

November 30, 2011  
File No. 21.0056127.00



Mr. Frank Evangelisti  
Chief Planner  
Broome Co. Dept. of Planning and Economic Development  
44 Hawley Street, 5<sup>th</sup> Floor  
Binghamton, New York 13902

Re: Off-Site Interim Remedial Measure  
ERP#B00168-7  
312 Maple St., Endicott, NY

Dear Mr. Evangelisti:

535 Washington Street  
11<sup>th</sup> Floor  
Buffalo, New York  
14203  
716-685-2300  
Fax: 716-685-3629  
[www.gza.com](http://www.gza.com)

GZA GeoEnvironmental of New York (GZA) is pleased to present this letter report to the Broome County Department of Planning and Economic Development that summarizes the recent Off-Site Interim Remedial Measure (IRM) done adjacent to the 312 Maple Street in Endicott, New York (Site). This work involved the excavation and disposal of trichloroethylene (TCE)-impacted soil from Norfolk Southern Railroad (NSR) property (Off-Site area) located adjacent to the Site on the south (see Figure 1). This work was done in general accordance with the Supplemental Off-Site IRM Work Plan dated September 23, 2010.

#### Background

The off-Site TCE-impacted soils were unable to be excavated during the May 2006 On-Site IRM activities due to access limitations onto the adjacent NSR property, primarily due to the close proximity of the northern most active railroad track.

Soil probes were completed in the general Off-Site area in July 2008 to evaluate and delineate the extent of TCE impacted soil requiring remediation. The remaining volume of Off-Site TCE impacted soil was estimated to be about 50 tons or 80 cubic yards (cy) and extended to an approximate average depth of about 4 feet below ground surface (bgs).

In November 2010, GZA was notified that the northern most railroad track was being removed by NSR which increased the distance between the proposed excavation area and the centerline of the active railroad track. This increased distance made it possible to excavate the remaining Off-Site TCE impacted soil for off-site disposal.

#### Coordination

GZA coordinated with Broome County, NSR, NYSDEC and the current Site occupant as part of the initial IRM activities. Once access to the NSR property was granted, GZA contacted the Broome County Department of Solid Waste (BCDSW) to determine their requirements for soil disposal at the county-operated landfill. The BCDSW required that

specific waste characteristic soil samples be collected and analyzed to determine whether or not the proposed excavated soils are considered a characteristic hazardous waste.

#### Waste Characteristic Sampling

GZA visited the Site on April 29, 2011 to collect representative soil samples. As required by the BCDSW, two soil samples were collected from the proposed excavation area that include a composite sample from three locations identified as WC-1(0'-4') and one grab sample identified as WC-1(1'-2'). The composite sample was analyzed for toxicity characteristic leaching procedure (TCLP) semi-volatile organic compounds (SVOCs), TCLP metals and total polychlorinated biphenyls (PCBs). The grab sample was tested for TCLP volatile organic compounds (VOCs). The results for these samples identified TCE as hazardous with a concentration of 510 ppb which exceeded the TCLP regulatory limit of 500 parts per billion (ppb). No other compounds or metals were identified exceeding their respective TCLP regulatory values.

GZA revisited the Site on May 12, 2011 to collect additional soil samples adjacent to the April 29, 2011 to further delineate the extent of potential hazardous TCE impacted soils around the previous sample location. Soil samples were collected using hand auger methods at locations extending east, south and west of the WC-1(1-2) soil sample location at approximate 12-inch spacing. Northern extending locations were not done as soils in this area were previously remediated during the 2006 On-Site IRM activities and replaced with clean backfilled soil. The soil samples were screened using a Mini-Rae 2000 organic vapor meter (OVM) to evaluate the presence of total organic vapors and were selected and submitted for TCLP VOC analysis based on the OVM screening results. The selected samples to be tested were identified as HA-3(1'-2'), HA-4(1'-2') and HA-7(1'-2'). The TCLP analytical results for these three samples identified TCE at concentrations of 340 ppb, 730 ppb and 510 ppb respectively (see Table 1).

The analytical results indicated that hazardous concentrations of TCE in the soil were more extensive than initially estimated. Based on the findings of the additional soil samples, GZA recommended that the entire volume of soil be excavated and treated as a hazardous waste for TCE. As such, GZAs excavation subcontractor contacted various waste disposal facilities to determine disposal facility and specific requirements.

