6	tert-Butylbenzene	45	
95-63-6	1,2,4-Trimethylbenzene	49	
135-98-8	sec-Butylbenzene	48	
99-87-6	4-Isopropyltoluene	50	
104-51-8	n-Butylbenzene	46	
91-20-3	Naphthalene	39	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-78324

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCSD-78324

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1N0406.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. 0.0 Date Analyzed: 07/30/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	55	
71-43-2	Benzene	55	
108-88-3	Toluene	56	
100-41-4	Ethylbenzene	54	
179601-23-1	m,p-Xylene	110	
95-47-6	o-Xylene	53	
1330-20-7	Xylene (Total)	160	
98-82-8	Isopropylbenzene	56	
103-65-1	n-Propylbenzene	54	
108-67-8	1,3,5-Trimethylbenzene	57	
98-06-6	tert-Butylbenzene	54	
95-63-6	1,2,4-Trimethylbenzene	56	
135-98-8	sec-Butylbenzene	55	
99-87-6	4-Isopropyltoluene	53	
104-51-8	n-Butylbenzene	56	
91-20-3	Naphthalene	47	

2B - FORM II VOA-2

WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Level: (TRACE or LOW) LOW

	EPA SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
01	LCS-78256	100	99	101	99				0
02	LCSD-78256	102	101	100	104				0
03	MB-78256	105	106	100	89				0
04	TRIP BLANK	103	105	101	85				0
05	EQUIP BLANK	108	108	98	87				0

		QC LIMITS
VDMC1	(DBFM) Dibromofluoromethane	(85-115)
VDMC2	(DCE) = 1,2-Dichloroethane-d4	(70-120)
VDMC3	(TOL) = Toluene-d8	(85-120)
VDMC4	(BFB) = Bromofluorobenzene	(75-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

som14.07.15.0901

2D - FORM II VOA-4

SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
01	LCS-78201	106	103	101	101				0
02	MB-78201	109	103	104	96				0
03	SED-2	102	108	100	100				0
04	SED-4	116	110	100	104				0
05	LCS-78324	107	100	103	103				0
06	LCSD-78324	108	101	102	103				0
07	MB-78324	107	92	105	99				0
08	SED-3	110	107	106	100				0
09	SED-31	94	102	105	103				0

		QC LIMITS
VDMC1	(DBFM) Dibromofluoromethane	(76-128)
VDMC2	(DCE) = 1,2-Dichloroethane-d4	(88-110)
VDMC3	(TOL) = Toluene-d8	(85-115)
VDMC4	(BFB) = Bromofluorobenzene	(85-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

som14.07.15.0901

2D - FORM II VOA-4

SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Level: (LOW/MED) MED

	EPA SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
01	LCS-78272	101	94	100	102				0
02	MB-78272	105	101	100	88				0
03	SED-2ME	100	90	106	90				0
04	SED-4ME	104	100	100	93				0

		QC LIMITS
VDMC1	(DBFM) Dibromofluoromethane	(76-128)
VDMC2	(DCE) = 1,2-Dichloroethane-d4	(88-110)
VDMC3	(TOL) = Toluene-d8	(85-115)
VDMC4	(BFB) = Bromofluorobenzene	(85-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

som14.07.15.0901

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78201

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCS-78201 LCS Lot No.:

Date Extracted: 07/23/2014 Date Analyzed (1): 07/23/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Methyl tert-butyl ether	50.0000	0.0000	58.0314	116		75 - 126
Benzene	50.0000	0.0000	55.9449	112		75 - 125
Toluene	50.0000	0.0000	56.4418	113		70 - 125
Ethylbenzene	50.0000	0.0000	55.5464	111		75 - 125
m,p-Xylene	100.0000	0.0000	111.3677	111		80 - 125
o-Xylene	50.0000	0.0000	56.1203	112		75 - 125
Xylene (Total)	150.0000	0.0000	167.4880	112		83 - 125
Isopropylbenzene	50.0000	0.0000	57.5275	115		75 - 130
n-Propylbenzene	50.0000	0.0000	57.9570	116		65 - 135
1,3,5-Trimethylbenzene	50.0000	0.0000	57.6067	115		65 - 135
tert-Butylbenzene	50.0000	0.0000	55.8053	112		65 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	57.7798	116		65 - 135
sec-Butylbenzene	50.0000	0.0000	57.8134	116		65 - 130
4-Isopropyltoluene	50.0000	0.0000	56.5779	113		75 - 135
n-Butylbenzene	50.0000	0.0000	58.1539	116		65 - 140
Naphthalene	50.0000	0.0000	52.8467	106		40 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78256

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCS-78256 LCS Lot No.:

Date Extracted: 07/25/2014 Date Analyzed (1): 07/25/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Methyl tert-butyl ether	50.0000	0.0000	48.7973	98		65 - 125
Benzene	50.0000	0.0000	46.7525	94		80 - 120
Toluene	50.0000	0.0000	46.5610	93		75 - 120
Ethylbenzene	50.0000	0.0000	49.8761	100		75 - 125
m,p-Xylene	100.0000	0.0000	101.0517	101		75 - 130
o-Xylene	50.0000	0.0000	50.1188	100		80 - 120
Xylene (Total)	150.0000	0.0000	151.1705	101		81 - 121
Isopropylbenzene	50.0000	0.0000	47.4057	95		75 - 125
n-Propylbenzene	50.0000	0.0000	49.7582	100		70 - 130
1,3,5-Trimethylbenzene	50.0000	0.0000	48.2398	96		75 - 130
tert-Butylbenzene	50.0000	0.0000	45.3777	91		70 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	50.0519	100		75 - 130
sec-Butylbenzene	50.0000	0.0000	49.2025	98		70 - 125
4-Isopropyltoluene	50.0000	0.0000	51.2153	102		75 - 130
n-Butylbenzene	50.0000	0.0000	47.3397	95		70 - 135
Naphthalene	50.0000	0.0000	40.0176	80		55 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78272

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCS-78272 LCS Lot No.:

Date Extracted: 07/28/2014 Date Analyzed (1): 07/28/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Methyl tert-butyl ether	2500.0000	0.0000	2393.1155	96		75 - 126
Benzene	2500.0000	0.0000	2501.9311	100		75 - 125
Toluene	2500.0000	0.0000	2518.8018	101		70 - 125
Ethylbenzene	2500.0000	0.0000	2664.5805	107		75 - 125
m,p-Xylene	5000.0000	0.0000	5321.6044	106		80 - 125
o-Xylene	2500.0000	0.0000	2642.1588	106		75 - 125
Xylene (Total)	7500.0000	0.0000	7963.7632	106		75 - 125
Isopropylbenzene	2500.0000	0.0000	2543.2892	102		75 - 130
n-Propylbenzene	2500.0000	0.0000	2619.7011	105		65 - 135
1,3,5-Trimethylbenzene	2500.0000	0.0000	2568.4448	103		65 - 135
tert-Butylbenzene	2500.0000	0.0000	2748.9400	110		65 - 130
1,2,4-Trimethylbenzene	2500.0000	0.0000	2643.7014	106		65 - 135
sec-Butylbenzene	2500.0000	0.0000	2681.7959	107		65 - 130
4-Isopropyltoluene	2500.0000	0.0000	2756.3524	110		75 - 135
n-Butylbenzene	2500.0000	0.0000	2571.9656	103		65 - 140
Naphthalene	2500.0000	0.0000	1961.9411	78		40 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78324

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCS-78324 LCS Lot No.:

Date Extracted: 07/30/2014 Date Analyzed (1): 07/30/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Methyl tert-butyl ether	50.0000	0.0000	52.4975	105		75 - 126
Benzene	50.0000	0.0000	52.4628	105		75 - 125
Toluene	50.0000	0.0000	52.2846	105		70 - 125
Ethylbenzene	50.0000	0.0000	51.9597	104		75 - 125
m,p-Xylene	100.0000	0.0000	102.2617	102		80 - 125
o-Xylene	50.0000	0.0000	50.6956	101		75 - 125
Xylene (Total)	150.0000	0.0000	152.9573	102		83 - 125
Isopropylbenzene	50.0000	0.0000	52.1751	104		75 - 130
n-Propylbenzene	50.0000	0.0000	52.6146	105		65 - 135
1,3,5-Trimethylbenzene	50.0000	0.0000	53.4885	107		65 - 135
tert-Butylbenzene	50.0000	0.0000	51.3732	103		65 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	52.8362	106		65 - 135
sec-Butylbenzene	50.0000	0.0000	53.4225	107		65 - 130
4-Isopropyltoluene	50.0000	0.0000	51.3014	103		75 - 135
n-Butylbenzene	50.0000	0.0000	52.6106	105		65 - 140
Naphthalene	50.0000	0.0000	47.7051	95		40 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.
LCSD-78256

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCSD-78256 LCS Lot No.:

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	50.0000	50.6699	101		3		40	65 - 125
Benzene	50.0000	49.3138	99		5		40	80 - 120
Toluene	50.0000	48.3884	97		4		40	75 - 120
Ethylbenzene	50.0000	50.6660	101		1		40	75 - 125
m,p-Xylene	100.0000	101.9429	102		1		40	75 - 130
o-Xylene	50.0000	51.3702	103		3		40	80 - 120
Xylene (Total)	150.0000	153.3131	102		1		40	81 - 121
Isopropylbenzene	50.0000	47.2297	94		1		40	75 - 125
n-Propylbenzene	50.0000	46.9787	94		6		40	70 - 130
1,3,5-Trimethylbenzene	50.0000	47.3315	95		1		40	75 - 130
tert-Butylbenzene	50.0000	45.4902	91		0		40	70 - 130
1,2,4-Trimethylbenzene	50.0000	49.3607	99		1		40	75 - 130
sec-Butylbenzene	50.0000	47.7858	96		2		40	70 - 125
4-Isopropyltoluene	50.0000	49.5587	99		3		40	75 - 130
n-Butylbenzene	50.0000	45.7066	91		4		40	70 - 135
Naphthalene	50.0000	39.4217	79		1		40	55 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 16 outside limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.
LCSD-78324

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCSD-78324 LCS Lot No.:

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	50.0000	55.2073	110		5		40	75 - 126
Benzene	50.0000	54.7701	110		5		40	75 - 125
Toluene	50.0000	55.6975	111		6		40	70 - 125
Ethylbenzene	50.0000	54.4101	109		5		40	75 - 125
m,p-Xylene	100.0000	108.1744	108		6		40	80 - 125
o-Xylene	50.0000	53.4062	107		6		40	75 - 125
Xylene (Total)	150.0000	161.5806	108		6		40	83 - 125
Isopropylbenzene	50.0000	56.2510	113		8		40	75 - 130
n-Propylbenzene	50.0000	54.2693	109		4		40	65 - 135
1,3,5-Trimethylbenzene	50.0000	57.4656	115		7		40	65 - 135
tert-Butylbenzene	50.0000	53.5849	107		4		40	65 - 130
1,2,4-Trimethylbenzene	50.0000	55.8537	112		6		40	65 - 135
sec-Butylbenzene	50.0000	55.3657	111		4		40	65 - 130
4-Isopropyltoluene	50.0000	53.0717	106		3		40	75 - 135
n-Butylbenzene	50.0000	56.3507	113		7		40	65 - 140
Naphthalene	50.0000	47.4442	95		0		40	40 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 16 outside limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
MB-78201

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab File ID: V1N0296.D Lab Sample ID: MB-78201

Instrument ID: V1

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 07/23/2014

Level: (TRACE or LOW/MED) LOW Time Analyzed: 10:02

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-78201	LCS-78201	V1N0293.D	7:56
02	SED-2	N1243-01C	V1N0299.D	11:34
03	SED-4	N1243-03C	V1N0301.D	12:29

COMMENTS:

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
MB-78324

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab File ID: V1N0408.D Lab Sample ID: MB-78324

Instrument ID: V1

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 07/30/2014

Level: (TRACE or LOW/MED) LOW Time Analyzed: 15:14

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-78324	LCS-78324	V1N0405.D	13:39
02	LCSD-78324	LCSD-78324	V1N0406.D	14:07
03	SED-3	N1243-02C	V1N0410.D	16:09
04	SED-31	N1243-04C	V1N0411.D	16:37

COMMENTS:

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
MB-78256

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab File ID: V8D6388.D Lab Sample ID: MB-78256

Instrument ID: V10

Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 07/25/2014

Level: (TRACE or LOW/MED) LOW Time Analyzed: 18:42

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-78256	LCS-78256	V8D6385.D	17:19
02	LCSD-78256	LCSD-78256	V8D6386.D	17:47
03	TRIP BLANK	N1243-05A	V8D6390.D	19:37
04	EQUIP BLANK	N1243-06A	V8D6403.D	1:35

COMMENTS:

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
MB-78272

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab File ID: V8D6418.D Lab Sample ID: MB-78272

Instrument ID: V10

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 07/28/2014

Level: (TRACE or LOW/MED) MED Time Analyzed: 13:34

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-78272	LCS-78272	V8D6414.D	11:44
02	SED-2ME	N1243-01D	V8D6427.D	18:08
03	SED-4ME	N1243-03D	V8D6428.D	18:35

COMMENTS:

som14.07.15.0901

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 07/21/2014 07/21/2014

EPA Sample No.(VSTD#####): VSTD0501D Date Analyzed: 07/23/2014

Lab File ID (Standard): V1N0292.D Time Analyzed: 7:18

Instrument ID: V1 Heated Purge: (Y/N) Y

		IS1 (S1) AREA	#	RT	#	IS2 (S2) AREA	#	RT	#	IS3 (S3) AREA	#	RT	#
	12 HOUR STD	532462		4.387		362278		7.242		142129		9.822	
	UPPER LIMIT	1064924		4.887		724556		7.742		284258		10.322	
	LOWER LIMIT	266231		3.887		181139		6.742		71065		9.322	
	EPA SAMPLE NO.												
01	LCS-78201	536670		4.399		353842		7.254		136485		9.814	
02	MB-78201	484486		4.395		314876		7.251		107768		9.820	
03	SED-2	480818		4.386		326609		7.241		126791		9.811	
04	SED-4	459162		4.399		313460		7.245		121498		9.825	

IS1 () = Fluorobenzene
IS2 () = Chlorobenzene-d5
IS3 () = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 07/21/2014 07/21/2014

EPA Sample No.(VSTD#####): VSTD0501I Date Analyzed: 07/30/2014

Lab File ID (Standard): V1N0404.D Time Analyzed: 12:59

Instrument ID: V1 Heated Purge: (Y/N) Y

		IS1 (S1) AREA	#	RT	#	IS2 (S2) AREA	#	RT	#	IS3 (S3) AREA	#	RT	#
	12 HOUR STD	527707		4.384		352785		7.229		137679		9.799	
	UPPER LIMIT	1055414		4.884		705570		7.729		275358		10.299	
	LOWER LIMIT	263854		3.884		176393		6.729		68840		9.299	
	EPA SAMPLE NO.												
01	LCS-78324	536398		4.390		352259		7.245		134595		9.805	
02	LCSD-78324	513251		4.384		338979		7.239		131405		9.799	
03	MB-78324	526979		4.383		328660		7.229		107158		9.809	
04	SED-3	471320		4.393		330988		7.229		117659		9.798	
05	SED-31	507977		4.399		326401		7.235		118682		9.805	

IS1 () = Fluorobenzene
IS2 () = Chlorobenzene-d5
IS3 () = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 07/25/2014 07/25/2014

EPA Sample No.(VSTD#####): VSTD05010V Date Analyzed: 07/25/2014

Lab File ID (Standard): V8D6384.D Time Analyzed: 16:52

Instrument ID: V10 Heated Purge: (Y/N) N

		IS1 (S1) AREA	#	RT	#	IS2 (S2) AREA	#	RT	#	IS3 (S3) AREA	#	RT	#
	12 HOUR STD	674139		5.239		656043		8.226		334418		10.728	
	UPPER LIMIT	1348278		5.739		1312086		8.726		668836		11.228	
	LOWER LIMIT	337070		4.739		328022		7.726		167209		10.228	
	EPA SAMPLE NO.												
01	LCS-78256	567138		5.239		524602		8.223		262368		10.728	
02	LCSD-78256	672775		5.239		646253		8.223		331065		10.728	
03	MB-78256	623153		5.239		592180		8.226		205078		10.731	
04	TRIP BLANK	611079		5.239		562723		8.226		174491		10.731	
05	EQUIP BLANK	546090		5.239		527160		8.226		179725		10.734	

IS1 () = Fluorobenzene
IS2 () = Chlorobenzene-d5
IS3 () = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 07/25/2014 07/25/2014

EPA Sample No.(VSTD#####): VSTD05010W Date Analyzed: 07/28/2014

Lab File ID (Standard): V8D6413.D Time Analyzed: 11:16

Instrument ID: V10 Heated Purge: (Y/N) N

		IS1 (S1) AREA	#	RT	#	IS2 (S2) AREA	#	RT	#	IS3 (S3) AREA	#	RT	#
	12 HOUR STD	586890		5.239		553238		8.226		275273		10.728	
	UPPER LIMIT	1173780		5.739		1106476		8.726		550546		11.228	
	LOWER LIMIT	293445		4.739		276619		7.726		137637		10.228	
	EPA SAMPLE NO.												
01	LCS-78272	585434		5.239		552816		8.223		275123		10.728	
02	MB-78272	576924		5.239		553766		8.226		190416		10.731	
03	SED-2ME	371515		5.239		350646		8.226		142077		10.731	
04	SED-4ME	471827		5.239		460791		8.226		187155		10.731	

IS1 () = Fluorobenzene
IS2 () = Chlorobenzene-d5
IS3 () = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 07/25/2014 07/25/2014

EPA Sample No.(VSTD#####): VSTD05010W Date Analyzed: 07/28/2014

Lab File ID (Standard): V8D6413.D Time Analyzed: 11:16

Instrument ID: V10 Heated Purge: (Y/N) N

		IS1 (S1) AREA	#	RT	#	IS2 (S2) AREA	#	RT	#	IS3 (S3) AREA	#	RT	#
	12 HOUR STD	586890		5.239		553238		8.226		275273		10.728	
	UPPER LIMIT	1173780		5.739		1106476		8.726		550546		11.228	
	LOWER LIMIT	293445		4.739		276619		7.726		137637		10.228	
	EPA SAMPLE NO.												
01	LCS-78272	585434		5.239		552816		8.223		275123		10.728	
02	MB-78272	576924		5.239		553766		8.226		190416		10.731	
03	SED-2ME	371515		5.239		350646		8.226		142077		10.731	
04	SED-4ME	471827		5.239		460791		8.226		187155		10.731	

IS1 () = Fluorobenzene
IS2 () = Chlorobenzene-d5
IS3 () = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

* Semivolatile Organics *

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : GZA GeoEnvironmental, Inc.

Project: Steelwinds 1

Laboratory Workorder / SDG #: N1243

SW846 8270D, SVOA by GC-MS

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code: SW846 8270D

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW3510C
Soil Samples were prepared following procedures in laboratory test code: SW3550B

V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: S6
Instrument Type: GCMS-Semi
Description: HP7890A
Manufacturer: Agilent
Model: 7890A/5973
GC Column used: 30 m X 0.25 mm ID [0.25 um thickness] Rxi-5sil MS capillary column.

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

Surrogate standard percent recoveries were within the QC limits.

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

The following samples were analyzed at dilution:

SED-2 (N1243-01BDL) : Dilution Factor: 2

G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

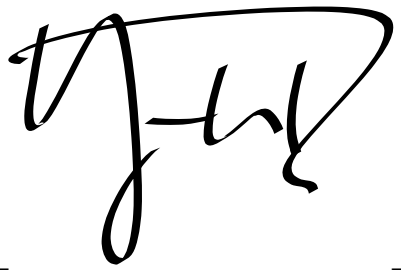
Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

· M1 peak tailing or fronting
· M2 peak co-elution
· M3 rising or falling baseline
· M4 retention time shift
· M5 miscellaneous - under this category, the justification is explained
· M6 software did not integrate peak
· M7 partial peak integration

Manual integrations were performed on the following:

SED-3 (N1243-02B) Indeno(1,2,3-cd)pyrene due to M6

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed:_____  _____

Date:_____8/8/2014_____

Data Flag/Qualifiers (Page 1 of 2):

U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).

J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
- estimated concentration for Tentatively Identified Compound

B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a "trace" concentration below the reporting limit and equal to or above the detection limit.

D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis

E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.

P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.

A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.

* For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.

L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution

RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.

RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.

RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.

MS Matrix Spike.

MSD Matrix Spike Duplicate

DUP Duplicate analysis

SD Serial Dilution

PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-2

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-01B

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8880.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 11 Decanted: (Y/N) N Date Received: 07/18/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
108-60-1	2,2´-oxybis(1-Chloropropane)	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	790	
106-47-8	4-Chloroaniline	370	U
111-91-1	Bis(2-chloroethoxy)methane	370	U
87-68-3	Hexachlorobutadiene	370	U
91-57-6	2-Methylnaphthalene	520	
77-47-4	Hexachlorocyclopentadiene	370	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	750	U
131-11-3	Dimethylphthalate	370	U
208-96-8	Acenaphthylene	230	J
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	750	U
83-32-9	Acenaphthene	270	J
132-64-9	Dibenzofuran	1100	
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethylphthalate	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
86-73-7	Fluorene	1600	
100-01-6	4-Nitroaniline	750	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
85-01-8	Phenanthrene	6600	E
120-12-7	Anthracene	1300	
86-74-8	Carbazole	310	J
206-44-0	Fluoranthene	1400	
129-00-0	Pyrene	980	
85-68-7	Butylbenzylphthalate	370	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-2

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-01B

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8880.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 11 Decanted: (Y/N) N Date Received: 07/18/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	370	U
56-55-3	Benzo(a)anthracene	310	J
218-01-9	Chrysene	400	
117-81-7	Bis(2-ethylhexyl)phthalate	220	J
205-99-2	Benzo(b)fluoranthene	470	
207-08-9	Benzo(k)fluoranthene	170	J
50-32-8	Benzo(a)pyrene	290	J
193-39-5	Indeno(1,2,3-cd)pyrene	250	J
53-70-3	Dibenzo(a,h)anthracene	370	U
191-24-2	Benzo(g,h,i)perylene	250	J

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-2DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-01BDL

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8895.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 11 Decanted: (Y/N) N Date Received: 07/18/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/29/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	740	U
541-73-1	1,3-Dichlorobenzene	740	U
106-46-7	1,4-Dichlorobenzene	740	U
95-50-1	1,2-Dichlorobenzene	740	U
108-60-1	2,2´-oxybis(1-Chloropropane)	740	U
67-72-1	Hexachloroethane	740	U
98-95-3	Nitrobenzene	740	U
78-59-1	Isophorone	740	U
120-82-1	1,2,4-Trichlorobenzene	740	U
91-20-3	Naphthalene	740	DJ
106-47-8	4-Chloroaniline	740	U
111-91-1	Bis(2-chloroethoxy)methane	740	U
87-68-3	Hexachlorobutadiene	740	U
91-57-6	2-Methylnaphthalene	500	DJ
77-47-4	Hexachlorocyclopentadiene	740	U
91-58-7	2-Chloronaphthalene	740	U
88-74-4	2-Nitroaniline	1500	U
131-11-3	Dimethylphthalate	740	U
208-96-8	Acenaphthylene	210	DJ
606-20-2	2,6-Dinitrotoluene	740	U
99-09-2	3-Nitroaniline	1500	U
83-32-9	Acenaphthene	250	DJ
132-64-9	Dibenzofuran	1100	D
121-14-2	2,4-Dinitrotoluene	740	U
84-66-2	Diethylphthalate	740	U
7005-72-3	4-Chlorophenyl-phenylether	740	U
86-73-7	Fluorene	1600	D
100-01-6	4-Nitroaniline	1500	U
101-55-3	4-Bromophenyl-phenylether	740	U
118-74-1	Hexachlorobenzene	740	U
85-01-8	Phenanthrene	6400	D
120-12-7	Anthracene	1200	D
86-74-8	Carbazole	300	DJ
206-44-0	Fluoranthene	1500	D
129-00-0	Pyrene	790	D
85-68-7	Butylbenzylphthalate	740	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-2DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-01BDL

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8895.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 11 Decanted: (Y/N) N Date Received: 07/18/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/29/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	740	U
56-55-3	Benzo(a)anthracene	280	DJ
218-01-9	Chrysene	340	DJ
117-81-7	Bis(2-ethylhexyl)phthalate	160	DJ
205-99-2	Benzo(b)fluoranthene	420	DJ
207-08-9	Benzo(k)fluoranthene	170	DJ
50-32-8	Benzo(a)pyrene	260	DJ
193-39-5	Indeno(1,2,3-cd)pyrene	200	DJ
53-70-3	Dibenzo(a,h)anthracene	740	U
191-24-2	Benzo(g,h,i)perylene	230	DJ

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-3

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-02B

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8881.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) N Date Received: 07/18/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	510	U
541-73-1	1,3-Dichlorobenzene	510	U
106-46-7	1,4-Dichlorobenzene	510	U
95-50-1	1,2-Dichlorobenzene	510	U
108-60-1	2,2´-oxybis(1-Chloropropane)	510	U
67-72-1	Hexachloroethane	510	U
98-95-3	Nitrobenzene	510	U
78-59-1	Isophorone	510	U
120-82-1	1,2,4-Trichlorobenzene	510	U
91-20-3	Naphthalene	220	J
106-47-8	4-Chloroaniline	510	U
111-91-1	Bis(2-chloroethoxy)methane	510	U
87-68-3	Hexachlorobutadiene	510	U
91-57-6	2-Methylnaphthalene	180	J
77-47-4	Hexachlorocyclopentadiene	510	U
91-58-7	2-Chloronaphthalene	510	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	510	U
208-96-8	Acenaphthylene	110	J
606-20-2	2,6-Dinitrotoluene	510	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	140	J
132-64-9	Dibenzofuran	450	J
121-14-2	2,4-Dinitrotoluene	510	U
84-66-2	Diethylphthalate	510	U
7005-72-3	4-Chlorophenyl-phenylether	510	U
86-73-7	Fluorene	740	
100-01-6	4-Nitroaniline	1000	U
101-55-3	4-Bromophenyl-phenylether	510	U
118-74-1	Hexachlorobenzene	510	U
85-01-8	Phenanthrene	3400	
120-12-7	Anthracene	730	
86-74-8	Carbazole	510	U
206-44-0	Fluoranthene	1400	
129-00-0	Pyrene	980	
85-68-7	Butylbenzylphthalate	510	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-3