#### Disposal Coordination

GZAs excavation subcontractor identified The Environmental Quality Company (EQ) of Belleville, Michigan as the facility that could accept the TCE impacted soil. Since the soil would be disposed of as a hazardous waste, an EPA hazardous waste generator number NYD986866101 was assigned to the facility with Broome County listed as the Site owner and generator. Based on historical knowledge of the Site, the waste was considered a characteristic hazardous waste with the waste code D040 (for TCE).

The EQ facility required a single soil sample to be collected and tested for total compound list (TCL) VOCs via EPA method 8260 to evaluate the concentration of TCE relative to its land ban value of 60 parts per million (ppm) as soils with TCE greater than 60 ppm would



require pretreatment prior to land disposal. GZA collected a soil sample identified as HA-1-2 (082511) from the Off-Site location on August 25, 2011. Analytical results indicated a TCE concentration of 280 ppm and therefore pretreatment of the soils would be required prior to disposal.



### Soil Excavation

Excavation of the Off-Site “source area” was done on October 25, 2011 by GZAs subcontractor (Natures Way Environmental) using standard excavation methods using a Cat 315C track excavator. The extents of the excavation were based on previous soil sample delineation sampling done in 2008 which indicated TCE impacted soil was generally at depths to about 4 feet bgs. Excavated soil was screened by GZA for total VOCs with an OVM. The top 8-12 inches of “clean soil” was removed and placed adjacent to the excavation for eventual reuse as clean backfill soil.

The TCE-impacted soil was excavated and directly loaded into two approximate 25-ton dump trucks for delivery to the EQ facility. Both trucks were observed fitted with plastic bed liners for transportation of the excavated soil. Waste tickets and manifest forms for the 48.95 tons of disposed soil are included in Attachment A.

The limits of the excavation generally ranged from about 19 feet to 23.5 feet long, about 13 feet to 15 feet wide and about 4.5 to 5.5 feet bgs. The bottom of the excavation typically extended through railroad-associated fill soils into an apparent native silt and clay soil layer. Groundwater was not encountered during the excavation. The approximate limits of the Site IRM excavation are shown on Figure 1.

Community air monitoring was conducted by GZA during the excavation which included visual observations for dust and down-wind monitoring for total organic vapors with an OVM. The excavated sandy soils were generally observed to be moist with no visible generation of dust. Additionally, downwind OVM screening did not identify migrating VOC vapors from the excavation activities.

### Confirmatory Soil Samples

The limits of the IRM excavation based on visual observations, OVM screening results and the adjacent 312 Maple Street property boundary. GZA collected confirmatory soil samples prior to backfilling to assess the concentrations of TCE remaining in the bottom and sidewalls of the excavation. One confirmatory soil sample was collected from each excavation sidewall (identified as NORTH 102511, EAST 102511, SOUTH 102511 and WEST 102511), and one excavation bottom sample (identified as BOTTOM 102511). Confirmatory samples were analyzed for TCL VOCs via EPA Method 8260. Confirmatory samples tested identified four VOCs including TCE, methylene chloride, 1,1,1-trichloroethene and naphthalene. However, none of the detected compounds were identified as exceeding their respective unrestricted soil cleanup objectives (USCOs) as defined in 6 New York Code Rules and Regulation Part 375-6 Remedial Programs Soil Cleanup Objectives (Part 375 SCOs) shown in Tables 375-6.8 (a). Table 2 shows

analytical summary results for confirmatory soil samples. Complete laboratory reports are included as Attachment B.



Excavation Backfilling

A clean imported gravel bank run stone was placed and compacted in the bottom of the excavation after collection of confirmatory soil samples. The backfill material was leveled and tamped with the excavator bucket. A total of 15.15 tons of clean, imported fill material was delivered to the Site by three dump trucks from Gregory and Sons facility in Flemingville, New York (identified as Source No. 6-35G, reportedly a NYSDOT approved source material). The stone is identified as Item 304.15 Type 1,3,4 (a Granular Material Documentation Form for the fill material and associated weigh tickets are included as Attachment C).

It is our opinion that the off-Site TCE impacted soils have successfully been remediated and TCE contaminated soils historically associated with the 312 Maple Street site (ERP#B00168-7) are no longer present.

Should you have any questions with respect to the Off-Site IRM activities, please do not hesitate to contact Daniel Troy at (716) 844-7034 or at [daniel.troy@gza.com](mailto:daniel.troy@gza.com).

Sincerely,

A handwritten signature in blue ink that reads "Daniel Troy".

Daniel Troy, P.E., LEED® AP  
Project Manager

A handwritten signature in blue ink that reads "Bart A. Klettke".

Bart A. Klettke, P.E.  
Associate Principal

Attachments: Figure 1 – Site Plan

Table 1 – Summary of Off-Site IRM TCLP Analytical Test Results

Table 2 – Summary of Off-Site IRM Confirmatory Analytical Test Results

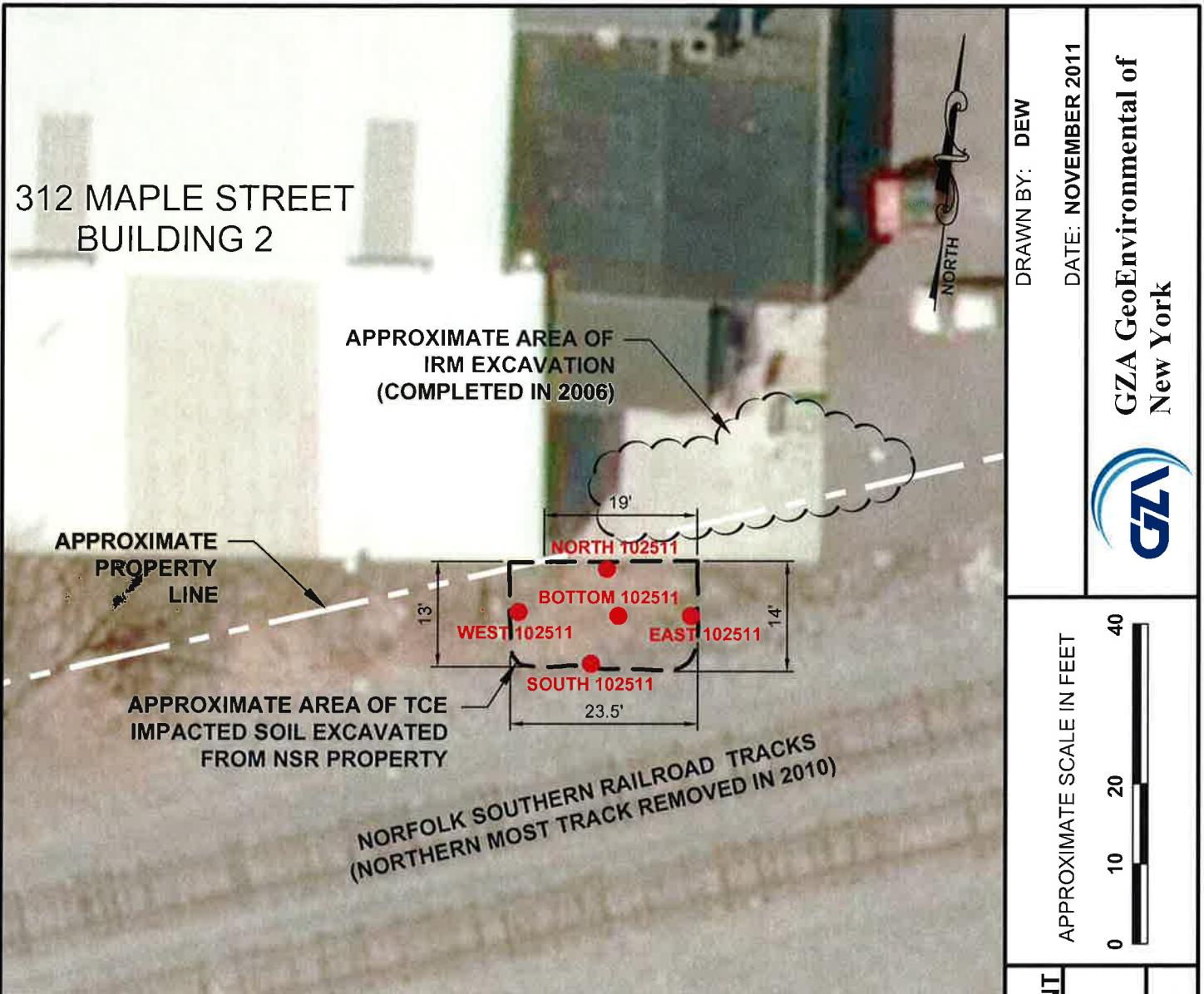
Attachment A – Waste Disposal Documentation