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-02B

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8881.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) N Date Received: 07/18/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	510	U
56-55-3	Benzo(a)anthracene	300	J
218-01-9	Chrysene	300	J
117-81-7	Bis(2-ethylhexyl)phthalate	510	U
205-99-2	Benzo(b)fluoranthene	430	J
207-08-9	Benzo(k)fluoranthene	170	J
50-32-8	Benzo(a)pyrene	300	J
193-39-5	Indeno(1,2,3-cd)pyrene	250	J
53-70-3	Dibenzo(a,h)anthracene	510	U
191-24-2	Benzo(g,h,i)perylene	270	J

EPA SAMPLE NO.
SED-4

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-03B

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8882.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) N Date Received: 07/18/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	540	U
541-73-1	1,3-Dichlorobenzene	540	U
106-46-7	1,4-Dichlorobenzene	540	U
95-50-1	1,2-Dichlorobenzene	540	U
108-60-1	2,2´-oxybis(1-Chloropropane)	540	U
67-72-1	Hexachloroethane	540	U
98-95-3	Nitrobenzene	540	U
78-59-1	Isophorone	540	U
120-82-1	1,2,4-Trichlorobenzene	540	U
91-20-3	Naphthalene	1700	
106-47-8	4-Chloroaniline	540	U
111-91-1	Bis(2-chloroethoxy)methane	540	U
87-68-3	Hexachlorobutadiene	540	U
91-57-6	2-Methylnaphthalene	880	
77-47-4	Hexachlorocyclopentadiene	540	U
91-58-7	2-Chloronaphthalene	540	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	540	U
208-96-8	Acenaphthylene	310	J
606-20-2	2,6-Dinitrotoluene	540	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	860	
132-64-9	Dibenzofuran	1700	
121-14-2	2,4-Dinitrotoluene	540	U
84-66-2	Diethylphthalate	540	U
7005-72-3	4-Chlorophenyl-phenylether	540	U
86-73-7	Fluorene	2300	
100-01-6	4-Nitroaniline	1100	U
101-55-3	4-Bromophenyl-phenylether	540	U
118-74-1	Hexachlorobenzene	540	U
85-01-8	Phenanthrene	5400	
120-12-7	Anthracene	850	
86-74-8	Carbazole	790	
206-44-0	Fluoranthene	1400	
129-00-0	Pyrene	1100	
85-68-7	Butylbenzylphthalate	540	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-4

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-03B

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8882.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) N Date Received: 07/18/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	540	U
56-55-3	Benzo(a)anthracene	520	J
218-01-9	Chrysene	620	
117-81-7	Bis(2-ethylhexyl)phthalate	420	J
205-99-2	Benzo(b)fluoranthene	820	
207-08-9	Benzo(k)fluoranthene	330	J
50-32-8	Benzo(a)pyrene	570	
193-39-5	Indeno(1,2,3-cd)pyrene	520	J
53-70-3	Dibenzo(a,h)anthracene	540	U
191-24-2	Benzo(g,h,i)perylene	510	J

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-31

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-04B

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8883.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 18 Decanted: (Y/N) N Date Received: 07/18/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
108-60-1	2,2´-oxybis(1-Chloropropane)	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	140	J
106-47-8	4-Chloroaniline	400	U
111-91-1	Bis(2-chloroethoxy)methane	400	U
87-68-3	Hexachlorobutadiene	400	U
91-57-6	2-Methylnaphthalene	120	J
77-47-4	Hexachlorocyclopentadiene	400	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	820	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
99-09-2	3-Nitroaniline	820	U
83-32-9	Acenaphthene	85	J
132-64-9	Dibenzofuran	310	J
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	500	
100-01-6	4-Nitroaniline	820	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
85-01-8	Phenanthrene	3000	
120-12-7	Anthracene	660	
86-74-8	Carbazole	82	J
206-44-0	Fluoranthene	1400	
129-00-0	Pyrene	990	
85-68-7	Butylbenzylphthalate	400	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-31

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1243-04B

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8883.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 18 Decanted: (Y/N) N Date Received: 07/18/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	400	U
56-55-3	Benzo(a)anthracene	300	J
218-01-9	Chrysene	310	J
117-81-7	Bis(2-ethylhexyl)phthalate	400	U
205-99-2	Benzo(b)fluoranthene	430	
207-08-9	Benzo(k)fluoranthene	160	J
50-32-8	Benzo(a)pyrene	320	J
193-39-5	Indeno(1,2,3-cd)pyrene	240	J
53-70-3	Dibenzo(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	250	J

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIP BLANK

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1243-06B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8879.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 07/18/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/24/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIP BLANK

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1243-06B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8879.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 07/18/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/24/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	1.4	J
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-78224

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-78224

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8876.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/24/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-78224

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-78224

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8876.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/24/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-78243

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-78243

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8873.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
108-60-1	2,2´-oxybis(1-Chloropropane)	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
87-68-3	Hexachlorobutadiene	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	670	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	670	U
83-32-9	Acenaphthene	330	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	670	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-78243

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-78243

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8873.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	Bis(2-ethylhexyl)phthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78224

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-78224

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8877.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/24/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	44	
541-73-1	1,3-Dichlorobenzene	43	
106-46-7	1,4-Dichlorobenzene	42	
95-50-1	1,2-Dichlorobenzene	43	
108-60-1	2,2´-oxybis(1-Chloropropane)	41	
67-72-1	Hexachloroethane	46	
98-95-3	Nitrobenzene	50	
78-59-1	Isophorone	48	
120-82-1	1,2,4-Trichlorobenzene	48	
91-20-3	Naphthalene	47	
106-47-8	4-Chloroaniline	41	
111-91-1	Bis(2-chloroethoxy)methane	47	
87-68-3	Hexachlorobutadiene	51	
91-57-6	2-Methylnaphthalene	50	
77-47-4	Hexachlorocyclopentadiene	37	
91-58-7	2-Chloronaphthalene	43	
88-74-4	2-Nitroaniline	45	
131-11-3	Dimethylphthalate	47	
208-96-8	Acenaphthylene	45	
606-20-2	2,6-Dinitrotoluene	47	
99-09-2	3-Nitroaniline	38	
83-32-9	Acenaphthene	44	
132-64-9	Dibenzofuran	44	
121-14-2	2,4-Dinitrotoluene	47	
84-66-2	Diethylphthalate	47	
7005-72-3	4-Chlorophenyl-phenylether	46	
86-73-7	Fluorene	46	
100-01-6	4-Nitroaniline	36	
101-55-3	4-Bromophenyl-phenylether	44	
118-74-1	Hexachlorobenzene	47	
85-01-8	Phenanthrene	43	
120-12-7	Anthracene	43	
86-74-8	Carbazole	44	
206-44-0	Fluoranthene	47	
129-00-0	Pyrene	43	
85-68-7	Butylbenzylphthalate	43	

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78224

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-78224

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8877.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/24/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	44	
56-55-3	Benzo(a)anthracene	46	
218-01-9	Chrysene	46	
117-81-7	Bis(2-ethylhexyl)phthalate	42	
205-99-2	Benzo(b)fluoranthene	48	
207-08-9	Benzo(k)fluoranthene	46	
50-32-8	Benzo(a)pyrene	47	
193-39-5	Indeno(1,2,3-cd)pyrene	50	
53-70-3	Dibenzo(a,h)anthracene	51	
191-24-2	Benzo(g,h,i)perylene	50	

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78243

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-78243

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8874.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	2400	
541-73-1	1,3-Dichlorobenzene	2300	
106-46-7	1,4-Dichlorobenzene	2300	
95-50-1	1,2-Dichlorobenzene	2300	
108-60-1	2,2´-oxybis(1-Chloropropane)	2300	
67-72-1	Hexachloroethane	2500	
98-95-3	Nitrobenzene	2700	
78-59-1	Isophorone	2600	
120-82-1	1,2,4-Trichlorobenzene	2700	
91-20-3	Naphthalene	2600	
106-47-8	4-Chloroaniline	970	
111-91-1	Bis(2-chloroethoxy)methane	2600	
87-68-3	Hexachlorobutadiene	2900	
91-57-6	2-Methylnaphthalene	2700	
77-47-4	Hexachlorocyclopentadiene	2400	
91-58-7	2-Chloronaphthalene	2400	
88-74-4	2-Nitroaniline	2400	
131-11-3	Dimethylphthalate	2400	
208-96-8	Acenaphthylene	2400	
606-20-2	2,6-Dinitrotoluene	2400	
99-09-2	3-Nitroaniline	1300	
83-32-9	Acenaphthene	2300	
132-64-9	Dibenzofuran	2300	
121-14-2	2,4-Dinitrotoluene	2300	
84-66-2	Diethylphthalate	2400	
7005-72-3	4-Chlorophenyl-phenylether	2400	
86-73-7	Fluorene	2400	
100-01-6	4-Nitroaniline	1800	
101-55-3	4-Bromophenyl-phenylether	2500	
118-74-1	Hexachlorobenzene	2600	
85-01-8	Phenanthrene	2300	
120-12-7	Anthracene	2300	
86-74-8	Carbazole	2200	
206-44-0	Fluoranthene	2300	
129-00-0	Pyrene	2500	
85-68-7	Butylbenzylphthalate	2300	

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78243

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-78243

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8874.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	1500	
56-55-3	Benzo(a)anthracene	2400	
218-01-9	Chrysene	2400	
117-81-7	Bis(2-ethylhexyl)phthalate	2400	
205-99-2	Benzo(b)fluoranthene	2600	
207-08-9	Benzo(k)fluoranthene	2500	
50-32-8	Benzo(a)pyrene	2500	
193-39-5	Indeno(1,2,3-cd)pyrene	2500	
53-70-3	Dibenzo(a,h)anthracene	2500	
191-24-2	Benzo(g,h,i)perylene	2500	

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-78224

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-78224

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8878.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/24/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	41	
541-73-1	1,3-Dichlorobenzene	39	
106-46-7	1,4-Dichlorobenzene	39	
95-50-1	1,2-Dichlorobenzene	39	
108-60-1	2,2´-oxybis(1-Chloropropane)	38	
67-72-1	Hexachloroethane	41	
98-95-3	Nitrobenzene	47	
78-59-1	Isophorone	47	
120-82-1	1,2,4-Trichlorobenzene	47	
91-20-3	Naphthalene	45	
106-47-8	4-Chloroaniline	40	
111-91-1	Bis(2-chloroethoxy)methane	46	
87-68-3	Hexachlorobutadiene	50	
91-57-6	2-Methylnaphthalene	50	
77-47-4	Hexachlorocyclopentadiene	35	
91-58-7	2-Chloronaphthalene	42	
88-74-4	2-Nitroaniline	44	
131-11-3	Dimethylphthalate	47	
208-96-8	Acenaphthylene	45	
606-20-2	2,6-Dinitrotoluene	48	
99-09-2	3-Nitroaniline	39	
83-32-9	Acenaphthene	44	
132-64-9	Dibenzofuran	45	
121-14-2	2,4-Dinitrotoluene	48	
84-66-2	Diethylphthalate	47	
7005-72-3	4-Chlorophenyl-phenylether	46	
86-73-7	Fluorene	46	
100-01-6	4-Nitroaniline	34	
101-55-3	4-Bromophenyl-phenylether	46	
118-74-1	Hexachlorobenzene	48	
85-01-8	Phenanthrene	45	
120-12-7	Anthracene	44	
86-74-8	Carbazole	46	
206-44-0	Fluoranthene	49	
129-00-0	Pyrene	44	
85-68-7	Butylbenzylphthalate	43	

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-78224

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-78224

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B8878.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/24/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	44	
56-55-3	Benzo(a)anthracene	47	
218-01-9	Chrysene	47	
117-81-7	Bis(2-ethylhexyl)phthalate	43	
205-99-2	Benzo(b)fluoranthene	47	
207-08-9	Benzo(k)fluoranthene	47	
50-32-8	Benzo(a)pyrene	48	
193-39-5	Indeno(1,2,3-cd)pyrene	52	
53-70-3	Dibenzo(a,h)anthracene	54	
191-24-2	Benzo(g,h,i)perylene	51	

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-78243

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCSD-78243

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8875.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	2400	
541-73-1	1,3-Dichlorobenzene	2300	
106-46-7	1,4-Dichlorobenzene	2300	
95-50-1	1,2-Dichlorobenzene	2400	
108-60-1	2,2´-oxybis(1-Chloropropane)	2300	
67-72-1	Hexachloroethane	2500	
98-95-3	Nitrobenzene	2800	
78-59-1	Isophorone	2700	
120-82-1	1,2,4-Trichlorobenzene	2900	
91-20-3	Naphthalene	2700	
106-47-8	4-Chloroaniline	1300	
111-91-1	Bis(2-chloroethoxy)methane	2700	
87-68-3	Hexachlorobutadiene	3000	
91-57-6	2-Methylnaphthalene	2900	
77-47-4	Hexachlorocyclopentadiene	2500	
91-58-7	2-Chloronaphthalene	2500	
88-74-4	2-Nitroaniline	2400	
131-11-3	Dimethylphthalate	2500	
208-96-8	Acenaphthylene	2500	
606-20-2	2,6-Dinitrotoluene	2500	
99-09-2	3-Nitroaniline	1500	
83-32-9	Acenaphthene	2500	
132-64-9	Dibenzofuran	2500	
121-14-2	2,4-Dinitrotoluene	2400	
84-66-2	Diethylphthalate	2500	
7005-72-3	4-Chlorophenyl-phenylether	2500	
86-73-7	Fluorene	2500	
100-01-6	4-Nitroaniline	1800	
101-55-3	4-Bromophenyl-phenylether	2600	
118-74-1	Hexachlorobenzene	2700	
85-01-8	Phenanthrene	2400	
120-12-7	Anthracene	2400	
86-74-8	Carbazole	2300	
206-44-0	Fluoranthene	2400	
129-00-0	Pyrene	2700	
85-68-7	Butylbenzylphthalate	2500	

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-78243

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCSD-78243

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B8875.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 07/25/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 07/28/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	1900	
56-55-3	Benzo(a)anthracene	2600	
218-01-9	Chrysene	2600	
117-81-7	Bis(2-ethylhexyl)phthalate	2600	
205-99-2	Benzo(b)fluoranthene	2800	
207-08-9	Benzo(k)fluoranthene	2600	
50-32-8	Benzo(a)pyrene	2600	
193-39-5	Indeno(1,2,3-cd)pyrene	2600	
53-70-3	Dibenzo(a,h)anthracene	2700	
191-24-2	Benzo(g,h,i)perylene	2600	

2H - FORM II SV-2

WATER SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

	EPA SAMPLE NO.	SDMC1 (NBZ) #	SDMC2 (FBP) #	SDMC3 (TPH) #	SDMC4 (PHL) #	SDMC5 (2FP) #	SDMC6 (TBP) #			TOT OUT
01	MB-78224	80	70	83	13	24	78			0
02	LCS-78224	100	91	88	19	32	84			0
03	LCSD-78224	95	86	85	14	25	90			0
04	EQUIP BLANK	94	85	80						0

		QC LIMITS
SDMC1	(NBZ) = Nitrobenzene-d5	(40-110)
SDMC2	(FBP) = 2-Fluorobiphenyl	(50-110)
SDMC3	(TPH) = Terphenyl-d14	(50-135)
SDMC4	(PHL) = Phenol-d5	(10-115)
SDMC5	(2FP) = 2-Fluorophenol	(20-110)
SDMC6	(TBP) = 2,4,6-Tribromophenol	(40-125)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D DMC diluted out

som14.07.15.0901

2K - FORM II SV-4

SOIL SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	SDMC1 (NBZ) #	SDMC2 (FBP) #	SDMC3 (TPH) #	SDMC4 (PHL) #	SDMC5 (2FP) #	SDMC6 (TBP) #			TOT OUT
01	MB-78243	89	84	90	74	77	84			0
02	LCS-78243	84	75	79	71	71	75			0
03	LCSD-78243	86	76	86	69	71	77			0
04	SED-2	75	68	75						0
05	SED-3	73	66	75						0
06	SED-4	74	68	73						0
07	SED-31	82	77	90						0
08	SED-2DL	66	59	60						0

			QC LIMITS
SDMC1	(NBZ)	= Nitrobenzene-d5	(35-100)
SDMC2	(FBP)	= 2-Fluorobiphenyl	(45-105)
SDMC3	(TPH)	= Terphenyl-d14	(30-125)
SDMC4	(PHL)	= Phenol-d5	(40-100)
SDMC5	(2FP)	= 2-Fluorophenol	(35-105)
SDMC6	(TBP)	= 2,4,6-Tribromophenol	(35-125)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D DMC diluted out

som14.07.15.0901

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78224

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCS-78224 LCS Lot No.: A0101343

Date Extracted: 07/24/2014 Date Analyzed (1): 07/28/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Bis(2-chloroethyl)ether	50.0000	0.0000	43.5343	87		35 - 110
1,3-Dichlorobenzene	50.0000	0.0000	43.2008	86		30 - 100
1,4-Dichlorobenzene	50.0000	0.0000	41.8168	84		30 - 100
1,2-Dichlorobenzene	50.0000	0.0000	42.5837	85		35 - 100
2,2´-oxybis(1-Chloropropan	50.0000	0.0000	40.9101	82		30 - 123
Hexachloroethane	50.0000	0.0000	45.7381	91		30 - 95
Nitrobenzene	50.0000	0.0000	49.6735	99		45 - 110
Isophorone	50.0000	0.0000	47.6316	95		50 - 110
1,2,4-Trichlorobenzene	50.0000	0.0000	47.8955	96		35 - 105
Naphthalene	50.0000	0.0000	46.7087	93		40 - 100
4-Chloroaniline	50.0000	0.0000	41.1164	82		15 - 110
Bis(2-chloroethoxy)methane	50.0000	0.0000	47.3994	95		45 - 105
Hexachlorobutadiene	50.0000	0.0000	51.4202	103		25 - 105
2-Methylnaphthalene	50.0000	0.0000	50.2591	101		45 - 105
Hexachlorocyclopentadiene	50.0000	0.0000	36.6263	73		27 - 147
2-Chloronaphthalene	50.0000	0.0000	43.2000	86		50 - 105
2-Nitroaniline	50.0000	0.0000	44.6156	89		50 - 115
Dimethylphthalate	50.0000	0.0000	46.7669	94		25 - 125
Acenaphthylene	50.0000	0.0000	44.5455	89		50 - 105
2,6-Dinitrotoluene	50.0000	0.0000	47.3822	95		50 - 115
3-Nitroaniline	50.0000	0.0000	37.5279	75		20 - 125
Acenaphthene	50.0000	0.0000	44.2521	89		45 - 110
Dibenzofuran	50.0000	0.0000	44.2783	89		55 - 105
2,4-Dinitrotoluene	50.0000	0.0000	47.3985	95		50 - 120
Diethylphthalate	50.0000	0.0000	47.0218	94		40 - 120
4-Chlorophenyl-phenylether	50.0000	0.0000	45.5769	91		50 - 110
Fluorene	50.0000	0.0000	45.5333	91		50 - 110
4-Nitroaniline	50.0000	0.0000	35.8192	72		35 - 120
4-Bromophenyl-phenylether	50.0000	0.0000	43.6806	87		50 - 115
Hexachlorobenzene	50.0000	0.0000	46.8695	94		50 - 110
Phenanthrene	50.0000	0.0000	43.2493	86		50 - 115
Anthracene	50.0000	0.0000	42.6925	85		55 - 110
Carbazole	50.0000	0.0000	43.6630	87		50 - 115
Fluoranthene	50.0000	0.0000	46.5079	93		55 - 115
Pyrene	50.0000	0.0000	43.0622	86		50 - 130
Butylbenzylphthalate	50.0000	0.0000	42.7037	85		45 - 115
3,3´-Dichlorobenzidine	50.0000	0.0000	43.9577	88		20 - 110
Benzo(a)anthracene	50.0000	0.0000	46.4867	93		55 - 110
Chrysene	50.0000	0.0000	45.5131	91		55 - 110
Bis(2-ethylhexyl)phthalate	50.0000	0.0000	42.4819	85		40 - 125
Benzo(b)fluoranthene	50.0000	0.0000	47.6734	95		45 - 120
Benzo(k)fluoranthene	50.0000	0.0000	45.7771	92		45 - 125
Benzo(a)pyrene	50.0000	0.0000	46.6211	93		55 - 110
Indeno(1,2,3-cd)pyrene	50.0000	0.0000	50.3456	101		45 - 125

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78224

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCS-78224 LCS Lot No.: A0101343

Date Extracted: 07/24/2014 Date Analyzed (1): 07/28/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dibenzo(a,h)anthracene	50.0000	0.0000	51.4147	103		40 - 125
Benzo(g,h,i)perylene	50.0000	0.0000	50.2240	100		40 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 46 outside limits

COMMENTS:

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78243

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCS-78243 LCS Lot No.: A0101343

Date Extracted: 07/25/2014 Date Analyzed (1): 07/28/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Bis(2-chloroethyl)ether	3333.0000	0.0000	2371.0377	71		40 - 105
1,3-Dichlorobenzene	3333.0000	0.0000	2349.6377	70		40 - 100
1,4-Dichlorobenzene	3333.0000	0.0000	2315.0922	69		35 - 105
1,2-Dichlorobenzene	3333.0000	0.0000	2341.0105	70		45 - 95
2,2´-oxybis(1-Chloropropan	3333.0000	0.0000	2290.3822	69		20 - 115
Hexachloroethane	3333.0000	0.0000	2508.7396	75		35 - 110
Nitrobenzene	3333.0000	0.0000	2709.0575	81		40 - 115
Isophorone	3333.0000	0.0000	2601.1800	78		45 - 110
1,2,4-Trichlorobenzene	3333.0000	0.0000	2695.3145	81		45 - 110
Naphthalene	3333.0000	0.0000	2559.4681	77		40 - 105
4-Chloroaniline	3333.0000	0.0000	971.2248	29		10 - 100
Bis(2-chloroethoxy)methane	3333.0000	0.0000	2567.6555	77		45 - 110
Hexachlorobutadiene	3333.0000	0.0000	2891.3240	87		40 - 115
2-Methylnaphthalene	3333.0000	0.0000	2748.1307	82		45 - 105
Hexachlorocyclopentadiene	3333.0000	0.0000	2428.1485	73		8 - 148
2-Chloronaphthalene	3333.0000	0.0000	2373.3759	71		45 - 105
2-Nitroaniline	3333.0000	0.0000	2362.9235	71		45 - 120
Dimethylphthalate	3333.0000	0.0000	2440.9481	73		50 - 110
Acenaphthylene	3333.0000	0.0000	2367.1139	71		45 - 105
2,6-Dinitrotoluene	3333.0000	0.0000	2378.9548	71		50 - 110
3-Nitroaniline	3333.0000	0.0000	1342.0626	40		25 - 110
Acenaphthene	3333.0000	0.0000	2342.2346	70		45 - 110
Dibenzofuran	3333.0000	0.0000	2344.6233	70		50 - 105
2,4-Dinitrotoluene	3333.0000	0.0000	2344.4012	70		50 - 115
Diethylphthalate	3333.0000	0.0000	2423.0509	73		50 - 115
4-Chlorophenyl-phenylether	3333.0000	0.0000	2445.8950	73		45 - 110
Fluorene	3333.0000	0.0000	2397.5686	72		50 - 110
4-Nitroaniline	3333.0000	0.0000	1826.5945	55		35 - 115
4-Bromophenyl-phenylether	3333.0000	0.0000	2489.7022	75		45 - 115
Hexachlorobenzene	3333.0000	0.0000	2563.9523	77		45 - 120
Phenanthrene	3333.0000	0.0000	2320.2448	70		50 - 110
Anthracene	3333.0000	0.0000	2284.5852	69		55 - 105
Carbazole	3333.0000	0.0000	2188.9581	66		45 - 115
Fluoranthene	3333.0000	0.0000	2317.4673	70		55 - 115
Pyrene	3333.0000	0.0000	2464.7927	74		45 - 125
Butylbenzylphthalate	3333.0000	0.0000	2331.3491	70		50 - 125
3,3´-Dichlorobenzidine	3333.0000	0.0000	1518.1147	46		10 - 130
Benzo(a)anthracene	3333.0000	0.0000	2420.3366	73		50 - 110
Chrysene	3333.0000	0.0000	2418.0356	73		55 - 110
Bis(2-ethylhexyl)phthalate	3333.0000	0.0000	2405.9157	72		45 - 125
Benzo(b)fluoranthene	3333.0000	0.0000	2585.7706	78		45 - 115
Benzo(k)fluoranthene	3333.0000	0.0000	2451.8372	74		45 - 125
Benzo(a)pyrene	3333.0000	0.0000	2486.9358	75		50 - 110
Indeno(1,2,3-cd)pyrene	3333.0000	0.0000	2497.9346	75		40 - 120

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78243

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCS-78243 LCS Lot No.: A0101343

Date Extracted: 07/25/2014 Date Analyzed (1): 07/28/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dibenzo(a,h)anthracene	3333.0000	0.0000	2536.5534	76		40 - 125
Benzo(g,h,i)perylene	3333.0000	0.0000	2461.9399	74		40 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 46 outside limits

COMMENTS:

3 - FORM III

WATER LABORATORY CONTROL

SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-78224

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCSD-78224 LCS Lot No.: A0101343