Attachment B – Analytical Reports

Attachment C – Imported Backfill Documentation

## **FIGURES**

# 312 MAPLE STREET BUILDING 2



## SITE PLAN

### LEGEND:

**BOTTOM 102511** APPROXIMATE LOCATION AND DESIGNATION OF CONFIRMATORY SAMPLE COLLECTED BY GZA

### NOTES:

1. BASE MAP ADAPTED FROM AN AERIAL PHOTOGRAPH DOWNLOADED FROM <http://www.bing.com/maps/>, A SURVEY PLAN PROVIDED BY THE CLIENT, AND FIELD OBSERVATIONS.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

BROOME COUNTY DEPARTMENT OF <b>PLANNING AND ECONOMIC DEVELOPMENT</b>	APPROXIMATE SCALE IN FEET
312 MAPLE STREET VILLAGE OF ENDICOTT, NEW YORK	0 10 20 40
<b>ERP SITE No. B-00168-7</b>	
OFF-SITE SOIL INTERIM REMEDIAL MEASURE	

PROJECT No.  
**21.0056127.00**

FIGURE No.  
**1**

**2**

## **TABLES**

**TABLE 1**  
 Summary of Off-Site IRM TCLP Analytical Test Results  
 312 Maple Street  
 Endicott, New York  
 ERP Site No. B-00168-7

Parameter	Toxicity Characteristic Level	WC-1 (0-4) (04/29/11)	WC-1 (1-2) (04/29/11)	HA-3 (1-2) (05/12/11)	HA-4(1-2) (05/12/11)	HA-7(1-2) (05/12/11)
<b>Volatile Organic Compounds - EPA Method 1311/8260 TCLP (ug/L)</b>						
Trichloroethene	500	NT	510	340	730	510
<b>Semi Volatile Organic Compounds - EPA Method 81311/8270 TCLP (ug/L)</b>						
		NT	NT	NT	NT	NT
<b>Metals - EPA Method 1311/6010/7470A TCLP (mg/L)</b>						
Barium	100	0.11	NT	NT	NT	NT
Lead	5	0.023	NT	NT	NT	NT
<b>Polychlorinated Biphenyls - EPA Method 8082 (ug/Kg)</b>						
		NT	NT	NT	NT	NT

Notes:

1. Compounds detected in one or more samples are presented on this table. Refer to Attachment B for list of all compounds included in analysis.
2. Analytical testing completed by GZA GeoEnvironmental Inc., of Hopkington, MA.
3. Toxicity Characteristic Levels based on 40 CFR Part 261.24
4. Blank indicates compound was not detected.
5. TCLP = Toxicity Characteristic Leaching Procedure. ug/L = parts per billion, mg/L = parts per million, NT=not tested.

**TABLE 2**  
 Summary of Off-Site IRM Confirmatory Analytical Test Results  
 3112 Maple Street  
 Endicott, New York  
 ERP Site No. B-00168-7

Parameter	NYSDEC PART 375		Pre IRM Sample		Excavation Confirmatory Sidewall Sample Identification		
	Unrestricted SCO	HA-1-2 Q82511	Bottom 102511	East 102511	North 102511	South 102511	West 102511
<b>Volatile Organic Compounds - EPA Method 8260 TCL (ug/kg)</b>							
Acetone	50	380					
Carbon Disulfide	NV	50 J			3.4 BJ		
Methylene Chloride	50				3.4 BJ		
1,1,1 Trichloroethane	680	1000		0.0016			
Trichloroethene	470	280,000 D	15	49	6.6	22	80
Tetrachloroethylene	1300	160 J					
Naphthalene	12000	60 J		1.7 BJ			

Notes:

1. Compounds detected in one or more samples are presented on this table. Refer to Attachment B for list of all compounds included in analysis.
2. Analytical testing completed by Spectrum Analytical of Warwick Rhode Island.
3. Soil Cleanup Objectives (SCOs) based on the 6NYCRR Part 375 Environmental Remediation Programs Unrestricted and Restricted Use Soil Cleanup Objectives (Table 375-6.8(a)), effective December 14, 2006.
4. Blank indicates compound was not detected.
5. TCL = Target Compound List, ug/kg = parts per billion, D = secondary diluted analysis, J= Estimated concentration, B= compound also detected in method blank.

**ATTACHMENT A**  
**WASTE DISPOSAL DOCUMENTATION**

100 K

Form Approved. OMB No. 2050-0039

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number NYD30286101	2. Page 1 of 1	3. Emergency Response Phone 800-424-0300	4. Manifest Tracking Number 008343201 JJK
Generator's Name and Mailing Address <b>BROOME COUNTY TCE SITE 312 MAPLE STREET ENDICOTT, NY 13760</b>					
Generator's Phone: <b>607-778-2414</b>					
6. Transporter 1 Company Name <b>US BULK TRANSPORT, INC.</b>					
7. Transporter 2 Company Name					
8. Designated Facility Name and Site Address <b>WICHIGAN DISPOSAL WASTE TREATMENT PLANT 4850 NORTH I-94 SERVICE DRIVE BELLEVILLE, MI 48111</b>					
Facility's Phone: <b>800-592-5489</b>					
9a. HM			9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) <b>1. RQ NA3077, HAZARDOUS WASTE, SOLID, N.O.S. (DD40) 9, PG III</b>		
			10. Containers No. DT	11. Total Quantity 23.50	12. Unit Wt/Vol. T
			X	D040	T
14. Special Handling Instructions and Additional Information <b>1.1 SOIL WITH CHLORINATED SOLVENTS ( ) ERG#171 J1132383WTS MDI</b>					
15. GENERATOR/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.					
Generator/Offeror's Printed/Typed Name <b>DAVID ELLIOTT of Frank Evangelist &amp; Sons Co.</b> Signature <b>X Dolby</b> Month Day Year <b>10 25 11</b>					
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.      Port of entry/exit: Transporter signature (for exports only):					
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name <b>Joe Boetz</b> Signature <b>Joe Boetz</b> Month Day Year <b>10 25 11</b> Transporter 2 Printed/Typed Name					
18. Discrepancy 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Manifest Reference Number:					
18b. Alternate Facility (or Generator) Facility's Phone:					
18c. Signature of Alternate Facility (or Generator)					
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous wastes: treatment, disposal, and recycling systems) 1. <b>H075</b> 2.      3.      4.					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name <b>Charles Swore</b> Signature <b>Charles</b> Month Day Year <b>10 25 11</b>					

EPA Form 0700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Form Approved. OMB No. 2050-0039

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)				
UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number NYD98865101	2. Page 1 of 1	
5. Generator's Name and Mailing Address <b>BROOME COUNTY TCE SITE 312 MAPLE STREET ENDICOTT, NY 13760</b> Generator's Phone: 607-766-3385 ATTN: ROBERT KRAWCZYK 6. Transporter 1 Company Name <b>US BULK TRANSPORT, INC.</b>				
7. Transporter 2 Company Name				
8. Designated Facility Name and Site Address <b>MICHIGAN DISPOSAL WASTE TREATMENT PLANT 40350 NORTH I-94 SERVICE DRIVE BELLEVILLE, MI 48111</b> U.S. EPA ID Number MID000724831				
9. Facility's Phone: 800-582-5489				
9a. HM		9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) <b>1 RQ NA3077, HAZARDOUS WASTE, SOLID, N.O.S. (D040) 9, PG III</b>		
<b>X</b>		No.	Type	
		1	DR	
2.				
3.				
4.				
10. Containers				
11. Total Quantity				
12. Unit Wt./Vol.				
13. Waste Codes				
14. Special Handling Instructions and Additional Information <b>1. SOIL WITH CHLORINATED SOLVENTS ( ) ERG#171 J1132383WTSMDI</b> 140TA				
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.				
Generator/Offeror's Printed/Typed Name <b>Daniel Troy of GEA</b>		Signature <b>for Robert Krawczyk X Val My</b>		
		Month	Day	Year
		10	25	11
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit Transporter signature (for exports only):				
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name <b>Robert Beaver</b> Signature Transporter 2 Printed/Typed Name <b>Robert Beaver</b> Signature				
Signature Month Day Year <b>10 25 11</b>				
Signature Month Day Year <b>10 25 11</b>				
18. Discrepancy				
18a. Discrepancy Indication Space <input checked="" type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection <b>actual weight 26.70 Tons per Marty Gregg WTS 10-26-11 JB</b> Manifest Reference Number:				
18b. Alternate Facility (or Generator)				
Facility's Phone:				
18c. Signature of Alternate Facility (or Generator)				
18d. Month Day Year				
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)				
1. <b>H075</b> 2. 3. 4.				
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18e				
Printed/Typed Name <b>Charles Cugle</b> Signature Month Day Year <b>10 25 11</b>				