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS RPD	QC LIMITS REC.
Bis(2-chloroethyl)ether	50.0000	40.5443	81		7		40	35 - 110
1,3-Dichlorobenzene	50.0000	39.4349	79		8		40	30 - 100
1,4-Dichlorobenzene	50.0000	38.6280	77		9		40	30 - 100
1,2-Dichlorobenzene	50.0000	39.3834	79		7		40	35 - 100
2,2´-oxybis(1-Chloropropan	50.0000	37.6402	75		9		40	30 - 123
Hexachloroethane	50.0000	41.1154	82		10		40	30 - 95
Nitrobenzene	50.0000	47.4611	95		4		40	45 - 110
Isophorone	50.0000	46.8087	94		1		40	50 - 110
1,2,4-Trichlorobenzene	50.0000	47.2055	94		2		40	35 - 105
Naphthalene	50.0000	44.5596	89		4		40	40 - 100
4-Chloroaniline	50.0000	39.8070	80		2		40	15 - 110
Bis(2-chloroethoxy)methane	50.0000	45.8802	92		3		40	45 - 105
Hexachlorobutadiene	50.0000	50.1685	100		3		40	25 - 105
2-Methylnaphthalene	50.0000	49.5530	99		2		40	45 - 105
Hexachlorocyclopentadiene	50.0000	35.1073	70		4		40	27 - 147
2-Chloronaphthalene	50.0000	41.8331	84		2		40	50 - 105
2-Nitroaniline	50.0000	44.1550	88		1		40	50 - 115
Dimethylphthalate	50.0000	46.7630	94		0		40	25 - 125
Acenaphthylene	50.0000	44.8240	90		1		40	50 - 105
2,6-Dinitrotoluene	50.0000	48.2290	96		1		40	50 - 115
3-Nitroaniline	50.0000	38.7122	77		3		40	20 - 125
Acenaphthene	50.0000	43.9433	88		1		40	45 - 110
Dibenzofuran	50.0000	44.6988	89		0		40	55 - 105
2,4-Dinitrotoluene	50.0000	48.3129	97		2		40	50 - 120
Diethylphthalate	50.0000	47.2951	95		1		40	40 - 120
4-Chlorophenyl-phenylether	50.0000	46.0646	92		1		40	50 - 110
Fluorene	50.0000	46.1769	92		1		40	50 - 110
4-Nitroaniline	50.0000	34.3304	69		4		40	35 - 120
4-Bromophenyl-phenylether	50.0000	45.7493	91		4		40	50 - 115
Hexachlorobenzene	50.0000	47.7279	95		1		40	50 - 110
Phenanthrene	50.0000	44.9692	90		5		40	50 - 115
Anthracene	50.0000	44.0572	88		3		40	55 - 110
Carbazole	50.0000	45.6836	91		4		40	50 - 115
Fluoranthene	50.0000	48.8414	98		5		40	55 - 115
Pyrene	50.0000	43.9326	88		2		40	50 - 130
Butylbenzylphthalate	50.0000	43.1729	86		1		40	45 - 115
3,3´-Dichlorobenzidine	50.0000	44.2684	89		1		40	20 - 110
Benzo(a)anthracene	50.0000	46.6836	93		0		40	55 - 110
Chrysene	50.0000	46.8610	94		3		40	55 - 110
Bis(2-ethylhexyl)phthalate	50.0000	42.6266	85		0		40	40 - 125
Benzo(b)fluoranthene	50.0000	47.1043	94		1		40	45 - 120
Benzo(k)fluoranthene	50.0000	47.0396	94		2		40	45 - 125
Benzo(a)pyrene	50.0000	47.7103	95		2		40	55 - 110
Indeno(1,2,3-cd)pyrene	50.0000	52.1195	104		3		40	45 - 125
Dibenzo(a,h)anthracene	50.0000	53.5389	107		4		40	40 - 125
Benzo(g,h,i)perylene	50.0000	50.8632	102		2		40	40 - 125

3 - FORM III

WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-78224

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCSD-78224 LCS Lot No.: A0101343

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC #	%RPD #	QC LIMITS RPD	QC LIMITS REC.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 46 outside limits

Spike Recovery: 0 out of 46 outside limits

COMMENTS:

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.
LCSD-78243

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCSD-78243 LCS Lot No.: A0101343

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS RPD	QC LIMITS REC.
Bis(2-chloroethyl)ether	3333.0000	2416.1685	72		1		40	40 - 105
1,3-Dichlorobenzene	3333.0000	2347.0838	70		0		40	40 - 100
1,4-Dichlorobenzene	3333.0000	2318.3454	70		1		40	35 - 105
1,2-Dichlorobenzene	3333.0000	2380.4338	71		1		40	45 - 95
2,2´-oxybis(1-Chloropropan	3333.0000	2309.2877	69		0		40	20 - 115
Hexachloroethane	3333.0000	2528.8110	76		1		40	35 - 110
Nitrobenzene	3333.0000	2824.4794	85		5		40	40 - 115
Isophorone	3333.0000	2673.8709	80		3		40	45 - 110
1,2,4-Trichlorobenzene	3333.0000	2852.5357	86		6		40	45 - 110
Naphthalene	3333.0000	2686.5748	81		5		40	40 - 105
4-Chloroaniline	3333.0000	1327.6211	40		32		40	10 - 100
Bis(2-chloroethoxy)methane	3333.0000	2691.2214	81		5		40	45 - 110
Hexachlorobutadiene	3333.0000	3037.4411	91		4		40	40 - 115
2-Methylnaphthalene	3333.0000	2857.5055	86		5		40	45 - 105
Hexachlorocyclopentadiene	3333.0000	2458.0827	74		1		40	8 - 148
2-Chloronaphthalene	3333.0000	2463.3327	74		4		40	45 - 105
2-Nitroaniline	3333.0000	2411.0195	72		1		40	45 - 120
Dimethylphthalate	3333.0000	2516.7461	76		4		40	50 - 110
Acenaphthylene	3333.0000	2481.0870	74		4		40	45 - 105
2,6-Dinitrotoluene	3333.0000	2484.8351	75		5		40	50 - 110
3-Nitroaniline	3333.0000	1526.3826	46		14		40	25 - 110
Acenaphthene	3333.0000	2483.1880	75		7		40	45 - 110
Dibenzofuran	3333.0000	2454.3452	74		6		40	50 - 105
2,4-Dinitrotoluene	3333.0000	2409.2695	72		3		40	50 - 115
Diethylphthalate	3333.0000	2469.7739	74		1		40	50 - 115
4-Chlorophenyl-phenylether	3333.0000	2521.6324	76		4		40	45 - 110
Fluorene	3333.0000	2492.0868	75		4		40	50 - 110
4-Nitroaniline	3333.0000	1843.4851	55		0		40	35 - 115
4-Bromophenyl-phenylether	3333.0000	2641.9733	79		5		40	45 - 115
Hexachlorobenzene	3333.0000	2694.8050	81		5		40	45 - 120
Phenanthrene	3333.0000	2419.1050	73		4		40	50 - 110
Anthracene	3333.0000	2375.1495	71		3		40	55 - 105
Carbazole	3333.0000	2281.5021	68		3		40	45 - 115
Fluoranthene	3333.0000	2360.3220	71		1		40	55 - 115
Pyrene	3333.0000	2732.9682	82		10		40	45 - 125
Butylbenzylphthalate	3333.0000	2541.9133	76		8		40	50 - 125
3,3´-Dichlorobenzidine	3333.0000	1890.2140	57		21		40	10 - 130
Benzo(a)anthracene	3333.0000	2610.9312	78		7		40	50 - 110
Chrysene	3333.0000	2590.8871	78		7		40	55 - 110
Bis(2-ethylhexyl)phthalate	3333.0000	2607.9164	78		8		40	45 - 125
Benzo(b)fluoranthene	3333.0000	2771.4447	83		6		40	45 - 115
Benzo(k)fluoranthene	3333.0000	2616.8771	79		7		40	45 - 125
Benzo(a)pyrene	3333.0000	2643.4739	79		5		40	50 - 110
Indeno(1,2,3-cd)pyrene	3333.0000	2646.2131	79		5		40	40 - 120
Dibenzo(a,h)anthracene	3333.0000	2708.9438	81		6		40	40 - 125
Benzo(g,h,i)perylene	3333.0000	2572.3414	77		4		40	40 - 125

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.
LCSD-78243

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab Sample ID: LCSD-78243 LCS Lot No.: A0101343

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC #	%RPD #	QC LIMITS RPD	QC LIMITS REC.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 46 outside limits

Spike Recovery: 0 out of 46 outside limits

COMMENTS:

4C - FORM IV SV

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB-78243

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab File ID: S6B8873.D Lab Sample ID: MB-78243

Instrument ID: S6 Date Extracted: 07/25/2014

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 07/28/2014

Level: (LOW/MED) LOW Time Analyzed: 12:12

Extraction: (Type) SONC GPC Cleanup: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS-78243	LCS-78243	S6B8874.D	07/28/2014
02	LCSD-78243	LCSD-78243	S6B8875.D	07/28/2014
03	SED-2	N1243-01B	S6B8880.D	07/28/2014
04	SED-3	N1243-02B	S6B8881.D	07/28/2014
05	SED-4	N1243-03B	S6B8882.D	07/28/2014
06	SED-31	N1243-04B	S6B8883.D	07/28/2014
07	SED-2DL	N1243-01BDL	S6B8895.D	07/29/2014

COMMENTS:

4C - FORM IV SV

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB-78224

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

Lab File ID: S6B8876.D Lab Sample ID: MB-78224

Instrument ID: S6 Date Extracted: 07/24/2014

Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 07/28/2014

Level: (LOW/MED) LOW Time Analyzed: 13:22

Extraction: (Type) SEPF GPC Cleanup: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS-78224	LCS-78224	S6B8877.D	07/28/2014
02	LCSD-78224	LCSD-78224	S6B8878.D	07/28/2014
03	EQUIP BLANK	N1243-06B	S6B8879.D	07/28/2014

COMMENTS:

8C - FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

GC Column: Rxi-5sil MS ID: 0.25 (mm) Init. Calib. Date(s): 07/10/2014 07/10/2014

EPA Sample No.(SSTD020##) SSTD0256S Date Analyzed: 07/28/2014

Lab File ID (Standard): S6B8871.D Time Analyzed: 11:07

Instrument ID: S6

		IS1 (DCB) AREA	#	RT	#	IS2 (NPT) AREA	#	RT	#	IS3 (ANT) AREA	#	RT	#
	12 HOUR STD	230747		4.796		835950		5.871		564888		7.334	
	UPPER LIMIT	461494		5.296		1671900		6.371		1129776		7.834	
	LOWER LIMIT	115374		4.296		417975		5.371		282444		6.834	
	EPA SAMPLE NO.												
01	MB-78243	273187		4.796		962430		5.871		624687		7.328	
02	LCS-78243	288554		4.796		1023858		5.871		676902		7.334	
03	LCSD-78243	317841		4.796		1096924		5.871		725601		7.334	
04	MB-78224	190475		4.790		679488		5.871		472585		7.328	
05	LCS-78224	186510		4.796		672114		5.871		461266		7.328	
06	LCSD-78224	204967		4.796		713078		5.871		490049		7.328	
07	EQUIP BLANK	186245		4.790		675216		5.871		462983		7.328	
08	SED-2	301034		4.796		1068349		5.871		696508		7.328	
09	SED-3	301967		4.796		1034671		5.871		678601		7.328	
10	SED-4	284238		4.796		973246		5.871		630002		7.328	
11	SED-31	294694		4.796		1021617		5.871		664358		7.328	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8D - FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

EPA Sample No.(SSTD020##) SSTD0256S Date Analyzed: 07/28/2014

Lab File ID (Standard): S6B8871.D Time Analyzed: 11:07

Instrument ID: S6 GC Column: Rxi-5sil MS ID: 0.25 (mm)

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	1181553		8.562		1335297		10.889		1273538		13.033	
	UPPER LIMIT	2363106		9.062		2670594		11.389		2547076		13.533	
	LOWER LIMIT	590777		8.062		667649		10.389		636769		12.533	
	EPA SAMPLE NO.												
01	MB-78243	1261806		8.562		1244731		10.930		1046953		13.086	
02	LCS-78243	1372362		8.562		1311332		10.895		1091462		13.039	
03	LCSD-78243	1423049		8.562		1261766		10.889		1046965		13.028	
04	MB-78224	980921		8.556		1107765		10.877		1048010		13.022	
05	LCS-78224	998668		8.562		1122381		10.889		1054755		13.027	
06	LCSD-78224	1036647		8.562		1196461		10.889		1127603		13.027	
07	EQUIP BLANK	974154		8.556		1134178		10.877		1067396		13.016	
08	SED-2	1343122		8.562		1149684		10.889		942453		13.033	
09	SED-3	1289747		8.562		1132999		10.883		931813		13.022	
10	SED-4	1199606		8.562		1050641		10.883		957720		13.028	
11	SED-31	1303559		8.562		1119327		10.889		921498		13.033	

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8C - FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

GC Column: Rxi-5sil MS ID: 0.25 (mm) Init. Calib. Date(s): 07/10/2014 07/10/2014

EPA Sample No.(SSTD020##) SSTD0256T Date Analyzed: 07/29/2014

Lab File ID (Standard): S6B8891.D Time Analyzed: 11:24

Instrument ID: S6

		IS1 (DCB) AREA	#	RT	#	IS2 (NPT) AREA	#	RT	#	IS3 (ANT) AREA	#	RT	#
	12 HOUR STD	201719		4.772		740199		5.853		508269		7.311	
	UPPER LIMIT	403438		5.272		1480398		6.353		1016538		7.811	
	LOWER LIMIT	100860		4.272		370100		5.353		254135		6.811	
	EPA SAMPLE NO.												
01	SED-2DL	200925		4.772		754566		5.847		547392		7.305	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8D - FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1243 Mod. Ref No.: SDG No.: SN1243

EPA Sample No.(SSTD020##) SSTD0256T Date Analyzed: 07/29/2014

Lab File ID (Standard): S6B8891.D Time Analyzed: 11:24

Instrument ID: S6 GC Column: Rxi-5sil MS ID: 0.25 (mm)

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	1081411		8.539		1277022		10.901		1241448		13.039	
	UPPER LIMIT	2162822		9.039		2554044		11.401		2482896		13.539	
	LOWER LIMIT	540706		8.039		638511		10.401		620724		12.539	
	EPA SAMPLE NO.												
01	SED-2DL	1175425		8.538		1356956		10.865		1278190		12.992	

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

* Wet Chemistry *

CASE NARRATIVE

Spectrum Analytical, Inc. Lab Reference No. SB93478

Client: Spectrum Analytical, Inc. - North Kingstown, RI

Project: Steelwinds 1 / N1243

SDG #: 93478

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception or a communication form is included in the addendum with this package.

II. HOLDING TIMES

All samples were prepared and analyzed within the method-specific holding time.

III. METHODS

Analyses were performed according to Lloyd Kahn.

IV. PREPARATION

Soil/Sediment samples were prepared according to General Preparation.

V. INSTRUMENTATION

The following equipment was used to analyze Lloyd Kahn:

TOC2 details: Teledyne Tekmar Apollo 9000 / TOC Boat Sampler Model 183

VI. ANALYSIS

A. Calibration:

All quality control samples were within the acceptance criteria.

B. Blanks:

All blanks were within the acceptance criteria.

C. Spikes:

1. Laboratory Control Samples (LCS):

All method criteria were met.

2. Matrix Spike / Matrix Spike Duplicate Samples (MS/MSD):

No matrix spike or matrix spike duplicates were analyzed.

3. Reference:

All method criteria were met.

D. Duplicates:

A duplicate was analyzed.

In batch 1417783 from source sample SED-2 (SB93478-01).

All method criteria were met with the following exceptions:

Total Organic Carbon in batch 1417783, sample 1417783-DUP2 from source sample SED-2 (SB93478-01): This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

E. Samples:

All method criteria were met with the following exceptions:

Total Organic Carbon in batch 1417783, samples SED-2 (SB93478-01), SED-3 (SB93478-02), SED-31 (SB93478-04), SED-4 (SB93478-03): This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration. The TOC value is initially measured in ug (microgram) of carbon but converts to ppm in the software program used for this purpose. The initial ug of carbon reading for this sample fell within range of the calibration curve of the instrumentation; however the limited sample weight used elevated the ppm value above the maximum value listed in Element. The sample value is not over the calibration range of the instrument and was not reanalyzed as a result.

Total Organic Carbon in batch 1417783, sample SED-2 (SB93478-01): This sample was analyzed in quadruplicate. The % RSD is 18.827.

FORM I - INORGANIC ANALYSIS DATA SHEET

Lloyd Kahn

SED-2

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	93478
Client:	Spectrum Analytical, Inc. - North Kingstown, RI			Project:	Steelwinds 1
Project Number:	N1243			Received:	07/24/14 15:27
Matrix:	Soil	Laboratory ID:	SB93478-01	File ID:	07301302
Sampled:	07/17/14 11:45	Prepared:	07/30/14 10:17	Analyzed:	07/30/14 13:10
% Solids:		Preparation:	General Preparation	Initial/Final:	10 g / 10 ml
Batch:	1417783	Sequence:	S408664	Calibration:	1407011
Instrument:	TOC2				
Reported to:	MRL				

CAS NO.	Analyte	Result (mg/kg)	Dilution Factor	MDL	MRL	Q
NA	Total Organic Carbon	29500	1	44.9	1000	E

FORM I - INORGANIC ANALYSIS DATA SHEET

Lloyd Kahn

SED-3

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	93478
Client:	Spectrum Analytical, Inc. - North Kingstown, RI			Project:	Steelwinds 1
Project Number:	N1243			Received:	07/24/14 15:27
Matrix:	Soil	Laboratory ID:	SB93478-02	File ID:	07301405
Sampled:	07/17/14 14:45	Prepared:	07/30/14 10:17	Analyzed:	07/30/14 14:20
% Solids:		Preparation:	General Preparation	Initial/Final:	10 g / 10 ml
Batch:	1417783	Sequence:	S408664	Calibration:	1407011
Instrument:	TOC2				
Reported to:	MRL				

CAS NO.	Analyte	Result (mg/kg)	Dilution Factor	MDL	MRL	Q
NA	Total Organic Carbon	30600	1	44.9	1000	E

FORM I - INORGANIC ANALYSIS DATA SHEET

Lloyd Kahn

SED-4

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	93478
Client:	Spectrum Analytical, Inc. - North Kingstown, RI			Project:	Steelwinds 1
Project Number:	N1243			Received:	07/24/14 15:27
Matrix:	Soil	Laboratory ID:	SB93478-03	File ID:	07301422
Sampled:	07/17/14 15:45	Prepared:	07/30/14 10:17	Analyzed:	07/30/14 14:30
% Solids:		Preparation:	General Preparation	Initial/Final:	10 g / 10 ml
Batch:	1417783	Sequence:	S408664	Calibration:	1407011
Instrument:	TOC2				
Reported to:	MRL				

CAS NO.	Analyte	Result (mg/kg)	Dilution Factor	MDL	MRL	Q
NA	Total Organic Carbon	36700	1	44.9	1000	E

FORM I - INORGANIC ANALYSIS DATA SHEET

Lloyd Kahn

SED-31

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	93478
Client:	Spectrum Analytical, Inc. - North Kingstown, RI			Project:	Steelwinds 1
Project Number:	N1243			Received:	07/24/14 15:27
Matrix:	Soil	Laboratory ID:	SB93478-04	File ID:	07301529
Sampled:	07/17/14 14:45	Prepared:	07/30/14 10:17	Analyzed:	07/30/14 15:39
% Solids:		Preparation:	General Preparation	Initial/Final:	10 g / 10 ml
Batch:	1417783	Sequence:	S408664	Calibration:	1407011
Instrument:	TOC2				
Reported to:	MRL				

CAS NO.	Analyte	Result (mg/kg)	Dilution Factor	MDL	MRL	Q
NA	Total Organic Carbon	30200	1	44.9	1000	E

FORM IIIc - DUPLICATES

SED-2

Lloyd Kahn

Laboratory: Spectrum Analytical, Inc. - Agawam, MA
Client: Spectrum Analytical, Inc. - North Kingstown, RI
Matrix: Soil/Sediment
Batch: 1417783
Preparation: General Preparation
Source Sample Name: SED-2

SDG: 93478
Project: Steelwinds 1
Laboratory ID: 1417783-DUP2
Lab Source ID: SB93478-01
Initial/Final: 10 g / 10 ml
% Solids:
File ID: 07301311

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Total Organic Carbon	20	29500		33000		11		Lloyd Kahn

* Values outside of QC limits

Individual peaks for multi-component analytes are indicated by a number in parentheses

FORM IIIa - LCS / LCS DUPLICATE RECOVERY

Lloyd Kahn

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA	SDG:	93478
Client:	Spectrum Analytical, Inc. - North Kingstown, RI	Project:	Steelwinds 1
Matrix:	Soil/Sediment	Instrument:	TOC2
Batch:	1417783	Laboratory ID:	1417783-BS1
Preparation:	General Preparation	Initial/Final:	10 g / 10 ml
Analyzed:	07/30/14 11:17	Spike ID:	14C0939
		File ID:	07301110

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	8000	7940	99	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Individual peaks for multi-component analytes are indicated by a number in parentheses

FORM III - BLANKS

Lloyd Kahn

Laboratory: Spectrum Analytical, Inc. - Agawam, MA
SDG: 93478
Client: Spectrum Analytical, Inc. - North Kingstown, RI
Project: Steelwinds 1
Instrument ID: TOC2
Calibration: 1407011
Sequence: S408664
Matrix: Soil/Sediment

Lab Sample ID	Analyte	Found	MRL	Units	C	Method
1417783-CCB1	Total Organic Carbon	88.1585	100	mg/kg	J	Lloyd Kahn
1417783-BLK1	Total Organic Carbon	62.3	1000	mg/kg	J	Lloyd Kahn
1417783-CCB2	Total Organic Carbon	98.834	100	mg/kg	J	Lloyd Kahn
1417783-CCB3	Total Organic Carbon	88.7686	100	mg/kg	J	Lloyd Kahn
1417783-CCB4	Total Organic Carbon	104.5074	100	mg/kg		Lloyd Kahn
1417783-CCB5	Total Organic Carbon	121.6474	100	mg/kg		Lloyd Kahn
1417783-CCB6	Total Organic Carbon	50.9372	100	mg/kg	J	Lloyd Kahn

FORM VIIb(Inorganics) - STANDARD REFERENCE MATERIAL RECOVERY

Lloyd Kahn

Laboratory: Spectrum Analytical, Inc. - Agawam, MA
SDG: 93478
Client: Spectrum Analytical, Inc. - North Kingstown, RI
Project: Steelwinds 1
Matrix: Soil/Sediment
Spike ID: 14A1386
Batch: 1417783
Laboratory ID: 1417783-SRM1
Preparation: General Preparation
Initial/Final: 10 g / 10 ml

ANALYTE	TRUE (mg/kg)	FOUND (mg/kg)	SRM % REC.	QC LIMITS REC.
Total Organic Carbon	3470	3920	113	49 - 151

* Values outside of QC limits

Report Date:
28-Aug-14 13:57

SPECTRUM ANALYTICAL, INC.
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HANIBAL TECHNOLOGY

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

Laboratory Report

GZA GeoEnvironmental, Inc.
535 Washington Street, 11th Floor
Buffalo, NY 14203

Work Order: N1400
Project : Steelwinds 1
Project #:

Attn: John Beninati

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
N1400-01	SUR-2	Aqueous	06-Aug-14 09:10	08-Aug-14 10:30
N1400-02	PW-2	Aqueous	06-Aug-14 09:15	08-Aug-14 10:30
N1400-03	SUR-3	Aqueous	06-Aug-14 09:50	08-Aug-14 10:30
N1400-04	FIELD DUPLICATE	Aqueous	06-Aug-14 09:55	08-Aug-14 10:30
N1400-05	SUR-4	Aqueous	06-Aug-14 10:35	08-Aug-14 10:30
N1400-06	PW-3	Aqueous	06-Aug-14 12:55	08-Aug-14 10:30
N1400-07	FIELD DUPLICATE2	Aqueous	06-Aug-14 13:00	08-Aug-14 10:30
N1400-08	PW-4	Aqueous	06-Aug-14 13:10	08-Aug-14 10:30
N1400-09	SUR 1	Aqueous	06-Aug-14 13:30	08-Aug-14 10:30
N1400-10	SUR 5	Aqueous	06-Aug-14 13:55	08-Aug-14 10:30
N1400-11	SUR-6	Aqueous	06-Aug-14 14:10	08-Aug-14 10:30
N1400-12	SED-6	Soil	06-Aug-14 14:35	08-Aug-14 10:30
N1400-13	SUR-7	Aqueous	06-Aug-14 15:05	08-Aug-14 10:30
N1400-14	SED-7	Soil	06-Aug-14 15:15	08-Aug-14 10:30
N1400-15	SUR-8	Aqueous	06-Aug-14 15:40	08-Aug-14 10:30
N1400-16	EQUIP.BLANK	Aqueous	06-Aug-14 15:55	08-Aug-14 10:30
N1400-17	TRIP BLANK	Aqueous	06-Aug-14 00:00	08-Aug-14 10:30

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the samples(s) as received. This report may not be reproduced, except in full, without written approval from Spectrum Analytical.

All applicable NELAC or USEPA CLP requirments have been meet.

Spectrum Analytical (Rhode Island) is accredited under the National Environmental Laboratory Approval Program (NELAP) and DoD Environmental Laboratory Accreditation Program (ELAP), holds Organic and Inorganic contracts under the USEPA CLP Program and is certified under several states. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.spectrum-analytical.com.