EPA Form 8700-22 (Rev. 3-05). Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# EQ - The Environmental Quality Company

## *Weight Ticket Summary*

WASTE TECHNOLOGY SERVICES  
435 NORTH 2ND STREET  
LEWISTON, NY 14092

Customer ID: 000583

Facility: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, Michigan 48111

Reference ID				Weight
02-21 493359-1	Manifest: 008343201JJK	Hauler: US BULK	Gross:	78,360
10/25/2011	Generator: NYD986866101 BROOME COUNTY TCE SITE (102042)		Tare:	33,800
	Approval: J1132383WTSMDI - SOIL WITH CHLORINATED SOLVENTS (WTS 32383)		Net:	44,560

# EQ - The Environmental Quality Company

## Weight Ticket Summary

WASTE TECHNOLOGY SERVICES  
435 NORTH 2ND STREET  
LEWISTON, NY 14092

Customer ID: 000583

Facility: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, Michigan 48111

Reference ID			Weight
02-21 493364-1	Manifest: 008343203JJK	Hauler: US BULK	Gross: 85,700
10/25/2011	Generator: NYD986866101 BROOME COUNTY TCE SITE (102042)		Tare: 32,360
	Approval: J1132383WTSMDI - SOIL WITH CHLORINATED SOLVENTS (WTS 32383)		Net: 53,340

**ATTACHMENT B**  
**ANALYTICAL REPORTS**



**GZA GeoEnvironmental, Inc.**  
106 South Street  
Hopkinton, MA 01748  
(781) 278-4700

Laboratory Identification Numbers:  
MA and ME: **MA092** NH: **2028**  
CT: **PH0579** RI: **LAO00236**  
NELAC - NYS DOH: **11063**

#### **A N A L Y T I C A L   R E P O R T**

GZA GeoEnvironmental of NY  
535 Washington Street  
11th Floor  
Buffalo, NY 14203-1415  
Daniel Troy

Project No.: **21.0056127.00**  
Work Order No.: **1105-00001**  
Date Received: **05/02/2011**  
Date Reported: **05/06/2011**

#### **SAMPLE INFORMATION**

Date Sampled	Matrix	Laboratory ID	Sample ID
04/29/2011	Solid	1105-00001 001	WC-1 - (0-4ft.)
04/29/2011	Solid	1105-00001 002	WC-1 - (1-2ft.)

*The laboratory report shall not be reproduced except in full without the written consent of the laboratory.*



**GZA GeoEnvironmental, Inc.**  
106 South Street  
Hopkinton, MA 01748  
(781) 278-4700

Page 2 of 6

## ANALYTICAL REPORT

GZA GeoEnvironmental of NY

535 Washington Street

11th Floor

Buffalo, NY 14203-1415

Daniel Troy

Project Name.: **312 Maple Street**

Project No.: **21.0056127.00**

Date Received: **05/02/2011**

Date Reported: **05/06/2011**

Work Order No.: **1105-00001**

---

### PROJECT NARRATIVE:

#### **1. Sample Receipt**

The samples were received on 04/30/11 via \_\_GZA courier, \_x\_UPS, \_\_FEDEX, or \_\_\_hand delivered. The temperature of the \_\_temperature blank/\_x\_cooler air, was 5.2 degrees C. The temperature requirement for most analyses is above freezing to 6 degrees C. The samples were received intact for all requested analyses.

The chain of custody indicates that the samples, when required, were chemically preserved in accordance with the method they reference.

#### **2. EPA Method 1311/6010C/7470A - Metals (TCLP)**

Attach QC 1311/6010C 05/03/11 - TCLP

Attach QC 1311/7470A 05/03/11 - TCLP

#### **3. EPA Method 8082 - PCBs**

Attach QC 8082 05/3/11 - Solid

#### **4. EPA Method 1311/8270 - SVOCs (TCLP)**

The Laboratory Control Sample (LCS) (5/4/2011 I) had a(n) TCLP 8270 List analyte outside of the 40-140% (Base/Neutral Extractables) / 30-130% (Acid Extractables) acceptance criteria. Specific outlier includes: pyridine (34.5%).