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

Department of Defense	N/A
Connecticut	PH-0153
Delaware	N/A
Florida	E87664
Maine	2007037
Massachusetts	M-RI907
New Hampshire	2631
New Jersey	RI001
New York	11522
Rhode Island	LAI00301
USDA	P330-08-00023
USEPA - ISM	EP-W-09-039
USEPA - SOM	EP-W-11-033

NELAP ACCREDITED TNI LABORATORY

LABORATORY ACCREDITATION BUREAU ACCREDITED
Certificate # L2247 Testing

Authorized by:

Yihai Ding
Laboratory Director

SPECTRUM ANALYTICAL, INC.
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* Data Summary Pack *

646 Camp Ave · North Kingstown, RI 02852-4008 · 401-732-3400 · FAX 401-732-3499
www.spectrum-analytical.com

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Identification and Analytical Requirements Summary

Project Name : Steelwinds 1 **SDG :** N1400

Customer Sample ID	Laboratory Sample ID	Analytical Requirements				
		MSVOA Method #	MSSEMI Method #	GC* Method #	ME	Other
SUR-2	N1400-01	SW8260_W	SW8270_W			
PW-2	N1400-02	SW8260_W				
SUR-3	N1400-03	SW8260_W	SW8270_W			
FIELD DUPLICATE	N1400-04	SW8260_W	SW8270_W			
SUR-4	N1400-05	SW8260_W	SW8270_W			
PW-3	N1400-06	SW8260_W				
FIELD DUPLICATE2	N1400-07	SW8260_W				
PW-4	N1400-08	SW8260_W				
SUR 1	N1400-09	SW8260_W	SW8270_W			
SUR 5	N1400-10	SW8260_W	SW8270_W			
SUR-6	N1400-11	SW8260_W	SW8270_W			
SED-6	N1400-12	SW8260_LOW_S	SW8270_S			SEE DATA
SUR-7	N1400-13	SW8260_W	SW8270_W			
SED-7	N1400-14	SW8260_LOW_S	SW8270_S			SEE DATA
SUR-8	N1400-15	SW8260_W	SW8270_W			
EQUIP.BLANK	N1400-16	SW8260_W	SW8270_W			
TRIP BLANK	N1400-17	SW8260_W				

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSVOA

Project Name : Steelwinds 1 **SDG :** N1400

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8260_LOW_S					
N1400-12C	SL	8/6/2014	8/8/2014	NA	8/13/2014
N1400-14C	SL	8/6/2014	8/8/2014	NA	8/13/2014
SW8260_W					
N1400-01A	AQ	8/6/2014	8/8/2014	NA	8/17/2014
N1400-02A	AQ	8/6/2014	8/8/2014	NA	8/17/2014
N1400-03A	AQ	8/6/2014	8/8/2014	NA	8/17/2014
N1400-04A	AQ	8/6/2014	8/8/2014	NA	8/17/2014
N1400-05A	AQ	8/6/2014	8/8/2014	NA	8/17/2014
N1400-06A	AQ	8/6/2014	8/8/2014	NA	8/17/2014
N1400-07A	AQ	8/6/2014	8/8/2014	NA	8/17/2014
N1400-08A	AQ	8/6/2014	8/8/2014	NA	8/17/2014
N1400-09A	AQ	8/6/2014	8/8/2014	NA	8/17/2014
N1400-10A	AQ	8/6/2014	8/8/2014	NA	8/17/2014
N1400-11A	AQ	8/6/2014	8/8/2014	NA	8/17/2014
N1400-13A	AQ	8/6/2014	8/8/2014	NA	8/18/2014
N1400-15A	AQ	8/6/2014	8/8/2014	NA	8/18/2014
N1400-16A	AQ	8/6/2014	8/8/2014	NA	8/18/2014
N1400-17A	AQ	8/6/2014	8/8/2014	NA	8/17/2014

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSSEMI

Project Name : Steelwinds 1 **SDG :** N1400

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8270_S					
N1400-12B	SL	8/6/2014	8/8/2014	8/19/2014	8/26/2014
N1400-14B	SL	8/6/2014	8/8/2014	8/19/2014	8/26/2014
SW8270_W					
N1400-01B	AQ	8/6/2014	8/8/2014	8/12/2014	8/26/2014
N1400-03B	AQ	8/6/2014	8/8/2014	8/12/2014	8/26/2014
N1400-04B	AQ	8/6/2014	8/8/2014	8/12/2014	8/26/2014
N1400-05B	AQ	8/6/2014	8/8/2014	8/12/2014	8/26/2014
N1400-09B	AQ	8/6/2014	8/8/2014	8/12/2014	8/26/2014
N1400-10B	AQ	8/6/2014	8/8/2014	8/12/2014	8/26/2014
N1400-11B	AQ	8/6/2014	8/8/2014	8/12/2014	8/26/2014
N1400-13B	AQ	8/6/2014	8/8/2014	8/12/2014	8/26/2014
N1400-15B	AQ	8/6/2014	8/8/2014	8/12/2014	8/26/2014
N1400-16B	AQ	8/6/2014	8/8/2014	8/12/2014	8/26/2014

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSVOA

Project Name : Steelwinds 1 **SDG :** N1400

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Low/Medium Level	Dil/Conc Factor
SW8260_LOW_S					
N1400-12C	SL	SW8260_LOW_S	NA	LOW	1
N1400-14C	SL	SW8260_LOW_S	NA	LOW	1
SW8260_W					
N1400-01A	AQ	SW8260_W	NA	LOW	1
N1400-02A	AQ	SW8260_W	NA	LOW	1
N1400-03A	AQ	SW8260_W	NA	LOW	1
N1400-04A	AQ	SW8260_W	NA	LOW	1
N1400-05A	AQ	SW8260_W	NA	LOW	1
N1400-06A	AQ	SW8260_W	NA	LOW	1
N1400-07A	AQ	SW8260_W	NA	LOW	1
N1400-08A	AQ	SW8260_W	NA	LOW	1
N1400-09A	AQ	SW8260_W	NA	LOW	1
N1400-10A	AQ	SW8260_W	NA	LOW	1
N1400-11A	AQ	SW8260_W	NA	LOW	1
N1400-13A	AQ	SW8260_W	NA	LOW	1
N1400-15A	AQ	SW8260_W	NA	LOW	1
N1400-16A	AQ	SW8260_W	NA	LOW	1
N1400-17A	AQ	SW8260_W	NA	LOW	1

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

New York State Department of Environmental Conservation
Sample Preparation and Analysis Summary MSSEMI

Project Name : Steelwinds 1 **SDG :** N1400

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
SW8270_S					
N1400-12B	SL	SW8270_S	3550B	NA	1
N1400-14B	SL	SW8270_S	3550B	NA	1
SW8270_W					
N1400-01B	AQ	SW8270_W	3510C	NA	1
N1400-03B	AQ	SW8270_W	3510C	NA	1
N1400-04B	AQ	SW8270_W	3510C	NA	1
N1400-05B	AQ	SW8270_W	3510C	NA	1
N1400-09B	AQ	SW8270_W	3510C	NA	1
N1400-10B	AQ	SW8270_W	3510C	NA	1
N1400-11B	AQ	SW8270_W	3510C	NA	1
N1400-13B	AQ	SW8270_W	3510C	NA	1
N1400-15B	AQ	SW8270_W	3510C	NA	1
N1400-16B	AQ	SW8270_W	3510C	NA	1

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: N1400

Client ID: GZA_BUFFALO
Project: Steelwinds 1
WO Name: Steelwinds 1
Location: GZA_STEELWINDS,
Comments: N/A

Case:
SDG:
PO: NEEDS PO

HC Due: 08/27/14
Fax Due:
Fax Report: ☐

Report Level: ASP-B
Special Program:
EDD: EQuIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
N1400-01A	SUR-2	08/06/2014 09:10	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-01B	SUR-2	08/06/2014 09:10	08/08/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	F2
N1400-02A	PW-2	08/06/2014 09:15	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-03A	SUR-3	08/06/2014 09:50	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-03B	SUR-3	08/06/2014 09:50	08/08/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	F2
N1400-04A	FIELD DUPLICATE	08/06/2014 09:55	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-04B	FIELD DUPLICATE	08/06/2014 09:55	08/08/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	F2
N1400-05A	SUR-4	08/06/2014 10:35	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-05B	SUR-4	08/06/2014 10:35	08/08/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	F2
N1400-06A	PW-3	08/06/2014 12:55	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-07A	FIELD DUPLICATE2	08/06/2014 13:00	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-08A	PW-4	08/06/2014 13:10	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-09A	SUR 1	08/06/2014 13:30	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-09B	SUR 1	08/06/2014 13:30	08/08/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	F2
N1400-10A	SUR 5	08/06/2014 13:55	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-10B	SUR 5	08/06/2014 13:55	08/08/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	F2
N1400-11A	SUR-6	08/06/2014 14:10	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-11B	SUR-6	08/06/2014 14:10	08/08/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	F2

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

08/12/2014 14:48 Lab Client Rep: Agnes R Huntley

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: N1400

Client ID: GZA_BUFFALO
Project: Steelwinds 1
WO Name: Steelwinds 1
Location: GZA_STEELWINDS,
Comments: N/A

Case:
SDG:
PO: NEEDS PO

HC Due: 08/27/14
Fax Due:
Fax Report: ☐

Report Level: ASP-B
Special Program:
EDD: EQuIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
N1400-12A	SED-6	08/06/2014 14:35	08/08/2014	Soil	PMoist	/					F2
N1400-12B	SED-6	08/06/2014 14:35	08/08/2014	Soil	SW8270_S	/ 8270_BN,				Y	F2
N1400-12C	SED-6	08/06/2014 14:35	08/08/2014	Soil	SW8260_LOW_S	/ 8260_STARS/CP-51				Y	VOA
N1400-12D	SED-6	08/06/2014 14:35	08/08/2014	Soil	SW8260_MED_S	/ 8260_STARS/CP-51		Y		Y	VOA
N1400-12E	SED-6	08/06/2014 14:35	08/08/2014	Soil	SW9060_TOC_S	/ SPECTRUM--					SUB
N1400-13A	SUR-7	08/06/2014 15:05	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-13B	SUR-7	08/06/2014 15:05	08/08/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	F2
N1400-14A	SED-7	08/06/2014 15:15	08/08/2014	Soil	PMoist	/					F2
N1400-14B	SED-7	08/06/2014 15:15	08/08/2014	Soil	SW8270_S	/ 8270_BN,				Y	F2
N1400-14C	SED-7	08/06/2014 15:15	08/08/2014	Soil	SW8260_LOW_S	/ 8260_STARS/CP-51				Y	VOA
N1400-14D	SED-7	08/06/2014 15:15	08/08/2014	Soil	SW8260_MED_S	/ 8260_STARS/CP-51		Y		Y	VOA
N1400-14E	SED-7	08/06/2014 15:15	08/08/2014	Soil	SW9060_TOC_S	/ SPECTRUM--					SUB
N1400-15A	SUR-8	08/06/2014 15:40	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-15B	SUR-8	08/06/2014 15:40	08/08/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	F2
N1400-16A	EQUIP.BLANK	08/06/2014 15:55	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA
N1400-16B	EQUIP.BLANK	08/06/2014 15:55	08/08/2014	Aqueous	SW8270_W	/ 8270_BN,				Y	F2
N1400-17A	TRIP BLANK	08/06/2014 00:00	08/08/2014	Aqueous	SW8260_W	/ 8260_STARS/CP-51				Y	VOA

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

* Volatiles *

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : GZA GeoEnvironmental, Inc.

Project: Steelwinds 1

Laboratory Workorder / SDG #: N1400

SW846 8260C, VOC by GC-MS

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code: SW846 8260C

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B
Soil Samples were prepared following procedures in laboratory test code: SW5035

V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V1
Instrument Type: GCMS-VOA
Description: HP5890 II / HP5972
Manufacturer: Hewlett-Packard
Model: 5890 / 5972
GC Column used: 30 m X 0.25 mm ID [1.40 um thickness] DB-624 capillary column.

Instrument Code: V5
Instrument Type: GCMS-VOA
Description: HP6890 / HP6890
Manufacturer: Hewlett-Packard
Model: 6890 / 6890
GC Column used: 30 m X 0.25 mm ID [1.40 um thickness] DB-624 capillary column.

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

Surrogate standard percent recoveries were within the QC limits.

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits with the following exceptions. Please note that most test procedures allow for several compounds outside of the QC limits for the LCS, although this may indicate a bias for this specific compound.

LCS-78536 in batch 78536, recovery is above criteria for Naphthalene at 127% with criteria of (40-125).

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

No sample in this SDG required analysis at dilution.

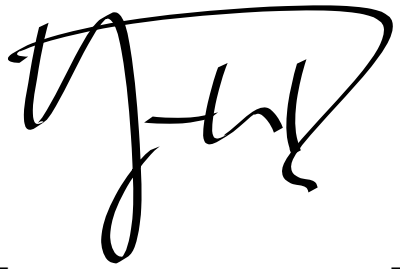
G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

No manual integrations were performed on any sample or standard.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.



Signed:_____ _____

Date:_____8/27/2014_____

Data Flag/Qualifiers (Page 1 of 2):

U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).

J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
- estimated concentration for Tentatively Identified Compound

B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a "trace" concentration below the reporting limit and equal to or above the detection limit.

D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis

E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.

P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.

A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.

* For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.

L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution

RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.

RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.

RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.

MS Matrix Spike.

MSD Matrix Spike Duplicate

DUP Duplicate analysis

SD Serial Dilution

PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-2

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-01A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3969.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-2

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-02A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3970.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-3

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-03A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3971.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	1.8	J

EPA SAMPLE NO.
FIELD DUPLICATE

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-04A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3972.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	1.6	J

EPA SAMPLE NO.
SUR-4

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-05A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3973.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	1.1	J
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	1.5	J

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-3

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-06A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3974.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	31	
108-88-3	Toluene	6.2	
100-41-4	Ethylbenzene	1.3	J
179601-23-1	m,p-Xylene	13	
95-47-6	o-Xylene	11	
1330-20-7	Xylene (Total)	24	
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	4.9	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	3.9	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	95	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FIELD DUPLICATE2

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-07A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3975.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	32	
108-88-3	Toluene	6.4	
100-41-4	Ethylbenzene	1.4	J
179601-23-1	m,p-Xylene	14	
95-47-6	o-Xylene	11	
1330-20-7	Xylene (Total)	25	
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	4.2	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	100	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-4

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-08A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3976.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	30	
108-88-3	Toluene	5.3	
100-41-4	Ethylbenzene	1.0	J
179601-23-1	m,p-Xylene	11	
95-47-6	o-Xylene	9.7	
1330-20-7	Xylene (Total)	21	
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	3.4	J
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	3.1	J
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	180	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR 1

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-09A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3977.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	12	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR 5

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-10A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3978.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	1.7	J

EPA SAMPLE NO.
SUR-6

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-11A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3979.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-6

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1400-12C

Sample wt/vol: 9.20 (g/mL) G Lab File ID: V1N0739.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. 22 Date Analyzed: 08/13/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	3.5	U
71-43-2	Benzene	3.5	U
108-88-3	Toluene	3.5	U
100-41-4	Ethylbenzene	3.5	U
179601-23-1	m,p-Xylene	3.5	U
95-47-6	o-Xylene	3.5	U
1330-20-7	Xylene (Total)	3.5	U
98-82-8	Isopropylbenzene	3.5	U
103-65-1	n-Propylbenzene	3.5	U
108-67-8	1,3,5-Trimethylbenzene	3.5	U
98-06-6	tert-Butylbenzene	3.5	U
95-63-6	1,2,4-Trimethylbenzene	3.5	U
135-98-8	sec-Butylbenzene	3.5	U
99-87-6	4-Isopropyltoluene	3.5	U
104-51-8	n-Butylbenzene	3.5	U
91-20-3	Naphthalene	3.5	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-7

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-13A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3980.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/18/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-7

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1400-14C

Sample wt/vol: 9.10 (g/mL) G Lab File ID: V1N0740.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. 20 Date Analyzed: 08/13/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	3.4	U
71-43-2	Benzene	3.4	U
108-88-3	Toluene	3.4	U
100-41-4	Ethylbenzene	3.4	U
179601-23-1	m,p-Xylene	3.4	U
95-47-6	o-Xylene	3.4	U
1330-20-7	Xylene (Total)	3.4	U
98-82-8	Isopropylbenzene	3.4	U
103-65-1	n-Propylbenzene	3.4	U
108-67-8	1,3,5-Trimethylbenzene	3.4	U
98-06-6	tert-Butylbenzene	3.4	U
95-63-6	1,2,4-Trimethylbenzene	3.4	U
135-98-8	sec-Butylbenzene	3.4	U
99-87-6	4-Isopropyltoluene	3.4	U
104-51-8	n-Butylbenzene	3.4	U
91-20-3	Naphthalene	3.4	U

EPA SAMPLE NO.
SUR-8

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-15A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3981.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/18/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIP.BLANK

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-16A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3982.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/18/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-17A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3964.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2014

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-78536

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-78536

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1N0726.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. 0.0 Date Analyzed: 08/13/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

EPA SAMPLE NO.
MB-78581

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-78581

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3963.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	5.0	U
71-43-2	Benzene	5.0	U
108-88-3	Toluene	5.0	U
100-41-4	Ethylbenzene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
95-47-6	o-Xylene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
98-82-8	Isopropylbenzene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
104-51-8	n-Butylbenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78536

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-78536

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V1N0724.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. 0.0 Date Analyzed: 08/13/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl tert-butyl ether	44	
71-43-2	Benzene	47	
108-88-3	Toluene	51	
100-41-4	Ethylbenzene	56	
179601-23-1	m,p-Xylene	110	
95-47-6	o-Xylene	54	
1330-20-7	Xylene (Total)	160	
98-82-8	Isopropylbenzene	56	
103-65-1	n-Propylbenzene	58	
108-67-8	1,3,5-Trimethylbenzene	57	
98-06-6	tert-Butylbenzene	54	
95-63-6	1,2,4-Trimethylbenzene	57	
135-98-8	sec-Butylbenzene	57	
99-87-6	4-Isopropyltoluene	56	
104-51-8	n-Butylbenzene	61	
91-20-3	Naphthalene	64	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78581

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-78581

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3960.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	50	
71-43-2	Benzene	49	
108-88-3	Toluene	50	
100-41-4	Ethylbenzene	49	
179601-23-1	m,p-Xylene	97	
95-47-6	o-Xylene	52	
1330-20-7	Xylene (Total)	150	
98-82-8	Isopropylbenzene	51	
103-65-1	n-Propylbenzene	51	
108-67-8	1,3,5-Trimethylbenzene	51	
98-06-6	tert-Butylbenzene	49	
95-63-6	1,2,4-Trimethylbenzene	49	
135-98-8	sec-Butylbenzene	49	
99-87-6	4-Isopropyltoluene	50	
104-51-8	n-Butylbenzene	49	
91-20-3	Naphthalene	49	

1A - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-78581

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-78581

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5P3961.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 08/17/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-butyl ether	53	
71-43-2	Benzene	51	
108-88-3	Toluene	54	
100-41-4	Ethylbenzene	51	
179601-23-1	m,p-Xylene	100	
95-47-6	o-Xylene	53	
1330-20-7	Xylene (Total)	150	
98-82-8	Isopropylbenzene	51	
103-65-1	n-Propylbenzene	51	
108-67-8	1,3,5-Trimethylbenzene	50	
98-06-6	tert-Butylbenzene	49	
95-63-6	1,2,4-Trimethylbenzene	50	
135-98-8	sec-Butylbenzene	49	
99-87-6	4-Isopropyltoluene	50	
104-51-8	n-Butylbenzene	49	
91-20-3	Naphthalene	50	

2B - FORM II VOA-2

WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Level: (TRACE or LOW) LOW

	EPA SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
01	LCS-78581	100	98	103	105				0
02	LCSD-78581	101	103	102	102				0
03	MB-78581	100	97	106	99				0
04	TRIP BLANK	100	98	106	101				0
05	SUR-2	103	100	103	96				0
06	PW-2	100	98	102	102				0
07	SUR-3	99	99	103	97				0
08	FIELD DUPLICATE	97	101	104	98				0
09	SUR-4	101	100	104	100				0
10	PW-3	98	100	102	95				0
11	FIELD DUPLICATE2	101	99	102	99				0
12	PW-4	100	98	111	108				0
13	SUR 1	102	100	104	98				0
14	SUR 5	101	99	100	101				0
15	SUR-6	104	100	101	100				0
16	SUR-7	101	101	100	96				0
17	SUR-8	103	100	101	102				0
18	EQUIP.BLANK	102	97	98	100				0

		QC LIMITS
VDMC1	(DBFM) Dibromofluoromethane	(85-115)
VDMC2	(DCE) = 1,2-Dichloroethane-d4	(70-120)
VDMC3	(TOL) = Toluene-d8	(85-120)
VDMC4	(BFB) = Bromofluorobenzene	(75-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

som14.07.15.0901

2D - FORM II VOA-4

SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
01	LCS-78536	104	105	104	103				0
02	MB-78536	109	98	103	97				0
03	SED-6	117	106	100	98				0
04	SED-7	118	109	99	94				0

		QC LIMITS
VDMC1	(DBFM) Dibromofluoromethane	(76-128)
VDMC2	(DCE) = 1,2-Dichloroethane-d4	(88-110)
VDMC3	(TOL) = Toluene-d8	(85-115)
VDMC4	(BFB) = Bromofluorobenzene	(85-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

som14.07.15.0901

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78536

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab Sample ID: LCS-78536 LCS Lot No.:

Date Extracted: 08/13/2014 Date Analyzed (1): 08/13/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Methyl tert-butyl ether	50.0000	0.0000	44.3532	89		75 - 126
Benzene	50.0000	0.0000	46.8621	94		75 - 125
Toluene	50.0000	0.0000	51.0942	102		70 - 125
Ethylbenzene	50.0000	0.0000	55.8963	112		75 - 125
m,p-Xylene	100.0000	0.0000	109.8268	110		80 - 125
o-Xylene	50.0000	0.0000	54.3046	109		75 - 125
Xylene (Total)	150.0000	0.0000	164.1314	109		83 - 125
Isopropylbenzene	50.0000	0.0000	55.7064	111		75 - 130
n-Propylbenzene	50.0000	0.0000	57.9359	116		65 - 135
1,3,5-Trimethylbenzene	50.0000	0.0000	56.8715	114		65 - 135
tert-Butylbenzene	50.0000	0.0000	53.7015	107		65 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	56.7589	114		65 - 135
sec-Butylbenzene	50.0000	0.0000	56.6409	113		65 - 130
4-Isopropyltoluene	50.0000	0.0000	55.5889	111		75 - 135
n-Butylbenzene	50.0000	0.0000	61.1761	122		65 - 140
Naphthalene	50.0000	0.0000	63.5726	127	*	40 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 1 out of 16 outside limits

COMMENTS:

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78581

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab Sample ID: LCS-78581 LCS Lot No.:

Date Extracted: 08/17/2014 Date Analyzed (1): 08/17/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Methyl tert-butyl ether	50.0000	0.0000	50.2147	100		65 - 125
Benzene	50.0000	0.0000	49.1228	98		80 - 120
Toluene	50.0000	0.0000	50.1450	100		75 - 120
Ethylbenzene	50.0000	0.0000	49.1688	98		75 - 125
m,p-Xylene	100.0000	0.0000	97.4723	97		75 - 130
o-Xylene	50.0000	0.0000	51.5469	103		80 - 120
Xylene (Total)	150.0000	0.0000	149.0192	99		81 - 121
Isopropylbenzene	50.0000	0.0000	51.4794	103		75 - 125
n-Propylbenzene	50.0000	0.0000	51.4327	103		70 - 130
1,3,5-Trimethylbenzene	50.0000	0.0000	51.4080	103		75 - 130
tert-Butylbenzene	50.0000	0.0000	48.5829	97		70 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	49.0412	98		75 - 130
sec-Butylbenzene	50.0000	0.0000	49.2547	99		70 - 125
4-Isopropyltoluene	50.0000	0.0000	50.2509	101		75 - 130
n-Butylbenzene	50.0000	0.0000	49.1088	98		70 - 135
Naphthalene	50.0000	0.0000	48.8562	98		55 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.
LCSD-78581

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab Sample ID: LCSD-78581 LCS Lot No.:

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS RPD	QC LIMITS REC.
Methyl tert-butyl ether	50.0000	53.1644	106		6		40	65 - 125
Benzene	50.0000	51.3266	103		5		40	80 - 120
Toluene	50.0000	53.5751	107		7		40	75 - 120
Ethylbenzene	50.0000	50.8987	102		4		40	75 - 125
m,p-Xylene	100.0000	100.0369	100		3		40	75 - 130
o-Xylene	50.0000	52.8274	106		3		40	80 - 120
Xylene (Total)	150.0000	152.8644	102		3		40	81 - 121
Isopropylbenzene	50.0000	50.7986	102		1		40	75 - 125
n-Propylbenzene	50.0000	50.7790	102		1		40	70 - 130
1,3,5-Trimethylbenzene	50.0000	49.6527	99		4		40	75 - 130
tert-Butylbenzene	50.0000	49.3318	99		2		40	70 - 130
1,2,4-Trimethylbenzene	50.0000	50.0599	100		2		40	75 - 130
sec-Butylbenzene	50.0000	49.4206	99		0		40	70 - 125
4-Isopropyltoluene	50.0000	50.2044	100		1		40	75 - 130
n-Butylbenzene	50.0000	48.5951	97		1		40	70 - 135
Naphthalene	50.0000	50.3184	101		3		40	55 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 16 outside limits

Spike Recovery: 0 out of 16 outside limits

COMMENTS:

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
MB-78536

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab File ID: V1N0726.D Lab Sample ID: MB-78536

Instrument ID: V1

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 08/13/2014

Level: (TRACE or LOW/MED) LOW Time Analyzed: 10:34

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-78536	LCS-78536	V1N0724.D	9:27
02	SED-6	N1400-12C	V1N0739.D	16:45
03	SED-7	N1400-14C	V1N0740.D	17:13

COMMENTS:

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
MB-78581

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab File ID: V5P3963.D Lab Sample ID: MB-78581

Instrument ID: V5

Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 08/17/2014

Level: (TRACE or LOW/MED) LOW Time Analyzed: 17:02

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-78581	LCS-78581	V5P3960.D	15:45
02	LCSD-78581	LCSD-78581	V5P3961.D	16:11
03	TRIP BLANK	N1400-17A	V5P3964.D	17:27
04	SUR-2	N1400-01A	V5P3969.D	19:34
05	PW-2	N1400-02A	V5P3970.D	19:59
06	SUR-3	N1400-03A	V5P3971.D	20:25
07	FIELD DUPLICATE	N1400-04A	V5P3972.D	20:51
08	SUR-4	N1400-05A	V5P3973.D	21:16
09	PW-3	N1400-06A	V5P3974.D	21:42
10	FIELD DUPLICATE2	N1400-07A	V5P3975.D	22:07
11	PW-4	N1400-08A	V5P3976.D	22:33
12	SUR 1	N1400-09A	V5P3977.D	22:58
13	SUR 5	N1400-10A	V5P3978.D	23:23
14	SUR-6	N1400-11A	V5P3979.D	23:49
15	SUR-7	N1400-13A	V5P3980.D	0:14
16	SUR-8	N1400-15A	V5P3981.D	0:39
17	EQUIP.BLANK	N1400-16A	V5P3982.D	1:04

COMMENTS:

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 07/21/2014 07/21/2014

EPA Sample No.(VSTD#####): VSTD0501X Date Analyzed: 08/13/2014

Lab File ID (Standard): V1N0723.D Time Analyzed: 8:44

Instrument ID: V1 Heated Purge: (Y/N) Y

		IS1 (S1) AREA	#	RT	#	IS2 (S2) AREA	#	RT	#	IS3 (S3) AREA	#	RT	#
	12 HOUR STD	575897		4.405		362701		7.241		150177		9.811	
	UPPER LIMIT	1151794		4.905		725402		7.741		300354		10.311	
	LOWER LIMIT	287949		3.905		181351		6.741		75089		9.311	
	EPA SAMPLE NO.												
01	LCS-78536	574046		4.394		359037		7.239		140024		9.809	
02	MB-78536	522122		4.400		336540		7.236		130416		9.805	
03	SED-6	475009		4.404		315061		7.250		118467		9.820	
04	SED-7	433153		4.403		297194		7.249		107893		9.809	

IS1 () = Fluorobenzene
IS2 () = Chlorobenzene-d5
IS3 () = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 08/17/2014 08/17/2014

EPA Sample No.(VSTD#####): VSTD0505R Date Analyzed: 08/17/2014

Lab File ID (Standard): V5P3959.D Time Analyzed: 15:20

Instrument ID: V5 Heated Purge: (Y/N) N

		IS1 (S1) AREA	#	RT	#	IS2 (S2) AREA	#	RT	#	IS3 (S3) AREA	#	RT	#
	12 HOUR STD	392770		5.569		267211		9.04		120640		12.198	
	UPPER LIMIT	785540		6.069		534422		9.54		241280		12.698	
	LOWER LIMIT	196385		5.069		133606		8.54		60320		11.698	
	EPA SAMPLE NO.												
01	LCS-78581	407065		5.565		273350		9.037		122733		12.206	
02	LCSD-78581	398163		5.577		275459		9.036		126092		12.206	
03	MB-78581	396676		5.577		265905		9.037		113250		12.194	
04	TRIP BLANK	406533		5.578		270024		9.037		114480		12.195	
05	SUR-2	416012		5.568		276438		9.040		117436		12.197	
06	PW-2	418357		5.565		274963		9.037		119892		12.206	
07	SUR-3	432095		5.568		282594		9.040		117275		12.197	
08	FIELD DUPLICATE	442533		5.571		288369		9.042		123305		12.200	
09	SUR-4	426836		5.568		280669		9.040		119334		12.197	
10	PW-3	440593		5.571		290416		9.042		126447		12.200	
11	FIELD DUPLICATE2	430262		5.569		290648		9.040		123780		12.198	
12	PW-4	444301		5.571		275695		9.042		125975		12.200	
13	SUR 1	435150		5.572		289984		9.043		125496		12.201	
14	SUR 5	440296		5.578		294467		9.038		131104		12.195	

IS1 () = Fluorobenzene
IS2 () = Chlorobenzene-d5
IS3 () = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA

VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 08/17/2014 08/17/2014

EPA Sample No.(VSTD#####): VSTD0505R Date Analyzed: 08/17/2014

Lab File ID (Standard): V5P3959.D Time Analyzed: 15:20

Instrument ID: V5 Heated Purge: (Y/N) N

		IS1 (S1) AREA	#	RT	#	IS2 (S2) AREA	#	RT	#	IS3 (S3) AREA	#	RT	#
	12 HOUR STD	392770		5.569		267211		9.04		120640		12.198	
	UPPER LIMIT	785540		6.069		534422		9.54		241280		12.698	
	LOWER LIMIT	196385		5.069		133606		8.54		60320		11.698	
	EPA SAMPLE NO.												
15	SUR-6	433820		5.566		294605		9.037		129201		12.207	
16	SUR-7	441014		5.565		301619		9.036		127794		12.205	
17	SUR-8	443953		5.576		298356		9.036		129796		12.205	
18	EQUIP.BLANK	440164		5.568		296646		9.039		128856		12.197	

IS1 () = Fluorobenzene
IS2 () = Chlorobenzene-d5
IS3 () = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

* Semivolatile Organics *

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : GZA GeoEnvironmental, Inc.

Project: Steelwinds 1

Laboratory Workorder / SDG #: N1400

SW846 8270D, SVOA by GC-MS

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code: SW846 8270D

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW3510C
Soil Samples were prepared following procedures in laboratory test code: SW3550B

V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: S6
Instrument Type: GCMS-Semi
Description: HP7890A
Manufacturer: Agilent
Model: 7890A/5973

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

Surrogate standard percent recoveries were within the QC limits.

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

No sample in this SDG required analysis at dilution.

G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies

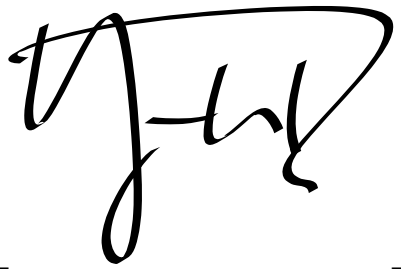
generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

· M1 peak tailing or fronting
· M2 peak co-elution
· M3 rising or falling baseline
· M4 retention time shift
· M5 miscellaneous - under this category, the justification is explained
· M6 software did not integrate peak
· M7 partial peak integration

Manual integrations were performed on the following:

SSTD0256E 2,4-Dinitrotoluene due to M6

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.



Signed:_____ _____

Date:_____8/27/2014_____

Data Flag/Qualifiers (Page 1 of 2):

U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).

J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
- estimated concentration for Tentatively Identified Compound

B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a "trace" concentration below the reporting limit and equal to or above the detection limit.

D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis

E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.

P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.

A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.

* For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.

L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution

RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.

RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.

RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.

MS Matrix Spike.

MSD Matrix Spike Duplicate

DUP Duplicate analysis

SD Serial Dilution

PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-2

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9186.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-2

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9186.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-3

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9187.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-3

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9187.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FIELD DUPLICATE

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9188.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FIELD DUPLICATE

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9188.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-4

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9189.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-4

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9189.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR 1

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-09B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9190.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR 1

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-09B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9190.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR 5

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-10B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9191.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR 5

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-10B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9191.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-6

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-11B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9192.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-6

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-11B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9192.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-6

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1400-12B

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B9199.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 22 Decanted: (Y/N) N Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/19/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
108-60-1	2,2´-oxybis(1-Chloropropane)	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	420	U
111-91-1	Bis(2-chloroethoxy)methane	420	U
87-68-3	Hexachlorobutadiene	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethylphthalate	420	U
208-96-8	Acenaphthylene	420	U
606-20-2	2,6-Dinitrotoluene	420	U
99-09-2	3-Nitroaniline	860	U
83-32-9	Acenaphthene	420	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
86-73-7	Fluorene	420	U
100-01-6	4-Nitroaniline	860	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
85-01-8	Phenanthrene	110	J
120-12-7	Anthracene	420	U
86-74-8	Carbazole	420	U
206-44-0	Fluoranthene	150	J
129-00-0	Pyrene	160	J
85-68-7	Butylbenzylphthalate	420	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-6

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1400-12B

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B9199.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 22 Decanted: (Y/N) N Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/19/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	420	U
56-55-3	Benzo(a)anthracene	88	J
218-01-9	Chrysene	88	J
117-81-7	Bis(2-ethylhexyl)phthalate	420	U
205-99-2	Benzo(b)fluoranthene	100	J
207-08-9	Benzo(k)fluoranthene	420	U
50-32-8	Benzo(a)pyrene	420	U
193-39-5	Indeno(1,2,3-cd)pyrene	420	U
53-70-3	Dibenzo(a,h)anthracene	420	U
191-24-2	Benzo(g,h,i)perylene	420	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-7

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-13B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9193.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-7

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-13B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9193.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-7

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1400-14B

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B9200.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) N Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/19/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
108-60-1	2,2´-oxybis(1-Chloropropane)	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
111-91-1	Bis(2-chloroethoxy)methane	410	U
87-68-3	Hexachlorobutadiene	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	840	U
131-11-3	Dimethylphthalate	410	U
208-96-8	Acenaphthylene	410	U
606-20-2	2,6-Dinitrotoluene	410	U
99-09-2	3-Nitroaniline	840	U
83-32-9	Acenaphthene	410	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
84-66-2	Diethylphthalate	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
86-73-7	Fluorene	410	U
100-01-6	4-Nitroaniline	840	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
86-74-8	Carbazole	410	U
206-44-0	Fluoranthene	86	J
129-00-0	Pyrene	93	J
85-68-7	Butylbenzylphthalate	410	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-7

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N1400-14B

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B9200.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) N Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/19/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	410	U
56-55-3	Benzo(a)anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	Bis(2-ethylhexyl)phthalate	410	U
205-99-2	Benzo(b)fluoranthene	410	U
207-08-9	Benzo(k)fluoranthene	410	U
50-32-8	Benzo(a)pyrene	410	U
193-39-5	Indeno(1,2,3-cd)pyrene	410	U
53-70-3	Dibenzo(a,h)anthracene	410	U
191-24-2	Benzo(g,h,i)perylene	410	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-8

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-15B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9194.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUR-8

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-15B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9194.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIP.BLANK

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-16B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9195.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIP.BLANK

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N1400-16B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9195.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received: 08/08/2014

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-78523

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-78523

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9183.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
108-60-1	2,2´-oxybis(1-Chloropropane)	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
87-68-3	Hexachlorobutadiene	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	20	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-78523

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-78523

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9183.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

EPA SAMPLE NO.
MB-78617

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-78617

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B9196.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/19/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
108-60-1	2,2´-oxybis(1-Chloropropane)	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
87-68-3	Hexachlorobutadiene	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	670	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	670	U
83-32-9	Acenaphthene	330	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	670	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-78617

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-78617

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B9196.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/19/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	Bis(2-ethylhexyl)phthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78523

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-78523

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9184.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	36	
541-73-1	1,3-Dichlorobenzene	33	
106-46-7	1,4-Dichlorobenzene	33	
95-50-1	1,2-Dichlorobenzene	34	
108-60-1	2,2´-oxybis(1-Chloropropane)	37	
67-72-1	Hexachloroethane	33	
98-95-3	Nitrobenzene	38	
78-59-1	Isophorone	39	
120-82-1	1,2,4-Trichlorobenzene	33	
91-20-3	Naphthalene	36	
106-47-8	4-Chloroaniline	32	
111-91-1	Bis(2-chloroethoxy)methane	38	
87-68-3	Hexachlorobutadiene	33	
91-57-6	2-Methylnaphthalene	36	
77-47-4	Hexachlorocyclopentadiene	26	
91-58-7	2-Chloronaphthalene	37	
88-74-4	2-Nitroaniline	40	
131-11-3	Dimethylphthalate	40	
208-96-8	Acenaphthylene	38	
606-20-2	2,6-Dinitrotoluene	40	
99-09-2	3-Nitroaniline	34	
83-32-9	Acenaphthene	39	
132-64-9	Dibenzofuran	39	
121-14-2	2,4-Dinitrotoluene	40	
84-66-2	Diethylphthalate	41	
7005-72-3	4-Chlorophenyl-phenylether	40	
86-73-7	Fluorene	41	
100-01-6	4-Nitroaniline	35	
101-55-3	4-Bromophenyl-phenylether	40	
118-74-1	Hexachlorobenzene	40	
85-01-8	Phenanthrene	42	
120-12-7	Anthracene	40	
86-74-8	Carbazole	41	
206-44-0	Fluoranthene	41	
129-00-0	Pyrene	41	
85-68-7	Butylbenzylphthalate	42	

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78523

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-78523

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9184.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	35	
56-55-3	Benzo(a)anthracene	40	
218-01-9	Chrysene	41	
117-81-7	Bis(2-ethylhexyl)phthalate	43	
205-99-2	Benzo(b)fluoranthene	44	
207-08-9	Benzo(k)fluoranthene	42	
50-32-8	Benzo(a)pyrene	40	
193-39-5	Indeno(1,2,3-cd)pyrene	40	
53-70-3	Dibenzo(a,h)anthracene	40	
191-24-2	Benzo(g,h,i)perylene	38	

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78617

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-78617

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B9197.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/19/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	2300	
541-73-1	1,3-Dichlorobenzene	2400	
106-46-7	1,4-Dichlorobenzene	2400	
95-50-1	1,2-Dichlorobenzene	2400	
108-60-1	2,2´-oxybis(1-Chloropropane)	2400	
67-72-1	Hexachloroethane	2500	
98-95-3	Nitrobenzene	2500	
78-59-1	Isophorone	2400	
120-82-1	1,2,4-Trichlorobenzene	2400	
91-20-3	Naphthalene	2500	
106-47-8	4-Chloroaniline	1100	
111-91-1	Bis(2-chloroethoxy)methane	2400	
87-68-3	Hexachlorobutadiene	2500	
91-57-6	2-Methylnaphthalene	2400	
77-47-4	Hexachlorocyclopentadiene	2800	
91-58-7	2-Chloronaphthalene	2500	
88-74-4	2-Nitroaniline	2500	
131-11-3	Dimethylphthalate	2500	
208-96-8	Acenaphthylene	2600	
606-20-2	2,6-Dinitrotoluene	2500	
99-09-2	3-Nitroaniline	1700	
83-32-9	Acenaphthene	2500	
132-64-9	Dibenzofuran	2500	
121-14-2	2,4-Dinitrotoluene	2500	
84-66-2	Diethylphthalate	2500	
7005-72-3	4-Chlorophenyl-phenylether	2500	
86-73-7	Fluorene	2500	
100-01-6	4-Nitroaniline	2100	
101-55-3	4-Bromophenyl-phenylether	2700	
118-74-1	Hexachlorobenzene	2600	
85-01-8	Phenanthrene	2700	
120-12-7	Anthracene	2600	
86-74-8	Carbazole	2400	
206-44-0	Fluoranthene	2500	
129-00-0	Pyrene	2900	
85-68-7	Butylbenzylphthalate	2800	

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-78617

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-78617

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B9197.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/19/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	1600	
56-55-3	Benzo(a)anthracene	2600	
218-01-9	Chrysene	2500	
117-81-7	Bis(2-ethylhexyl)phthalate	2800	
205-99-2	Benzo(b)fluoranthene	2900	
207-08-9	Benzo(k)fluoranthene	2800	
50-32-8	Benzo(a)pyrene	2600	
193-39-5	Indeno(1,2,3-cd)pyrene	2400	
53-70-3	Dibenzo(a,h)anthracene	2400	
191-24-2	Benzo(g,h,i)perylene	2300	

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-78523

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-78523

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9185.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
111-44-4	Bis(2-chloroethyl)ether	36	
541-73-1	1,3-Dichlorobenzene	33	
106-46-7	1,4-Dichlorobenzene	33	
95-50-1	1,2-Dichlorobenzene	33	
108-60-1	2,2´-oxybis(1-Chloropropane)	37	
67-72-1	Hexachloroethane	33	
98-95-3	Nitrobenzene	39	
78-59-1	Isophorone	40	
120-82-1	1,2,4-Trichlorobenzene	35	
91-20-3	Naphthalene	37	
106-47-8	4-Chloroaniline	33	
111-91-1	Bis(2-chloroethoxy)methane	40	
87-68-3	Hexachlorobutadiene	33	
91-57-6	2-Methylnaphthalene	36	
77-47-4	Hexachlorocyclopentadiene	30	
91-58-7	2-Chloronaphthalene	37	
88-74-4	2-Nitroaniline	41	
131-11-3	Dimethylphthalate	41	
208-96-8	Acenaphthylene	40	
606-20-2	2,6-Dinitrotoluene	41	
99-09-2	3-Nitroaniline	35	
83-32-9	Acenaphthene	39	
132-64-9	Dibenzofuran	40	
121-14-2	2,4-Dinitrotoluene	42	
84-66-2	Diethylphthalate	43	
7005-72-3	4-Chlorophenyl-phenylether	41	
86-73-7	Fluorene	42	
100-01-6	4-Nitroaniline	37	
101-55-3	4-Bromophenyl-phenylether	43	
118-74-1	Hexachlorobenzene	43	
85-01-8	Phenanthrene	45	
120-12-7	Anthracene	44	
86-74-8	Carbazole	44	
206-44-0	Fluoranthene	44	
129-00-0	Pyrene	44	
85-68-7	Butylbenzylphthalate	44	

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-78523

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-78523

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S6B9185.D

Level: (LOW/MED) LOW Extraction: (Type) SEPF

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/12/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-94-1	3,3´-Dichlorobenzidine	40	
56-55-3	Benzo(a)anthracene	43	
218-01-9	Chrysene	43	
117-81-7	Bis(2-ethylhexyl)phthalate	45	
205-99-2	Benzo(b)fluoranthene	47	
207-08-9	Benzo(k)fluoranthene	44	
50-32-8	Benzo(a)pyrene	43	
193-39-5	Indeno(1,2,3-cd)pyrene	41	
53-70-3	Dibenzo(a,h)anthracene	42	
191-24-2	Benzo(g,h,i)perylene	41	

EPA SAMPLE NO.
LCSD-78617

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCSD-78617

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B9198.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/19/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
111-44-4	Bis(2-chloroethyl)ether	2200	
541-73-1	1,3-Dichlorobenzene	2400	
106-46-7	1,4-Dichlorobenzene	2400	
95-50-1	1,2-Dichlorobenzene	2400	
108-60-1	2,2´-oxybis(1-Chloropropane)	2400	
67-72-1	Hexachloroethane	2600	
98-95-3	Nitrobenzene	2600	
78-59-1	Isophorone	2500	
120-82-1	1,2,4-Trichlorobenzene	2500	
91-20-3	Naphthalene	2600	
106-47-8	4-Chloroaniline	1300	
111-91-1	Bis(2-chloroethoxy)methane	2500	
87-68-3	Hexachlorobutadiene	2600	
91-57-6	2-Methylnaphthalene	2400	
77-47-4	Hexachlorocyclopentadiene	3200	
91-58-7	2-Chloronaphthalene	2600	
88-74-4	2-Nitroaniline	2400	
131-11-3	Dimethylphthalate	2400	
208-96-8	Acenaphthylene	2600	
606-20-2	2,6-Dinitrotoluene	2400	
99-09-2	3-Nitroaniline	1600	
83-32-9	Acenaphthene	2600	
132-64-9	Dibenzofuran	2500	
121-14-2	2,4-Dinitrotoluene	2200	
84-66-2	Diethylphthalate	2300	
7005-72-3	4-Chlorophenyl-phenylether	2500	
86-73-7	Fluorene	2500	
100-01-6	4-Nitroaniline	1800	
101-55-3	4-Bromophenyl-phenylether	2800	
118-74-1	Hexachlorobenzene	2600	
85-01-8	Phenanthrene	2700	
120-12-7	Anthracene	2500	
86-74-8	Carbazole	2200	
206-44-0	Fluoranthene	2200	
129-00-0	Pyrene	3100	
85-68-7	Butylbenzylphthalate	2900	

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-78617

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCSD-78617

Sample wt/vol: 15.0 (g/mL) G Lab File ID: S6B9198.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: Decanted: (Y/N) Date Received:

Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/19/2014

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Date Analyzed: 08/26/2014

GPC Cleanup:(Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-94-1	3,3´-Dichlorobenzidine	1700	
56-55-3	Benzo(a)anthracene	2600	
218-01-9	Chrysene	2600	
117-81-7	Bis(2-ethylhexyl)phthalate	2900	
205-99-2	Benzo(b)fluoranthene	2700	
207-08-9	Benzo(k)fluoranthene	2700	
50-32-8	Benzo(a)pyrene	2600	
193-39-5	Indeno(1,2,3-cd)pyrene	2500	
53-70-3	Dibenzo(a,h)anthracene	2400	
191-24-2	Benzo(g,h,i)perylene	2500	

2H - FORM II SV-2

WATER SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

	EPA SAMPLE NO.	SDMC1 (NBZ) #	SDMC2 (FBP) #	SDMC3 (TPH) #	SDMC4 (PHL) #	SDMC5 (2FP) #	SDMC6 (TBP) #			TOT OUT
01	MB-78523	83	78	89	12	21	79			0
02	LCS-78523	82	80	81	12	21	75			0
03	LCSD-78523	82	78	82	13	23	82			0
04	SUR-2	99	99	70						0
05	SUR-3	96	93	77						0
06	FIELD DUPLICATE	91	91	73						0
07	SUR-4	93	91	61						0
08	SUR 1	88	86	62						0
09	SUR 5	88	84	65						0
10	SUR-6	94	91	60						0
11	SUR-7	93	90	66						0
12	SUR-8	91	91	73						0
13	EQUIP.BLANK	90	86	65						0

		QC LIMITS
SDMC1	(NBZ) = Nitrobenzene-d5	(40-110)
SDMC2	(FBP) = 2-Fluorobiphenyl	(50-110)
SDMC3	(TPH) = Terphenyl-d14	(50-135)
SDMC4	(PHL) = Phenol-d5	(10-115)
SDMC5	(2FP) = 2-Fluorophenol	(20-110)
SDMC6	(TBP) = 2,4,6-Tribromophenol	(40-125)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D DMC diluted out

som14.07.15.0901

2K - FORM II SV-4

SOIL SEMIVOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Level: (LOW/MED) LOW

	EPA SAMPLE NO.	SDMC1 (NBZ) #	SDMC2 (FBP) #	SDMC3 (TPH) #	SDMC4 (PHL) #	SDMC5 (2FP) #	SDMC6 (TBP) #			TOT OUT
01	MB-78617	88	88	104	79	83	84			0
02	LCS-78617	79	79	90	73	76	78			0
03	LCSD-78617	80	81	91	70	74	75			0
04	SED-6	70	69	85						0
05	SED-7	71	71	82						0

		QC LIMITS
SDMC1	(NBZ) = Nitrobenzene-d5	(35-100)
SDMC2	(FBP) = 2-Fluorobiphenyl	(45-105)
SDMC3	(TPH) = Terphenyl-d14	(30-125)
SDMC4	(PHL) = Phenol-d5	(40-100)
SDMC5	(2FP) = 2-Fluorophenol	(35-105)
SDMC6	(TBP) = 2,4,6-Tribromophenol	(35-125)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D DMC diluted out

som14.07.15.0901

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78523

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab Sample ID: LCS-78523 LCS Lot No.: A0101343

Date Extracted: 08/12/2014 Date Analyzed (1): 08/26/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Bis(2-chloroethyl)ether	50.0000	0.0000	35.8371	72		35 - 110
1,3-Dichlorobenzene	50.0000	0.0000	33.3076	67		30 - 100
1,4-Dichlorobenzene	50.0000	0.0000	32.7497	65		30 - 100
1,2-Dichlorobenzene	50.0000	0.0000	33.8423	68		35 - 100
2,2´-oxybis(1-Chloropropan	50.0000	0.0000	36.5114	73		30 - 123
Hexachloroethane	50.0000	0.0000	32.7365	65		30 - 95
Nitrobenzene	50.0000	0.0000	38.1701	76		45 - 110
Isophorone	50.0000	0.0000	39.1761	78		50 - 110
1,2,4-Trichlorobenzene	50.0000	0.0000	32.8128	66		35 - 105
Naphthalene	50.0000	0.0000	35.9623	72		40 - 100
4-Chloroaniline	50.0000	0.0000	32.4485	65		15 - 110
Bis(2-chloroethoxy)methane	50.0000	0.0000	38.3174	77		45 - 105
Hexachlorobutadiene	50.0000	0.0000	32.7891	66		25 - 105
2-Methylnaphthalene	50.0000	0.0000	35.6275	71		45 - 105
Hexachlorocyclopentadiene	50.0000	0.0000	25.5880	51		27 - 147
2-Chloronaphthalene	50.0000	0.0000	37.4690	75		50 - 105
2-Nitroaniline	50.0000	0.0000	39.7445	79		50 - 115
Dimethylphthalate	50.0000	0.0000	39.8982	80		25 - 125
Acenaphthylene	50.0000	0.0000	38.2614	77		50 - 105
2,6-Dinitrotoluene	50.0000	0.0000	39.6643	79		50 - 115
3-Nitroaniline	50.0000	0.0000	33.5263	67		20 - 125
Acenaphthene	50.0000	0.0000	39.4338	79		45 - 110
Dibenzofuran	50.0000	0.0000	38.8805	78		55 - 105
2,4-Dinitrotoluene	50.0000	0.0000	39.7524	80		50 - 120
Diethylphthalate	50.0000	0.0000	41.0325	82		40 - 120
4-Chlorophenyl-phenylether	50.0000	0.0000	39.9905	80		50 - 110
Fluorene	50.0000	0.0000	40.8291	82		50 - 110
4-Nitroaniline	50.0000	0.0000	34.7602	70		35 - 120
4-Bromophenyl-phenylether	50.0000	0.0000	40.2182	80		50 - 115
Hexachlorobenzene	50.0000	0.0000	40.2182	80		50 - 110
Phenanthrene	50.0000	0.0000	42.1230	84		50 - 115
Anthracene	50.0000	0.0000	39.7160	79		55 - 110
Carbazole	50.0000	0.0000	40.6085	81		50 - 115
Fluoranthene	50.0000	0.0000	40.9771	82		55 - 115
Pyrene	50.0000	0.0000	40.7860	82		50 - 130
Butylbenzylphthalate	50.0000	0.0000	42.4685	85		45 - 115
3,3´-Dichlorobenzidine	50.0000	0.0000	35.3677	71		20 - 110
Benzo(a)anthracene	50.0000	0.0000	40.3590	81		55 - 110
Chrysene	50.0000	0.0000	40.5772	81		55 - 110
Bis(2-ethylhexyl)phthalate	50.0000	0.0000	43.3964	87		40 - 125
Benzo(b)fluoranthene	50.0000	0.0000	44.1037	88		45 - 120
Benzo(k)fluoranthene	50.0000	0.0000	42.2817	85		45 - 125
Benzo(a)pyrene	50.0000	0.0000	40.4695	81		55 - 110
Indeno(1,2,3-cd)pyrene	50.0000	0.0000	40.1435	80		45 - 125

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78523

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab Sample ID: LCS-78523 LCS Lot No.: A0101343

Date Extracted: 08/12/2014 Date Analyzed (1): 08/26/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dibenzo(a,h)anthracene	50.0000	0.0000	39.6178	79		40 - 125
Benzo(g,h,i)perylene	50.0000	0.0000	38.3131	77		40 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 46 outside limits

COMMENTS:

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78617

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab Sample ID: LCS-78617 LCS Lot No.: A0100278

Date Extracted: 08/19/2014 Date Analyzed (1): 08/26/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Bis(2-chloroethyl)ether	3333.0000	0.0000	2284.0599	69		40 - 105
1,3-Dichlorobenzene	3333.0000	0.0000	2414.7736	72		40 - 100
1,4-Dichlorobenzene	3333.0000	0.0000	2435.6149	73		35 - 105
1,2-Dichlorobenzene	3333.0000	0.0000	2402.8902	72		45 - 95
2,2´-oxybis(1-Chloropropan	3333.0000	0.0000	2435.2038	73		20 - 115
Hexachloroethane	3333.0000	0.0000	2477.3572	74		35 - 110
Nitrobenzene	3333.0000	0.0000	2486.0626	75		40 - 115
Isophorone	3333.0000	0.0000	2422.3603	73		45 - 110
1,2,4-Trichlorobenzene	3333.0000	0.0000	2447.0223	73		45 - 110
Naphthalene	3333.0000	0.0000	2493.0604	75		40 - 105
4-Chloroaniline	3333.0000	0.0000	1082.5902	32		10 - 100
Bis(2-chloroethoxy)methane	3333.0000	0.0000	2426.9051	73		45 - 110
Hexachlorobutadiene	3333.0000	0.0000	2511.0267	75		40 - 115
2-Methylnaphthalene	3333.0000	0.0000	2394.0460	72		45 - 105
Hexachlorocyclopentadiene	3333.0000	0.0000	2800.6269	84		8 - 148
2-Chloronaphthalene	3333.0000	0.0000	2527.2824	76		45 - 105
2-Nitroaniline	3333.0000	0.0000	2481.5649	74		45 - 120
Dimethylphthalate	3333.0000	0.0000	2486.2657	75		50 - 110
Acenaphthylene	3333.0000	0.0000	2584.1970	78		45 - 105
2,6-Dinitrotoluene	3333.0000	0.0000	2459.1814	74		50 - 110
3-Nitroaniline	3333.0000	0.0000	1662.9122	50		25 - 110
Acenaphthene	3333.0000	0.0000	2494.4024	75		45 - 110
Dibenzofuran	3333.0000	0.0000	2487.8849	75		50 - 105
2,4-Dinitrotoluene	3333.0000	0.0000	2463.4300	74		50 - 115
Diethylphthalate	3333.0000	0.0000	2497.1070	75		50 - 115
4-Chlorophenyl-phenylether	3333.0000	0.0000	2499.4214	75		45 - 110
Fluorene	3333.0000	0.0000	2528.0754	76		50 - 110
4-Nitroaniline	3333.0000	0.0000	2085.0292	63		35 - 115
4-Bromophenyl-phenylether	3333.0000	0.0000	2659.5692	80		45 - 115
Hexachlorobenzene	3333.0000	0.0000	2618.6763	79		45 - 120
Phenanthrene	3333.0000	0.0000	2685.5156	81		50 - 110
Anthracene	3333.0000	0.0000	2598.0920	78		55 - 105
Carbazole	3333.0000	0.0000	2393.9794	72		45 - 115
Fluoranthene	3333.0000	0.0000	2451.7403	74		55 - 115
Pyrene	3333.0000	0.0000	2891.9947	87		45 - 125
Butylbenzylphthalate	3333.0000	0.0000	2835.2274	85		50 - 125
3,3´-Dichlorobenzidine	3333.0000	0.0000	1611.0718	48		10 - 130
Benzo(a)anthracene	3333.0000	0.0000	2589.7746	78		50 - 110
Chrysene	3333.0000	0.0000	2539.1297	76		55 - 110
Bis(2-ethylhexyl)phthalate	3333.0000	0.0000	2835.1748	85		45 - 125
Benzo(b)fluoranthene	3333.0000	0.0000	2874.1072	86		45 - 115
Benzo(k)fluoranthene	3333.0000	0.0000	2767.4625	83		45 - 125
Benzo(a)pyrene	3333.0000	0.0000	2648.1375	79		50 - 110
Indeno(1,2,3-cd)pyrene	3333.0000	0.0000	2397.1392	72		40 - 120

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.
LCS-78617

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab Sample ID: LCS-78617 LCS Lot No.: A0100278

Date Extracted: 08/19/2014 Date Analyzed (1): 08/26/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dibenzo(a,h)anthracene	3333.0000	0.0000	2380.4103	71		40 - 125
Benzo(g,h,i)perylene	3333.0000	0.0000	2344.4409	70		40 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 46 outside limits

COMMENTS:

3 - FORM III

WATER LABORATORY CONTROL

SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-78523

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab Sample ID: LCSD-78523 LCS Lot No.: A0101343

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS RPD	QC LIMITS REC.
Bis(2-chloroethyl)ether	50.0000	36.2309	72		0		40	35 - 110
1,3-Dichlorobenzene	50.0000	33.1878	66		2		40	30 - 100
1,4-Dichlorobenzene	50.0000	32.7366	65		0		40	30 - 100
1,2-Dichlorobenzene	50.0000	33.2666	67		1		40	35 - 100
2,2´-oxybis(1-Chloropropan	50.0000	36.8424	74		1		40	30 - 123
Hexachloroethane	50.0000	33.3947	67		3		40	30 - 95
Nitrobenzene	50.0000	39.2808	79		4		40	45 - 110
Isophorone	50.0000	40.3965	81		4		40	50 - 110
1,2,4-Trichlorobenzene	50.0000	34.6009	69		4		40	35 - 105
Naphthalene	50.0000	37.2860	75		4		40	40 - 100
4-Chloroaniline	50.0000	32.8629	66		2		40	15 - 110
Bis(2-chloroethoxy)methane	50.0000	39.9771	80		4		40	45 - 105
Hexachlorobutadiene	50.0000	32.8809	66		0		40	25 - 105
2-Methylnaphthalene	50.0000	36.0982	72		1		40	45 - 105
Hexachlorocyclopentadiene	50.0000	30.1643	60		16		40	27 - 147
2-Chloronaphthalene	50.0000	37.3265	75		0		40	50 - 105
2-Nitroaniline	50.0000	41.0711	82		4		40	50 - 115
Dimethylphthalate	50.0000	41.3515	83		4		40	25 - 125
Acenaphthylene	50.0000	40.3692	81		5		40	50 - 105
2,6-Dinitrotoluene	50.0000	40.5923	81		3		40	50 - 115
3-Nitroaniline	50.0000	34.8982	70		4		40	20 - 125
Acenaphthene	50.0000	39.3352	79		0		40	45 - 110
Dibenzofuran	50.0000	39.8176	80		3		40	55 - 105
2,4-Dinitrotoluene	50.0000	42.1370	84		5		40	50 - 120
Diethylphthalate	50.0000	42.9340	86		5		40	40 - 120
4-Chlorophenyl-phenylether	50.0000	40.5961	81		1		40	50 - 110
Fluorene	50.0000	41.5754	83		1		40	50 - 110
4-Nitroaniline	50.0000	36.9847	74		6		40	35 - 120
4-Bromophenyl-phenylether	50.0000	42.8431	86		7		40	50 - 115
Hexachlorobenzene	50.0000	42.7244	85		6		40	50 - 110
Phenanthrene	50.0000	45.0302	90		7		40	50 - 115
Anthracene	50.0000	43.6473	87		10		40	55 - 110
Carbazole	50.0000	44.0407	88		8		40	50 - 115
Fluoranthene	50.0000	43.8846	88		7		40	55 - 115
Pyrene	50.0000	43.7760	88		7		40	50 - 130
Butylbenzylphthalate	50.0000	44.0672	88		3		40	45 - 115
3,3´-Dichlorobenzidine	50.0000	40.3235	81		13		40	20 - 110
Benzo(a)anthracene	50.0000	43.4801	87		7		40	55 - 110
Chrysene	50.0000	43.3780	87		7		40	55 - 110
Bis(2-ethylhexyl)phthalate	50.0000	44.5894	89		2		40	40 - 125
Benzo(b)fluoranthene	50.0000	46.5493	93		6		40	45 - 120
Benzo(k)fluoranthene	50.0000	43.9745	88		3		40	45 - 125
Benzo(a)pyrene	50.0000	43.0186	86		6		40	55 - 110
Indeno(1,2,3-cd)pyrene	50.0000	41.0705	82		2		40	45 - 125
Dibenzo(a,h)anthracene	50.0000	41.8649	84		6		40	40 - 125
Benzo(g,h,i)perylene	50.0000	40.5737	81		5		40	40 - 125

3 - FORM III

WATER LABORATORY CONTROL

SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-78523

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab Sample ID: LCSD-78523 LCS Lot No.: A0101343

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC #	%RPD #	QC LIMITS RPD	QC LIMITS REC.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 46 outside limits

Spike Recovery: 0 out of 46 outside limits

COMMENTS:

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.
LCSD-78617

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab Sample ID: LCSD-78617 LCS Lot No.: A0100278

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS RPD	QC LIMITS REC.
Bis(2-chloroethyl)ether	3333.0000	2239.8452	67		3		40	40 - 105
1,3-Dichlorobenzene	3333.0000	2431.9935	73		1		40	40 - 100
1,4-Dichlorobenzene	3333.0000	2439.5603	73		0		40	35 - 105
1,2-Dichlorobenzene	3333.0000	2432.4544	73		1		40	45 - 95
2,2´-oxybis(1-Chloropropan	3333.0000	2420.8707	73		0		40	20 - 115
Hexachloroethane	3333.0000	2556.9428	77		4		40	35 - 110
Nitrobenzene	3333.0000	2586.0403	78		4		40	40 - 115
Isophorone	3333.0000	2456.3938	74		1		40	45 - 110
1,2,4-Trichlorobenzene	3333.0000	2518.6676	76		4		40	45 - 110
Naphthalene	3333.0000	2577.6848	77		3		40	40 - 105
4-Chloroaniline	3333.0000	1269.1931	38		17		40	10 - 100
Bis(2-chloroethoxy)methane	3333.0000	2502.0912	75		3		40	45 - 110
Hexachlorobutadiene	3333.0000	2616.8467	79		5		40	40 - 115
2-Methylnaphthalene	3333.0000	2433.3232	73		1		40	45 - 105
Hexachlorocyclopentadiene	3333.0000	3177.4738	95		12		40	8 - 148
2-Chloronaphthalene	3333.0000	2600.4635	78		3		40	45 - 105
2-Nitroaniline	3333.0000	2397.2236	72		3		40	45 - 120
Dimethylphthalate	3333.0000	2407.0212	72		4		40	50 - 110
Acenaphthylene	3333.0000	2602.4022	78		0		40	45 - 105
2,6-Dinitrotoluene	3333.0000	2377.8912	71		4		40	50 - 110
3-Nitroaniline	3333.0000	1640.3559	49		2		40	25 - 110
Acenaphthene	3333.0000	2561.1900	77		3		40	45 - 110
Dibenzofuran	3333.0000	2495.2499	75		0		40	50 - 105
2,4-Dinitrotoluene	3333.0000	2224.6481	67		10		40	50 - 115
Diethylphthalate	3333.0000	2344.9041	70		7		40	50 - 115
4-Chlorophenyl-phenylether	3333.0000	2476.3687	74		1		40	45 - 110
Fluorene	3333.0000	2476.9505	74		3		40	50 - 110
4-Nitroaniline	3333.0000	1832.6684	55		14		40	35 - 115
4-Bromophenyl-phenylether	3333.0000	2788.7904	84		5		40	45 - 115
Hexachlorobenzene	3333.0000	2647.1092	79		0		40	45 - 120
Phenanthrene	3333.0000	2664.3301	80		1		40	50 - 110
Anthracene	3333.0000	2544.4806	76		3		40	55 - 105
Carbazole	3333.0000	2215.0221	66		9		40	45 - 115
Fluoranthene	3333.0000	2243.6710	67		10		40	55 - 115
Pyrene	3333.0000	3061.2618	92		6		40	45 - 125
Butylbenzylphthalate	3333.0000	2855.5038	86		1		40	50 - 125
3,3´-Dichlorobenzidine	3333.0000	1722.7151	52		8		40	10 - 130
Benzo(a)anthracene	3333.0000	2583.9414	78		0		40	50 - 110
Chrysene	3333.0000	2591.2639	78		3		40	55 - 110
Bis(2-ethylhexyl)phthalate	3333.0000	2864.1859	86		1		40	45 - 125
Benzo(b)fluoranthene	3333.0000	2712.9195	81		6		40	45 - 115
Benzo(k)fluoranthene	3333.0000	2693.2680	81		2		40	45 - 125
Benzo(a)pyrene	3333.0000	2586.8450	78		1		40	50 - 110
Indeno(1,2,3-cd)pyrene	3333.0000	2532.3041	76		5		40	40 - 120
Dibenzo(a,h)anthracene	3333.0000	2417.5796	73		3		40	40 - 125
Benzo(g,h,i)perylene	3333.0000	2486.7503	75		7		40	40 - 125

3 - FORM III
SOIL LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.
LCSD-78617

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab Sample ID: LCSD-78617 LCS Lot No.: A0100278

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC #	%RPD #	QC LIMITS RPD	QC LIMITS REC.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 46 outside limits

Spike Recovery: 0 out of 46 outside limits

COMMENTS:

4C - FORM IV SV

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB-78523

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab File ID: S6B9183.D Lab Sample ID: MB-78523

Instrument ID: S6 Date Extracted: 08/12/2014

Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 08/26/2014

Level: (LOW/MED) LOW Time Analyzed: 14:19

Extraction: (Type) SEPF GPC Cleanup: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS-78523	LCS-78523	S6B9184.D	08/26/2014
02	LCSD-78523	LCSD-78523	S6B9185.D	08/26/2014
03	SUR-2	N1400-01B	S6B9186.D	08/26/2014
04	SUR-3	N1400-03B	S6B9187.D	08/26/2014
05	FIELD DUPLICATE	N1400-04B	S6B9188.D	08/26/2014
06	SUR-4	N1400-05B	S6B9189.D	08/26/2014
07	SUR 1	N1400-09B	S6B9190.D	08/26/2014
08	SUR 5	N1400-10B	S6B9191.D	08/26/2014
09	SUR-6	N1400-11B	S6B9192.D	08/26/2014
10	SUR-7	N1400-13B	S6B9193.D	08/26/2014
11	SUR-8	N1400-15B	S6B9194.D	08/26/2014
12	EQUIP.BLANK	N1400-16B	S6B9195.D	08/26/2014

COMMENTS:

4C - FORM IV SV

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB-78617

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

Lab File ID: S6B9196.D Lab Sample ID: MB-78617

Instrument ID: S6 Date Extracted: 08/19/2014

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 08/26/2014

Level: (LOW/MED) LOW Time Analyzed: 19:20

Extraction: (Type) SONC GPC Cleanup: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS-78617	LCS-78617	S6B9197.D	08/26/2014
02	LCSD-78617	LCSD-78617	S6B9198.D	08/26/2014
03	SED-6	N1400-12B	S6B9199.D	08/26/2014
04	SED-7	N1400-14B	S6B9200.D	08/26/2014

COMMENTS:

8C - FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

GC Column: Rxi-5sil MS ID: 0.25 (mm) Init. Calib. Date(s): 08/06/2014 08/06/2014

EPA Sample No.(SSTD020##) SSTD0256R Date Analyzed: 08/26/2014

Lab File ID (Standard): S6B9175.D Time Analyzed: 10:59

Instrument ID: S6

		IS1 (DCB) AREA	#	RT	#	IS2 (NPT) AREA	#	RT	#	IS3 (ANT) AREA	#	RT	#
	12 HOUR STD	252538		4.402		976362		5.483		708412		6.934	
	UPPER LIMIT	505076		4.902		1952724		5.983		1416824		7.434	
	LOWER LIMIT	126269		3.902		488181		4.983		354206		6.434	
	EPA SAMPLE NO.												
01	MB-78523	262213		4.402		966484		5.483		699841		6.934	
02	LCS-78523	278072		4.402		1047093		5.483		742584		6.940	
03	LCSD-78523	288103		4.402		1060714		5.483		757954		6.940	
04	SUR-2	195820		4.402		748204		5.477		533315		6.934	
05	SUR-3	209022		4.402		779413		5.477		564083		6.934	
06	FIELD DUPLICATE	209022		4.402		799557		5.477		568602		6.934	
07	SUR-4	204469		4.402		776465		5.477		550868		6.934	
08	SUR 1	214637		4.402		836545		5.477		595168		6.934	
09	SUR 5	204479		4.402		738964		5.477		532222		6.934	
10	SUR-6	211428		4.402		804351		5.477		566152		6.934	
11	SUR-7	210923		4.402		776531		5.477		561290		6.934	
12	SUR-8	208826		4.402		776150		5.477		558474		6.934	
13	EQUIP.BLANK	213539		4.402		812387		5.477		573027		6.934	
14	MB-78617	343628		4.408		1258632		5.483		844177		6.934	
15	LCS-78617	368647		4.408		1363891		5.483		924376		6.940	

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8C - FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

GC Column: Rxi-5sil MS ID: 0.25 (mm) Init. Calib. Date(s): 08/06/2014 08/06/2014

EPA Sample No.(SSTD020##) SSTD0256R Date Analyzed: 08/26/2014

Lab File ID (Standard): S6B9175.D Time Analyzed: 10:59

Instrument ID: S6

		IS1 (DCB) AREA	#	RT	#	IS2 (NPT) AREA	#	RT	#	IS3 (ANT) AREA	#	RT	#
	12 HOUR STD	252538		4.402		976362		5.483		708412		6.934	
	UPPER LIMIT	505076		4.902		1952724		5.983		1416824		7.434	
	LOWER LIMIT	126269		3.902		488181		4.983		354206		6.434	
	EPA SAMPLE NO.												
16	LCSD-78617	407655		4.408		1436837		5.483		925126		6.940	
17	SED-6	396375		4.408		1416900		5.483		940400		6.934	
18	SED-7	378576		4.408		1383048		5.483		937678		6.934	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8D - FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

EPA Sample No.(SSTD020##) SSTD0256R Date Analyzed: 08/26/2014

Lab File ID (Standard): S6B9175.D Time Analyzed: 10:59

Instrument ID: S6 GC Column: Rxi-5sil MS ID: 0.25 (mm)

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	1540093		8.162		1778943		10.383		1681229		12.152	
	UPPER LIMIT	3080186		8.662		3557886		10.883		3362458		12.652	
	LOWER LIMIT	770047		7.662		889472		9.883		840615		11.652	
	EPA SAMPLE NO.												
01	MB-78523	1469653		8.156		1533786		10.377		1245040		12.140	
02	LCS-78523	1566527		8.156		1642736		10.383		1324050		12.140	
03	LCSD-78523	1554293		8.162		1644943		10.389		1310256		12.146	
04	SUR-2	1191938		8.157		1377289		10.372		1284766		12.134	
05	SUR-3	1195081		8.156		1334775		10.372		1105044		12.134	
06	FIELD DUPLICATE	1211838		8.156		1324736		10.372		1137672		12.134	
07	SUR-4	1194376		8.157		1305311		10.372		1144412		12.128	
08	SUR 1	1295869		8.157		1447089		10.372		1254541		12.134	
09	SUR 5	1145063		8.156		1314578		10.372		1154061		12.128	
10	SUR-6	1211780		8.156		1375297		10.371		1152241		12.128	
11	SUR-7	1215344		8.156		1335438		10.365		1131857		12.122	
12	SUR-8	1211824		8.156		1318944		10.366		1122676		12.122	
13	EQUIP.BLANK	1216520		8.156		1288703		10.366		1016108		12.122	
14	MB-78617	1627700		8.157		1271854		10.366		884077		12.117	
15	LCS-78617	1821316		8.162		1586319		10.372		1094622		12.123	

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area

AREA LOWER LIMIT = 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8D - FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: N1400 Mod. Ref No.: SDG No.: SN1400

EPA Sample No.(SSTD020##) SSTD0256R Date Analyzed: 08/26/2014

Lab File ID (Standard): S6B9175.D Time Analyzed: 10:59

Instrument ID: S6 GC Column: Rxi-5sil MS ID: 0.25 (mm)

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	1540093		8.162		1778943		10.383		1681229		12.152	
	UPPER LIMIT	3080186		8.662		3557886		10.883		3362458		12.652	
	LOWER LIMIT	770047		7.662		889472		9.883		840615		11.652	
	EPA SAMPLE NO.												
16	LCSD-78617	1679681		8.156		1271700		10.366		929215		12.117	
17	SED-6	1745706		8.156		1265992		10.366		866846		12.117	
18	SED-7	1793216		8.156		1453446		10.366		1004360		12.116	

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

* Wet Chemistry *

CASE NARRATIVE

Spectrum Analytical, Inc. Lab Reference No. SB94557

Client: Spectrum Analytical, Inc. - North Kingstown, RI

Project: Steelwinds 1 / N1400

SDG #: 94557

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception or a communication form is included in the addendum with this package.

II. HOLDING TIMES

All samples were prepared and analyzed within the method-specific holding time.

III. METHODS

Analyses were performed according to Lloyd Kahn.

IV. PREPARATION

Soil/Sediment samples were prepared according to General Preparation.

V. INSTRUMENTATION

The following equipment was used to analyze Lloyd Kahn:

TOC2 details: Teledyne Tekmar Apollo 9000 / TOC Boat Sampler Model 183

VI. ANALYSIS

A. Calibration:

All quality control samples were within the acceptance criteria.

B. Blanks:

All blanks were within the acceptance criteria.

C. Spikes:

1. Laboratory Control Samples (LCS):

All method criteria were met.

2. Matrix Spike / Matrix Spike Duplicate Samples (MS/MSD):

No matrix spike or matrix spike duplicates were analyzed.

3. Reference:

All method criteria were met.

D. Duplicates:

No client requested duplicate. However, the method criteria may have been fulfilled with non-SDG source samples.

E. Samples:

All method criteria were met.

FORM I - INORGANIC ANALYSIS DATA SHEET

Lloyd Kahn

SED-6

Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	94557
Client:	Spectrum Analytical, Inc. - North Kingstown, RI			Project:	Steelwinds 1
Project Number:	N1400			Received:	08/13/14 17:18
Matrix:	Soil	Laboratory ID:	SB94557-01	File ID:	
Sampled:	08/06/14 14:35	Prepared:	08/20/14 12:00	Analyzed:	08/20/14 17:17
% Solids:		Preparation:	General Preparation	Initial/Final:	10 g / 10 ml
Batch:	1419600	Sequence:	S409434	Calibration:	1407011
Instrument:	TOC2				
Reported to:	MRL				

CAS NO.	Analyte	Result (mg/kg)	Dilution Factor	MDL	MRL	Q
NA	Total Organic Carbon	2370	1	44.9	1000	

FORM I - INORGANIC ANALYSIS DATA SHEET

Lloyd Kahn

SED-7

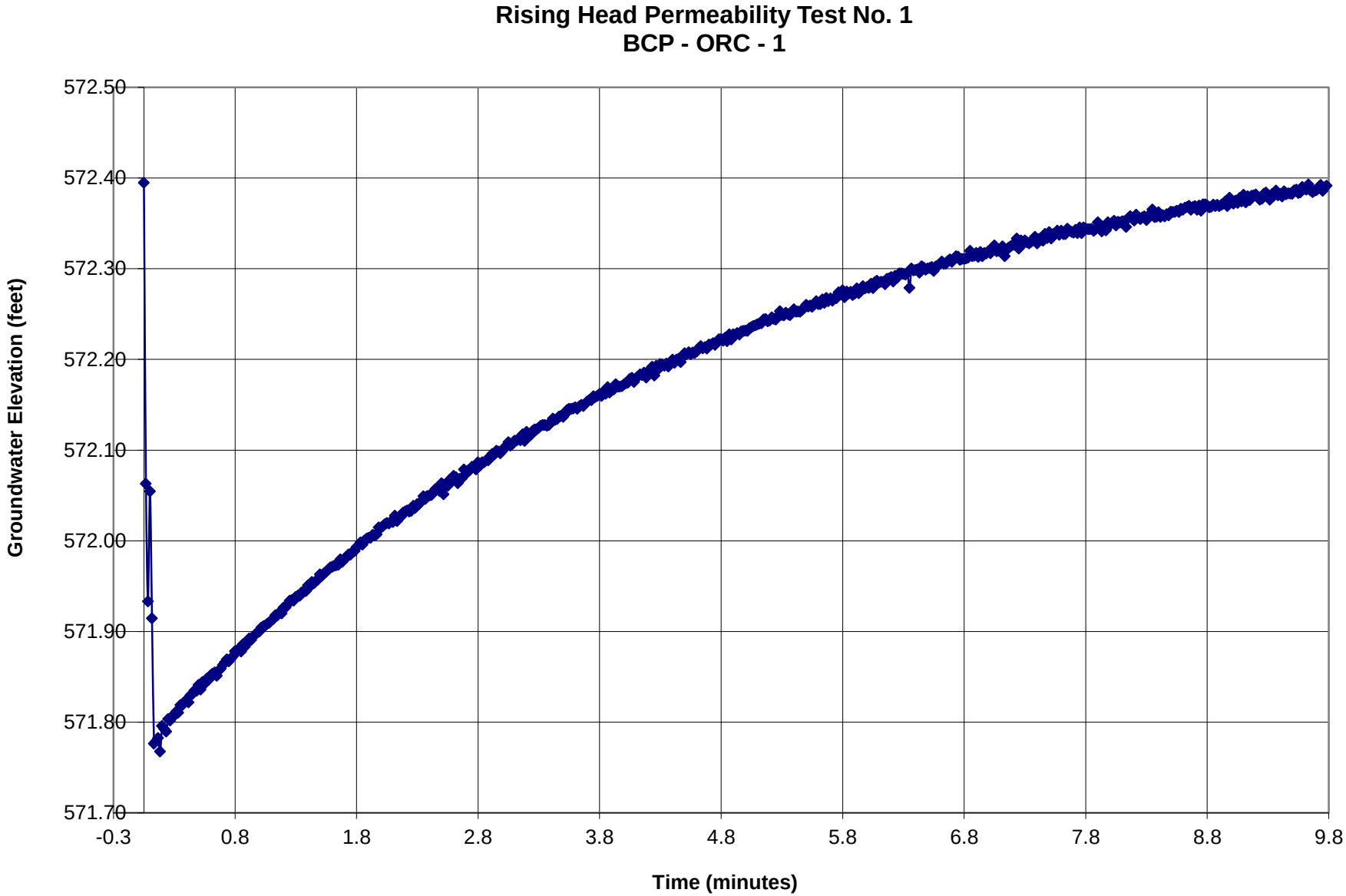
Laboratory:	Spectrum Analytical, Inc. - Agawam, MA			SDG:	94557
Client:	Spectrum Analytical, Inc. - North Kingstown, RI			Project:	Steelwinds 1
Project Number:	N1400			Received:	08/13/14 17:18
Matrix:	Soil	Laboratory ID:	SB94557-02	File ID:	
Sampled:	08/06/14 15:15	Prepared:	08/20/14 12:00	Analyzed:	08/20/14 17:39
% Solids:		Preparation:	General Preparation	Initial/Final:	10 g / 10 ml
Batch:	1419600	Sequence:	S409434	Calibration:	1407011
Instrument:	TOC2				
Reported to:	MRL				

CAS NO.	Analyte	Result (mg/kg)	Dilution Factor	MDL	MRL	Q
NA	Total Organic Carbon	1020	1	44.9	1000	

APPENDIX D

HYDRAULIC CONDUCTIVITY TEST CALCULATIONS

Steel Winds I Site
Lackawanna, NY
03.0033579.07



Bouwer & Rice Slug Test Method
Hydraulic Conductivity Calculation Worksheet
Rising Head Test No. 1
Project : 03.0033579.06 Steel Winds

Date 7/15/2014
Well No BCP - ORC -1

H =	15.53	feet	(aquifer thickness)
Le =	15.53	feet	(wetted screen length)
Lw =	15.53	feet	(length from bottom of well to static water table)
rw =	0.583	feet	(borehole radius)
rc =	0.167	feet	(well radius)
n =	0.30		(porosity of gravel pack)
yo =	0.83	feet	(drawdown difference for initial reading at flat portion of curve--see log graph)
yt =	0.54	feet	(drawdown difference for end reading at flat portion of curve--see log graph)
t =	4.32	min	(change in time from yo to yt)
Le/rw=	26.6		(calculated ratio)
A =	2.36	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
B =	0.37	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
C =	1.82	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
rc' =	*0.349*		(effective radius)

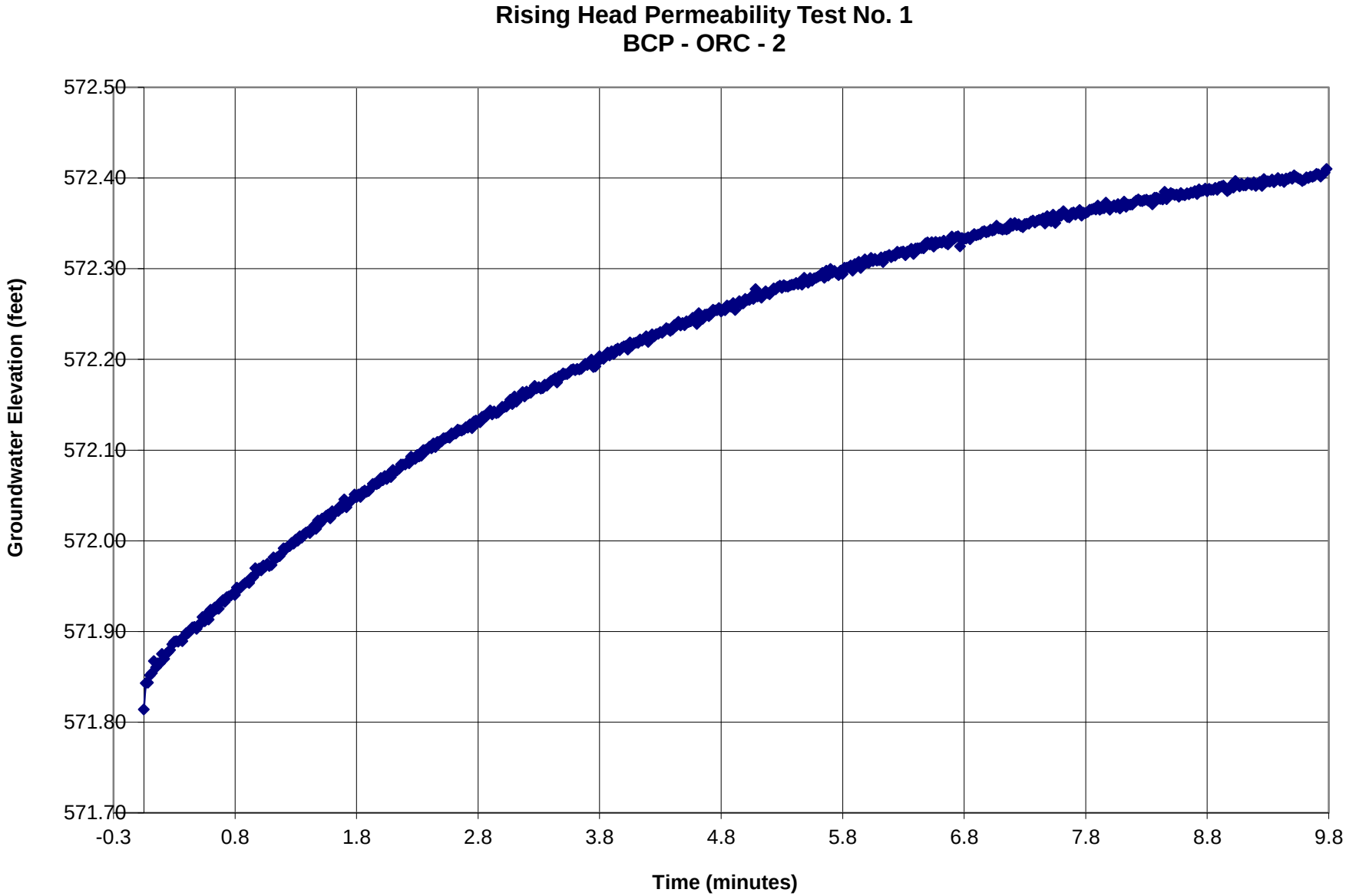
m = 0.653

if well d = 2 inch, m = 0.163
if d = 4 inch, m = 0.653
if d = 6 inch, m = 1.469

FOR Lw=H

ln Re =	*1.940*				
Re =	*6.959*	*feet*			
			K =	*9.65E-04*	*ft/min*	*(hydraulic conductivity)*
			K =	***4.90E-04***	***cm/sec***	***(hydraulic conductivity)***
			K =	*1.39E+00*	*ft/day*	*(hydraulic conductivity)*
			T =	*2.16E+01*	*ft^2/day*	*(transmissivity)*
			T =	***161.44***	***gpd/ft***	***(transmissivity)***
			Q =	*0.0315*	*ft^3/min*	*(flowrate)*
			Q =	*0.236*	*gpm*	*(flowrate)*

Steel Winds I Site
Lackawanna, NY
03.0033579.07



Bouwer & Rice Slug Test Method
Hydraulic Conductivity Calculation Worksheet
Rising Head Test No. 2
Project : 03.0033579.06 Steel Winds

Date 7/15/2014
Well No BCP - ORC -1

H =	15.53	feet	(aquifer thickness)
Le =	15.53	feet	(wetted screen length)
Lw =	15.53	feet	(length from bottom of well to static water table)
rw =	0.583	feet	(borehole radius)
rc =	0.167	feet	(well radius)
n =	0.30		(porosity of gravel pack)
yo =	0.80	feet	(drawdown difference for initial reading at flat portion of curve--see log graph)
yt =	0.55	feet	(drawdown difference for end reading at flat portion of curve--see log graph)
t =	3.60	min	(change in time from yo to yt)
Le/rw=	26.6		(calculated ratio)
A =	2.36	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
B =	0.37	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
C =	1.82	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
rc' =	*0.349*		(effective radius)

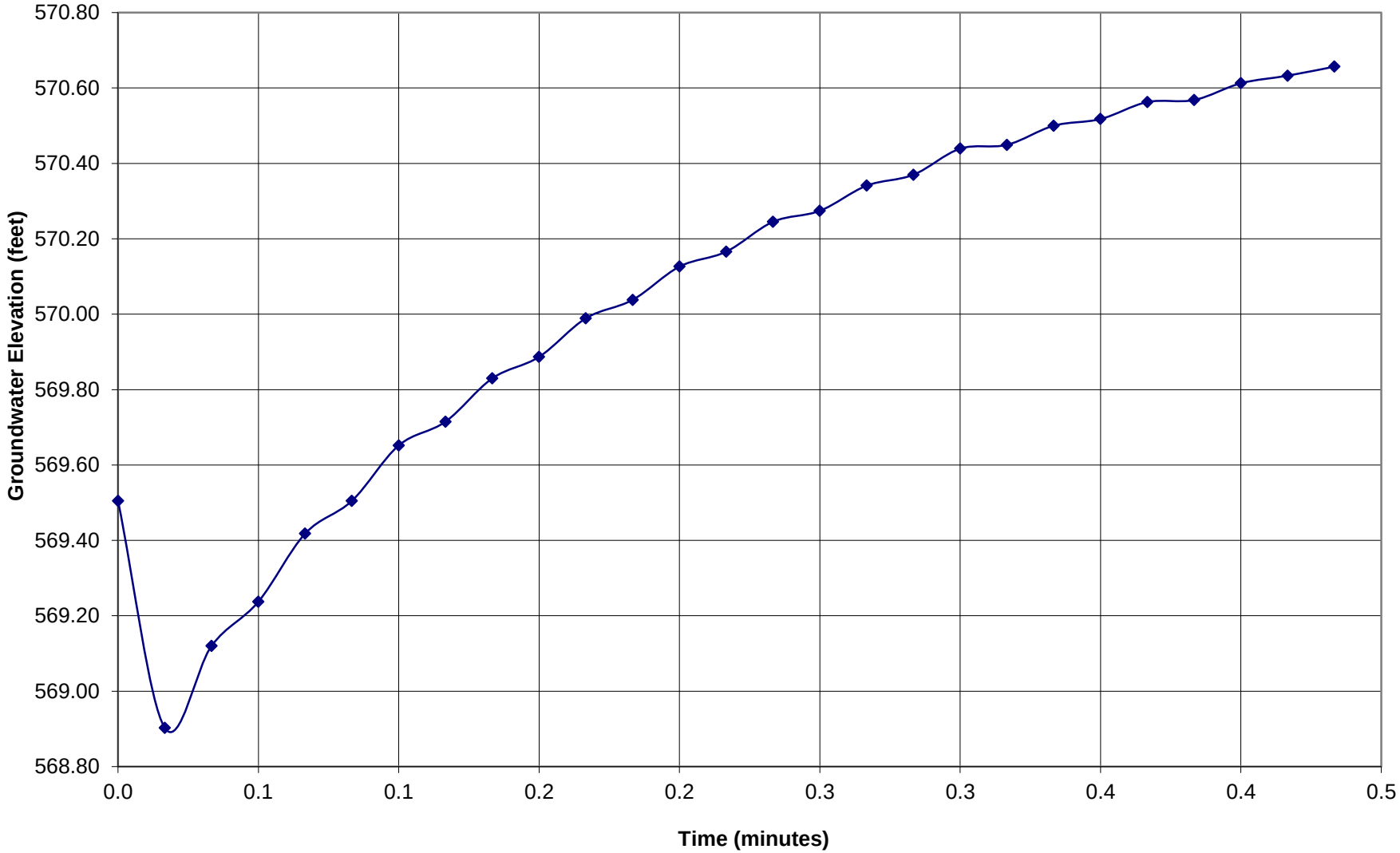
m = 0.653
if well d = 2 inch, m = 0.163
if d = 4 inch, m = 0.653
if d = 6 inch, m = 1.469

FOR Lw=H

ln Re =	*1.940*				
Re =	*6.959*	*feet*			
			K =	*1.01E-03*	*ft/min*	*(hydraulic conductivity)*
			K =	***5.13E-04***	***cm/sec***	***(hydraulic conductivity)***
			K =	*1.45E+00*	*ft/day*	*(hydraulic conductivity)*
			T =	*2.26E+01*	*ft^2/day*	*(transmissivity)*
			T =	***168.86***	***gpd/ft***	***(transmissivity)***
			Q =	*0.0318*	*ft^3/min*	*(flowrate)*
			Q =	*0.238*	*gpm*	*(flowrate)*

Steel Winds I Site
Lackawanna, NY
03.0033579.07

Rising Head Permeability Test No. 1
MWN-01B



Bouwer & Rice Slug Test Method
Hydraulic Conductivity Calculation Worksheet
Rising Head Test No. 1
Project : 03.0033579.06 Steel Winds

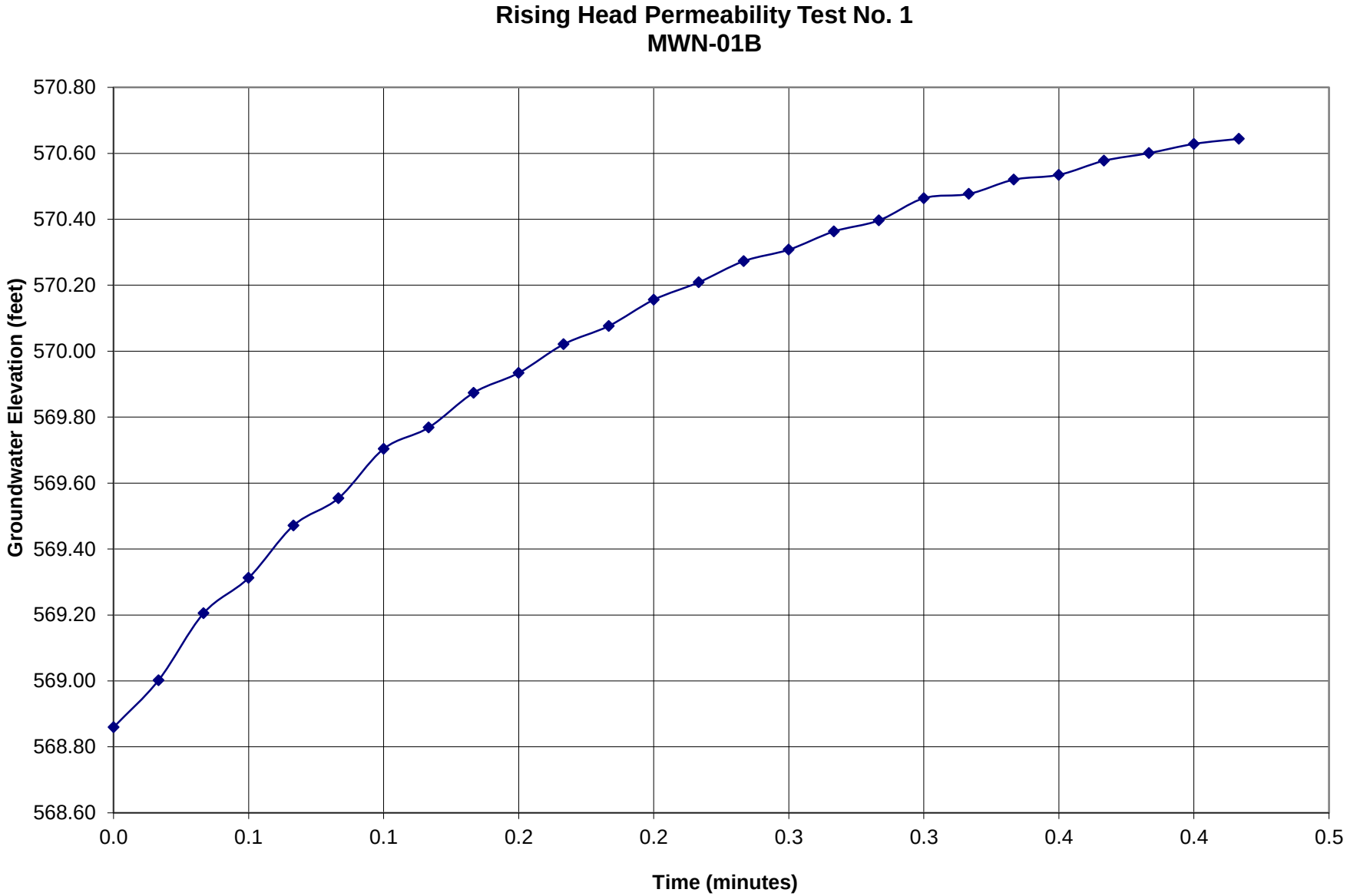
Date 7/15/2014
Well No MWN-01B

H =	17.47	feet	(aquifer thickness)
Le =	17.47	feet	(wetted screen length)
Lw =	17.47	feet	(length from bottom of well to static water table)
rw =	0.161	feet	(borehole radius)
rc =	0.083	feet	(well radius)
n =	0.30		(porosity of gravel pack)
yo =	1.53	feet	(drawdown difference for initial reading at flat portion of curve--see log graph)
yt =	0.51	feet	(drawdown difference for end reading at flat portion of curve--see log graph)
t =	0.23	min	(change in time from yo to yt)
Le/rw=	108.5		(calculated ratio)
A =	4.47	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
B =	0.76	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
C =	4.50	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
rc' =	*0.112*		(effective radius)
m =	0.163		if well d = 2 inch, m = 0.163 if d = 4 inch, m = 0.653 if d = 6 inch, m = 1.469

FOR Lw=H

ln Re =	*1.795*		*K =*	*6.24E-03*	*ft/min*	*(hydraulic conductivity)*
Re =	*6.020*	*feet*	***K =***	***3.17E-03***	***cm/sec***	***(hydraulic conductivity)***
			K =	*8.98E+00*	*ft/day*	*(hydraulic conductivity)*
			T =	*1.57E+02*	*ft^2/day*	*(transmissivity)*
			T =	***1173.67***	***gpd/ft***	***(transmissivity)***
			Q =	*0.2891*	*ft^3/min*	*(flowrate)*
			Q =	*2.163*	*gpm*	*(flowrate)*

Steel Winds I Site
Lackawanna, NY
03.0033579.07



Bouwer & Rice Slug Test Method
Hydraulic Conductivity Calculation Worksheet
Rising Head Test No. 2
Project : 03.0033579.06 Steel Winds

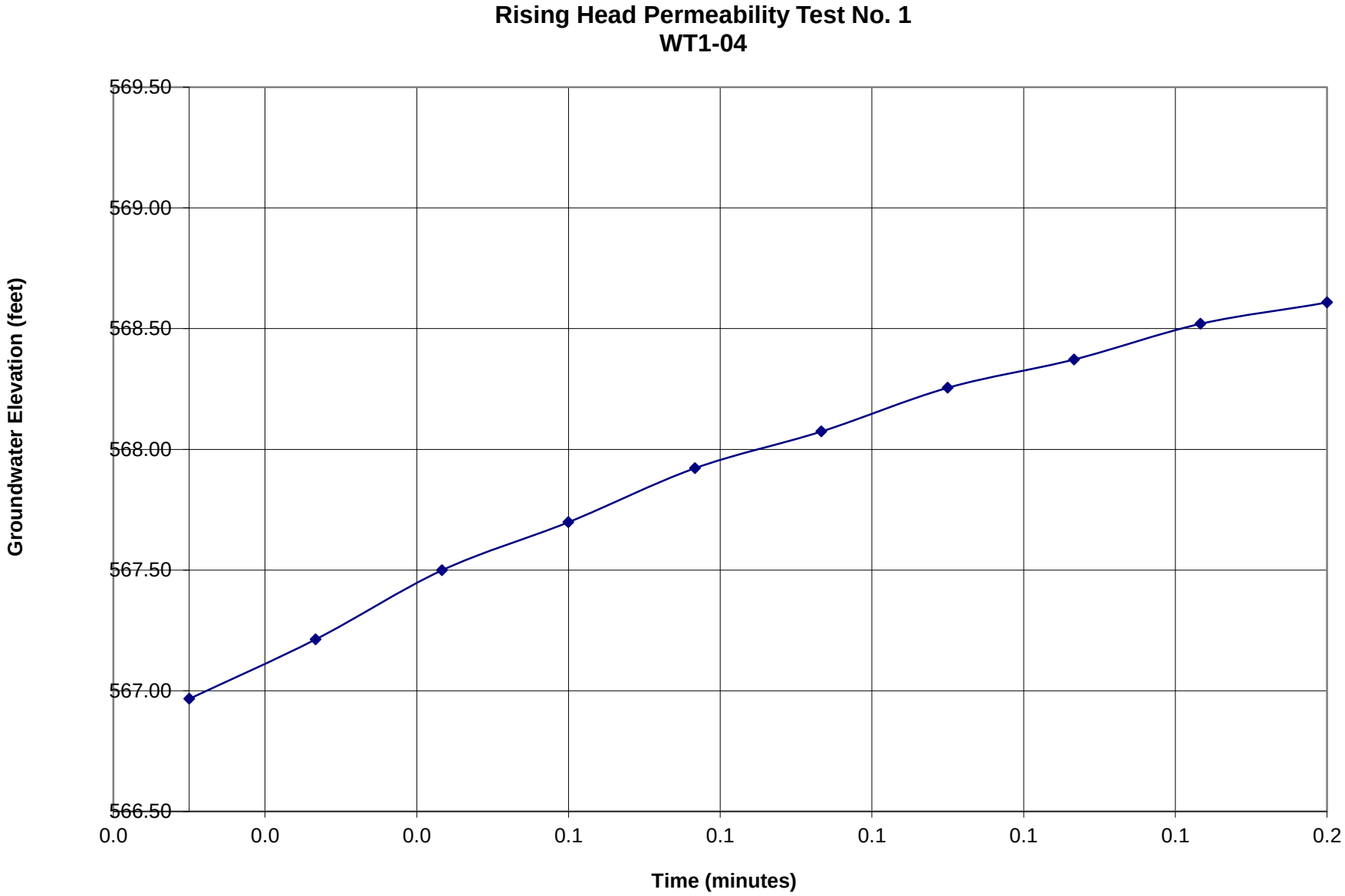
Date 7/15/2014
Well No MWN-01B

H =	17.47	feet	(aquifer thickness)
Le =	17.47	feet	(wetted screen length)
Lw =	17.47	feet	(length from bottom of well to static water table)
rw =	0.161	feet	(borehole radius)
rc =	0.083	feet	(well radius)
n =	0.30		(porosity of gravel pack)
yo =	1.64	feet	(drawdown difference for initial reading at flat portion of curve--see log graph)
yt =	0.49	feet	(drawdown difference for end reading at flat portion of curve--see log graph)
t =	0.25	min	(change in time from yo to yt)
Le/rw=	108.5		(calculated ratio)
A =	4.47	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
B =	0.76	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
C =	4.50	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
rc' =	*0.112*		(effective radius)
m =	0.163		if well d = 2 inch, m = 0.163 if d = 4 inch, m = 0.653 if d = 6 inch, m = 1.469

FOR Lw=H

ln Re =	*1.795*		*K =*	*6.31E-03*	*ft/min*	*(hydraulic conductivity)*
Re =	*6.020*	*feet*	***K =***	***3.21E-03***	***cm/sec***	***(hydraulic conductivity)***
			K =	*9.09E+00*	*ft/day*	*(hydraulic conductivity)*
			T =	*1.59E+02*	*ft^2/day*	*(transmissivity)*
			T =	***1187.33***	***gpd/ft***	***(transmissivity)***
			Q =	*0.3135*	*ft^3/min*	*(flowrate)*
			Q =	*2.345*	*gpm*	*(flowrate)*

Steel Winds I Site
Lackawanna, NY
03.0033579.07



Bouwer & Rice Slug Test Method
Hydraulic Conductivity Calculation Worksheet
Rising Head Test No. 1

Project : 03.0033579.06 Steel Winds

Date 7/16/2014
Well No WT1-04

H =	11.92	feet	(aquifer thickness)
Le =	11.92	feet	(wetted screen length)
Lw =	11.92	feet	(length from bottom of well to static water table)
rw =	0.161	feet	(borehole radius)
rc =	0.083	feet	(well radius)
n =	0.30		(porosity of gravel pack)
yo =	5.35	feet	(drawdown difference for initial reading at flat portion of curve--see log graph)
yt =	4.93	feet	(drawdown difference for end reading at flat portion of curve--see log graph)
t =	0.04	min	(change in time from yo to yt)
Le/rw=	74.0		(calculated ratio)
A =	3.68	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
B =	0.60	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
C =	3.45	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
rc' =	*0.112*		(effective radius)

m = 0.163

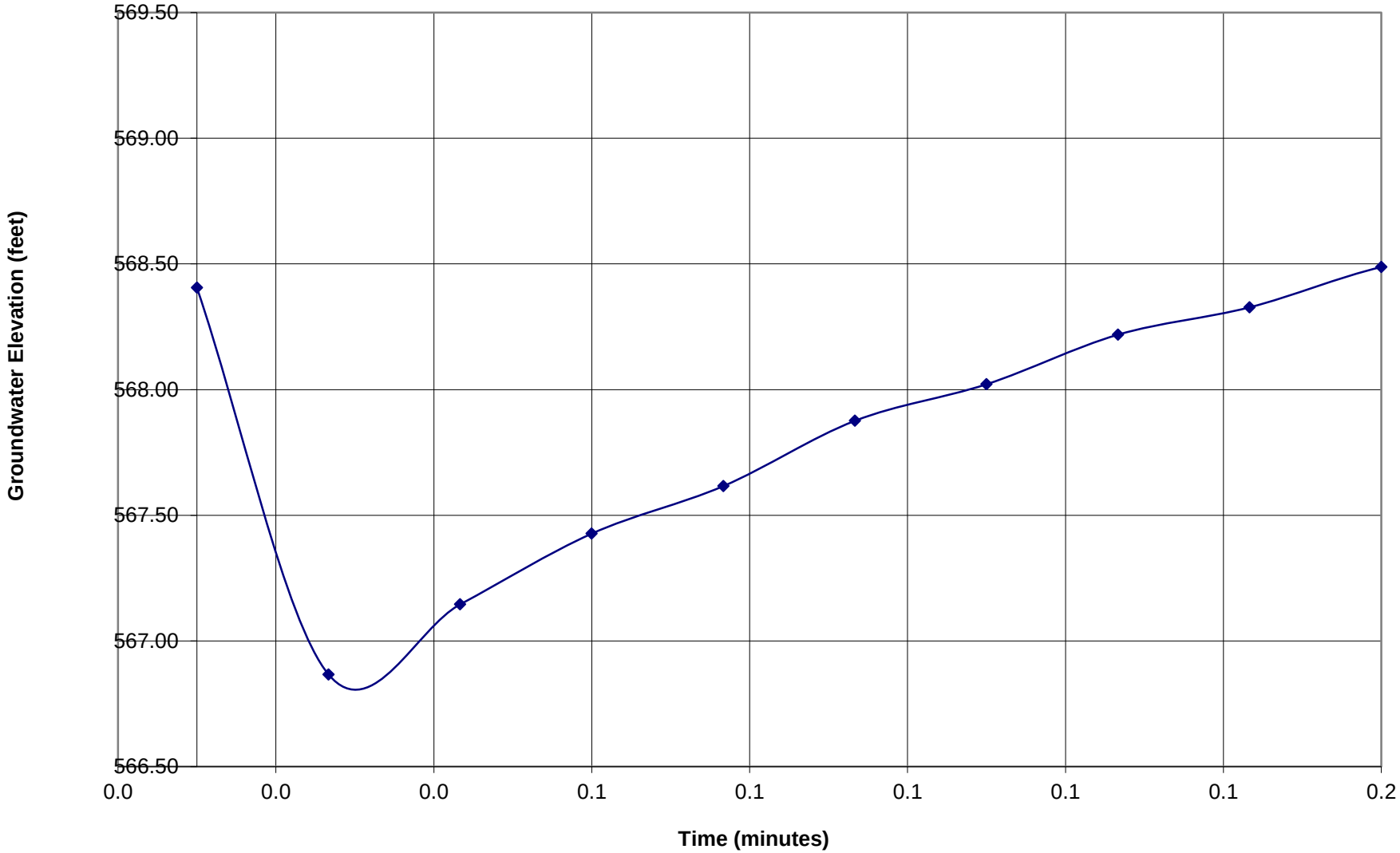
if well d = 2 inch, m = 0.163
if d = 4 inch, m = 0.653
if d = 6 inch, m = 1.469

FOR Lw=H

ln Re =	*1.484*				
Re =	*4.408*	*feet*			
			K = *3.58E-03*	*ft/min*	*(hydraulic conductivity)*
			K = ***1.82E-03***	***cm/sec***	***(hydraulic conductivity)***
			K = *5.15E+00*	*ft/day*	*(hydraulic conductivity)*
			T = *6.14E+01*	*ft^2/day*	*(transmissivity)*
			T = ***459.03***	***gpd/ft***	***(transmissivity)***
			Q = *0.4326*	*ft^3/min*	*(flowrate)*
			Q = *3.236*	*gpm*	*(flowrate)*

Steel Winds I Site
Lackawanna, NY
03.0033579.07

Rising Head Permeability Test No. 2
WT1-04



Bouwer & Rice Slug Test Method
Hydraulic Conductivity Calculation Worksheet
Rising Head Test No. 2
Project : 03.0033579.06 Steel Winds

Date 7/16/2014
Well No WT1-04

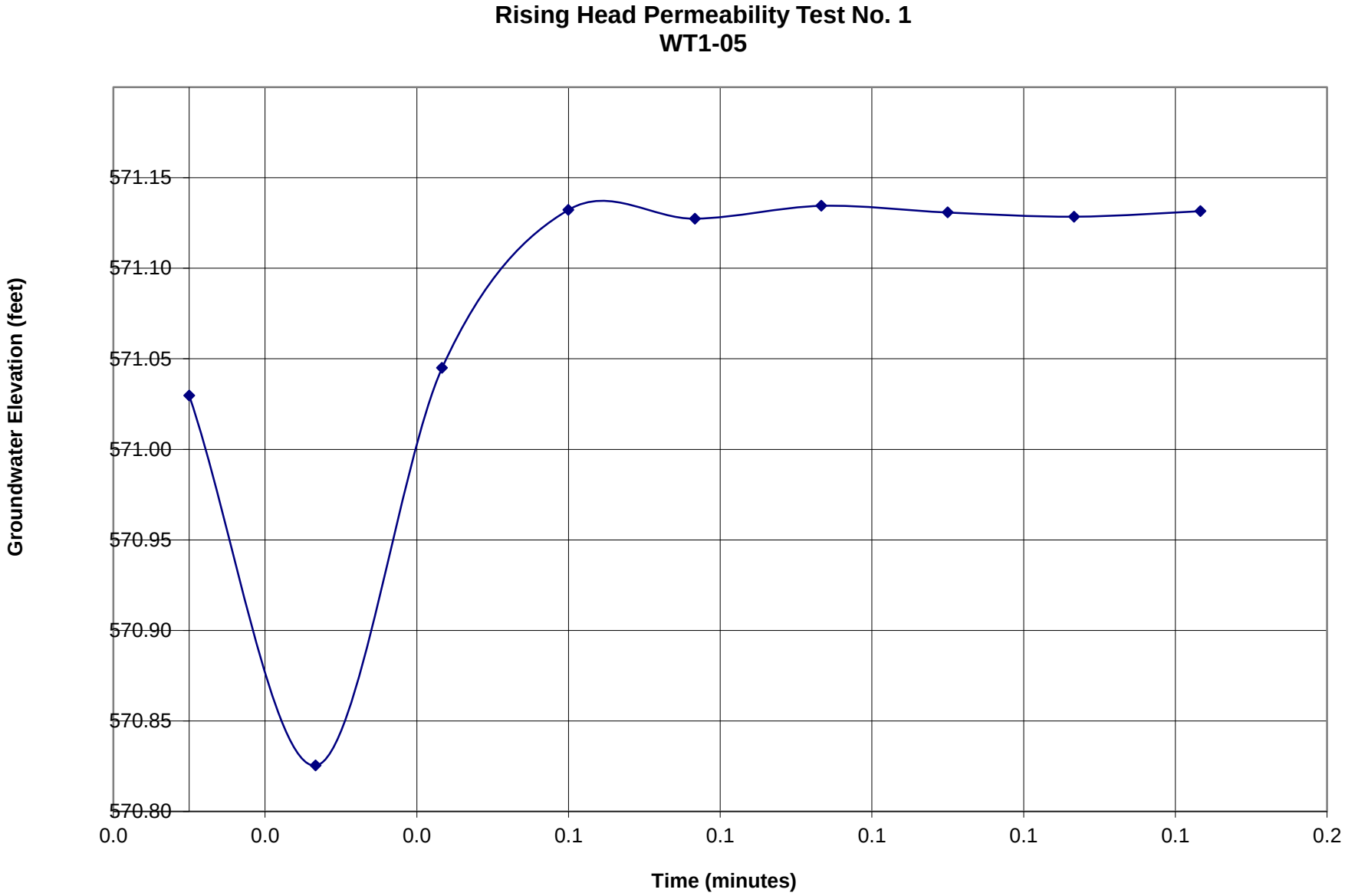
H =	11.92	feet	(aquifer thickness)
Le =	11.92	feet	(wetted screen length)
Lw =	11.92	feet	(length from bottom of well to static water table)
rw =	0.161	feet	(borehole radius)
rc =	0.083	feet	(well radius)
n =	0.30		(porosity of gravel pack)
yo =	5.70	feet	(drawdown difference for initial reading at flat portion of curve--see log graph)
yt =	5.23	feet	(drawdown difference for end reading at flat portion of curve--see log graph)
t =	0.05	min	(change in time from yo to yt)
Le/rw=	74.0		(calculated ratio)
A =	3.68	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
B =	0.60	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
C =	3.45	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
rc' =	*0.112*		(effective radius)

m = 0.163
if well d = 2 inch, m = 0.163
if d = 4 inch, m = 0.653
if d = 6 inch, m = 1.469

FOR Lw=H

ln Re =	*1.484*				
Re =	*4.408*	*feet*			
			K =	*3.01E-03*	*ft/min*	*(hydraulic conductivity)*
			K =	***1.53E-03***	***cm/sec***	***(hydraulic conductivity)***
			K =	*4.34E+00*	*ft/day*	*(hydraulic conductivity)*
			T =	*5.17E+01*	*ft^2/day*	*(transmissivity)*
			T =	***386.52***	***gpd/ft***	***(transmissivity)***
			Q =	*0.3881*	*ft^3/min*	*(flowrate)*
			Q =	*2.903*	*gpm*	*(flowrate)*

Steel Winds I Site
Lackawanna, NY
03.0033579.07



Bouwer & Rice Slug Test Method
Hydraulic Conductivity Calculation Worksheet
Rising Head Test No. 1

Project : 03.0033579.06 Steel Winds

Date 7/16/2014
Well No WT1-05

H =	10.08	feet	(aquifer thickness)
Le =	10.08	feet	(wetted screen length)
Lw =	10.08	feet	(length from bottom of well to static water table)
rw =	0.161	feet	(borehole radius)
rc =	0.083	feet	(well radius)
n =	0.30		(porosity of gravel pack)
yo =	1.26	feet	(drawdown difference for initial reading at flat portion of curve--see log graph)
yt =	1.05	feet	(drawdown difference for end reading at flat portion of curve--see log graph)
t =	0.01	min	(change in time from yo to yt)
Le/rw=	62.6		(calculated ratio)
A =	3.39	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
B =	0.55	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
C =	3.08	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
rc' =	*0.112*		(effective radius)

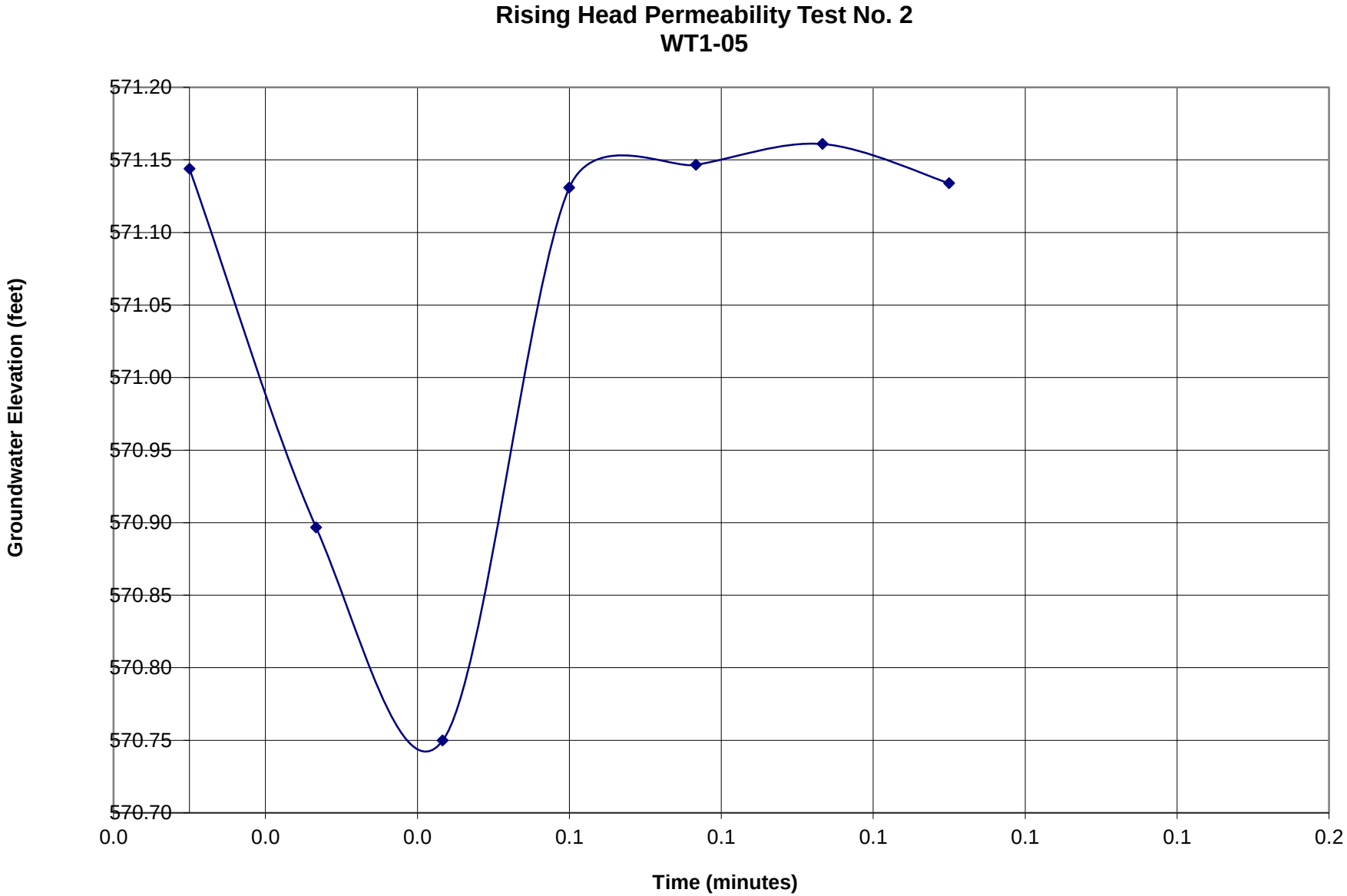
m = 0.163

if well d = 2 inch, m = 0.163
if d = 4 inch, m = 0.653
if d = 6 inch, m = 1.469

FOR Lw=H

ln Re =	*1.348*		*K =*	*3.62E-02*	*ft/min*	*(hydraulic conductivity)*
Re =	*3.849*	*feet*	***K =***	***1.84E-02***	***cm/sec***	***(hydraulic conductivity)***
			K =	*5.21E+01*	*ft/day*	*(hydraulic conductivity)*
			T =	*5.25E+02*	*ft^2/day*	*(transmissivity)*
			T =	***3926.80***	***gpd/ft***	***(transmissivity)***
			Q =	*0.9088*	*ft^3/min*	*(flowrate)*
			Q =	*6.798*	*gpm*	*(flowrate)*

Steel Winds I Site
Lackawanna, NY
03.0033579.07



Bouwer & Rice Slug Test Method
Hydraulic Conductivity Calculation Worksheet
Rising Head Test No. 2
Project : 03.0033579.06 Steel Winds

Date 7/16/2014
Well No WT1-05

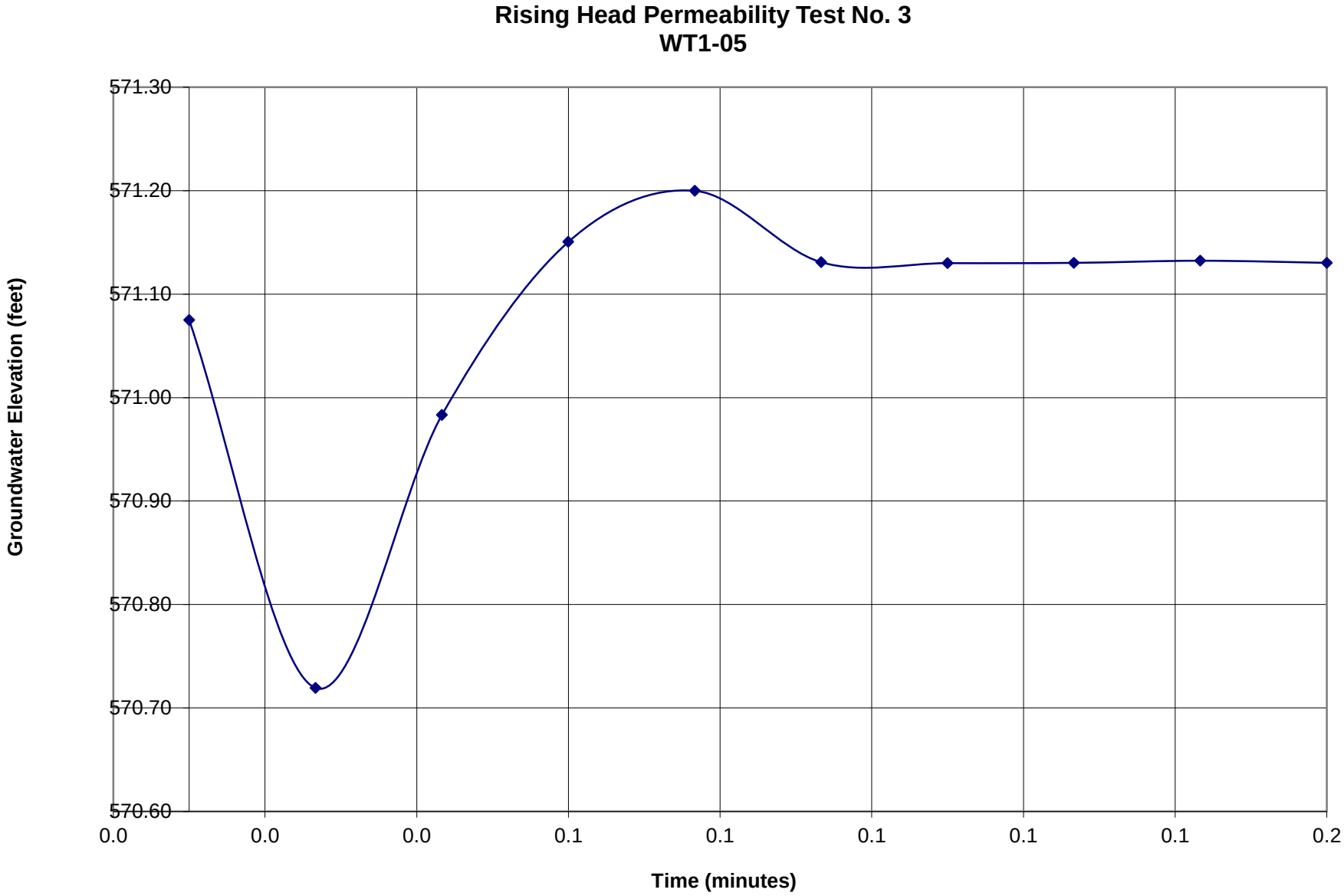
H =	10.08	feet	(aquifer thickness)
Le =	10.08	feet	(wetted screen length)
Lw =	10.08	feet	(length from bottom of well to static water table)
rw =	0.161	feet	(borehole radius)
rc =	0.083	feet	(well radius)
n =	0.30		(porosity of gravel pack)
yo =	1.34	feet	(drawdown difference for initial reading at flat portion of curve--see log graph)
yt =	0.96	feet	(drawdown difference for end reading at flat portion of curve--see log graph)
t =	0.02	min	(change in time from yo to yt)
Le/rw=	62.6		(calculated ratio)
A =	3.39	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
B =	0.55	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
C =	3.08	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
rc' =	*0.112*		(effective radius)

m = 0.163
if well d = 2 inch, m = 0.163
if d = 4 inch, m = 0.653
if d = 6 inch, m = 1.469

FOR Lw=H

ln Re =	*1.348*				
Re =	*3.849*	*feet*			
			K =	*3.31E-02*	*ft/min*	*(hydraulic conductivity)*
			K =	***1.68E-02***	***cm/sec***	***(hydraulic conductivity)***
			K =	*4.76E+01*	*ft/day*	*(hydraulic conductivity)*
			T =	*4.80E+02*	*ft^2/day*	*(transmissivity)*
			T =	***3591.33***	***gpd/ft***	***(transmissivity)***
			Q =	*0.8839*	*ft^3/min*	*(flowrate)*
			Q =	*6.612*	*gpm*	*(flowrate)*

Steel Winds I Site
Lackawanna, NY
03.0033579.07



Bouwer & Rice Slug Test Method
Hydraulic Conductivity Calculation Worksheet
Rising Head Test No. 3
Project : 03.0033579.06 Steel Winds

Date 7/16/2014
Well No WT1-05

H =	10.08	feet	(aquifer thickness)
Le =	10.08	feet	(wetted screen length)
Lw =	10.08	feet	(length from bottom of well to static water table)
rw =	0.161	feet	(borehole radius)
rc =	0.083	feet	(well radius)
n =	0.30		(porosity of gravel pack)
yo =	1.37	feet	(drawdown difference for initial reading at flat portion of curve--see log graph)
yt =	0.94	feet	(drawdown difference for end reading at flat portion of curve--see log graph)
t =	0.03	min	(change in time from yo to yt)
Le/rw=	62.6		(calculated ratio)
A =	3.39	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
B =	0.55	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
C =	3.08	ft at Le/rw	(from plot--Fig 2 in Bouwer and Rice)
rc' =	*0.112*		(effective radius)

m = 0.163
if well d = 2 inch, m = 0.163
if d = 4 inch, m = 0.653
if d = 6 inch, m = 1.469

FOR Lw=H

ln Re =	*1.348*				
Re =	*3.849*	*feet*			
			K =	*2.49E-02*	*ft/min*	*(hydraulic conductivity)*
			K =	***1.27E-02***	***cm/sec***	***(hydraulic conductivity)***
			K =	*3.59E+01*	*ft/day*	*(hydraulic conductivity)*
			T =	*3.62E+02*	*ft^2/day*	*(transmissivity)*
			T =	***2704.33***	***gpd/ft***	***(transmissivity)***
			Q =	*0.6805*	*ft^3/min*	*(flowrate)*
			Q =	*5.091*	*gpm*	*(flowrate)*

APPENDIX E

MASS LOADING CALCULATIONS

WT-01 Area of Concern Naphthalene Mass Loading Calculations
Technical Impracticability Waiver Application-Steel Winds I Lackawanna, New York

Geologic Unit	Hydraulic Conductivity (ft/day)[1]	Aquifer Thickness (ft)	Discharge Zone Length (ft)	Aquifer Area (ft^2)	Hydraulic Gradient (ft/ft)[2]	Groundwater Discharge (ft^3/day)[3]	Naphthalene Groundwater Concentration (mg/l)[4]	Mass Loading (lb/yr)[5]
Fill/Slag	45.7	10	350	3,500	0.0018	288	0.3	**1.97**
Sand/Silty Sand	5.0	10	350	3,500	0.0016	28	1.2	**0.77**
Total								**2.74**

Notes:

1. Fill/slag hydraulic conductivity is the average from monitoring well WT01-05, based on field testing performed by GZA. The sand/silty sand hydraulic conductivity is the average from wells WT01-04, BCP-ORC-1 and MWN-01B, based on field testing performed by GZA.
2. From hydraulic gradient segments 6 (fill/slag) and 3 (sand/silty sand) presented in Appendix B of Benchmark's *Comprehensive Groundwater Quality Assessment Report* for the Tecumseh Redevelopment CMS Area, dated August 2013
3. Groundwater discharge calculated by the following formula- Groundwater Discharge (ft^3/day) = Hydraulic conductivity (ft/day) x Hydraulic Gradient (ft/ft) x Aquifer Area (ft^2).
4. Maximum June 2014 concentration from each geologic unit (MWN-01 concentration for fill/slag and MWN01B concentration for sand/silty sand).
5. Mass Loading calculated using the following formula: Mass Loading (lb/yr) = Groundwater Discharge (ft^3/day) x Naphthalene Concentration (mg/l) x 365 (days/yr) x 1/453,592 (lb/mg Naphthalene) x 28.3168 (liters/ft^3).

WT-01 Area of Concern Estimated Naphthalene Pore Water Calculations
Technical Impracticability Waiver Application-Steel Winds I Lackawanna, New York

Geologic Unit	Aquifer Flow (ft^3/year)[1]	Estimated Precipitation Infiltration Rate (ft/yr)[2]	Downgradient Area (ft^2)[3]	Precipitation Infiltration Volume (ft^3/year)[4]	Total Discharge Volume (ft^3/year)[5]	Naphthalene Groundwater Concentration (mg/l)[6]	Estimated Pore Water Concentration (mg/l)[7]
Combined Fill/Slag and Sand/Silty Sand	115,328	1.25	20,000	25,000	140,328	0.38	0.31

Notes:
1. Taken from above table.
2. From Benchmark's *Comprehensive Groundwater Quality Assessment Report for the Tecumseh Redevelopment CMS Area* , dated August 2013
3. Area between WT-01 Area of Concern and Smokes Creek, which is the assumed primary groundwater discharge point.
4. Equal to infiltration rate x downgradient area.
5. Equal to aquifer discharge + infiltration volume.
6. Weighted average based on above geologic unit flows and naphthalene concentrations.
7. Calculated using the following formula: estimated porewater concentration (mg/l) = (aquifer flow x naphthalene groundwater concentration)/total discharge volume.

APPENDIX F

REPRESENTATIVE PHOTOGRAPHS

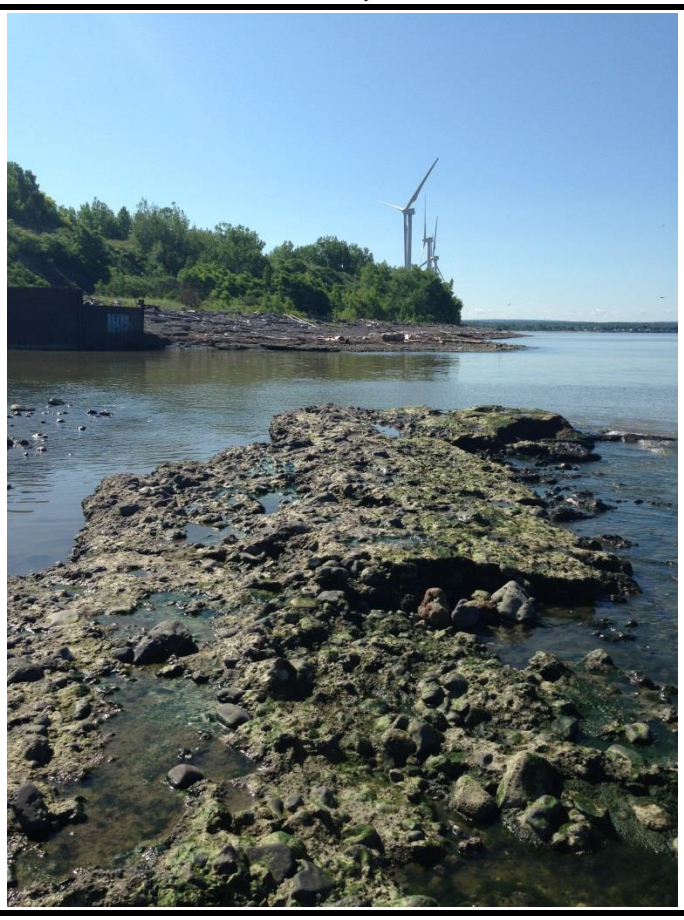


Photo No. 1: View of consolidated slag in Lake Erie adjacent to the Site.

Photo No. 2: Example of consolidated slag material.

Photo No. 3: Steel coffer dam at mouth of Smokes Creek

Photo No. 4: Northern bank of Smokes Creek adjacent to the Site.

Photo No. 5: Mouth of Smokes Creek

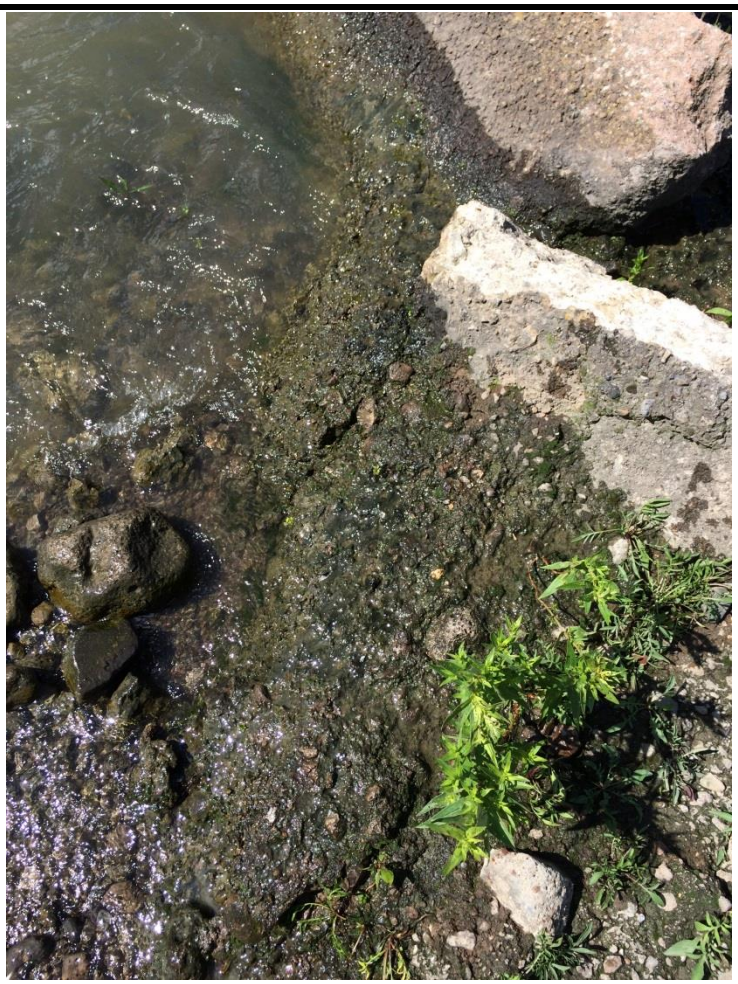


Photo No. 6: Consolidated slag material.