Attach QC 1311/8270 5/4/2011 "I" - Aqueous

#### **5. EPA Method 1311/8260 - VOCs (TCLP)**

Attach QC 1311/8260 5/5/2011 "S" - Aqueous



**GZA GeoEnvironmental, Inc.**  
106 South Street  
Hopkinton, MA 01748  
(781) 278-4700

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**A N A L Y T I C A L   R E P O R T**

GZA GeoEnvironmental of NY

535 Washington Street

11th Floor

Buffalo, NY 14203-1415

Daniel Troy

Project Name.: **312 Maple Street**

Project No.: **21.0056127.00**

Date Received: **05/02/2011**

Date Reported: **05/06/2011**

Work Order No.: **1105-00001**

Data Authorized By: \_\_\_\_\_

NELAC certification, as indicated by the NELAC Lab ID Number, is per analyte. For a complete list of NELAC validated analytes, please contact the laboratory.

Abbreviations:

% R = % Recovery

DF = Dilution Factor

DFS = Dilution Factor Solids

CF = Calculation Factor

DO = Diluted Out

Method Key:

Method 8260: The current version of the method is 8260B.

Method 8270: The current version of the method is 8270D.

Method 6010: The current version of the method is 6010C.

Method 8081: The current version of the method is 8081B.

Method 8082: The current version of the method is 8082A.

Method 7471: The current version of the method is 7471B.

The current Metals preparation methods are: 3010A (aqueous) and 3051 (solid).

Please note that the laboratory signed copy of the chain of custody record is an integral part of the data report.

The laboratory report shall not be reproduced except in full without the written consent of the laboratory.

Soil data is reported on a dry weight basis unless otherwise specified.

Matrix Spike / Matrix Spike Duplicate sets are performed as per method and are reported at the end of the analytical report if assigned on the Chain of Custody.



**GZA GeoEnvironmental, Inc.**  
106 South Street  
Hopkinton, MA 01748  
(781) 278-4700

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**A N A L Y T I C A L   R E P O R T**

GZA GeoEnvironmental of NY  
535 Washington Street  
11th Floor  
Buffalo, NY 14203-1415  
Daniel Troy

Project Name.: **312 Maple Street**  
Project No.: **21.0056127.00**

Date Received: **05/02/2011**  
Date Reported: **05/06/2011**  
Work Order No.: **1105-00001**

Sample ID: **WC-1 - (0-4ft.)** Sample No.: **001**  
Sample Date: **04/29/2011**

Test Performed	Method	Results	Reporting Limit	Units	Tech	Analysis Date
PERCENT SOLID		77.7		%	TAJ	05/03/2011
POLYCHLORINATED BIPHENYLS	EPA 8082				TAJ	05/04/2011
Aroclor 1268	EPA 8082	<100	100	ug/kg	TAJ	05/04/2011
Aroclor 1262	EPA 8082	<100	100	ug/kg	TAJ	05/04/2011
Aroclor 1260	EPA 8082	<100	100	ug/kg	TAJ	05/04/2011
Aroclor 1254	EPA 8082	<100	100	ug/kg	TAJ	05/04/2011
Aroclor 1248	EPA 8082	<100	100	ug/kg	TAJ	05/04/2011
Aroclor 1242/1016	EPA 8082	<100	100	ug/kg	TAJ	05/04/2011
Aroclor 1232	EPA 8082	<100	100	ug/kg	TAJ	05/04/2011
Aroclor 1221	EPA 8082	<100	100	ug/kg	TAJ	05/04/2011
Surrogates:						
***Tetrachloro-m-xylene	EPA 8082	85.5	30-150	% R	TAJ	05/04/2011
***Tetrachloro-m-xylene	EPA 8082	94.5	30-150	% R	TAJ	05/04/2011
***Decachlorobiphenyl	EPA 8082	118	30-150	% R	TAJ	05/04/2011
***Decachlorobiphenyl	EPA 8082	112	30-150	% R	TAJ	05/04/2011
Extraction	EPA 3545	1.0		DF	KMM	05/03/2011
TCLP SEMI-VOLATILE ORGANICS	EPA 8270				CMG	05/04/2011
Pyridine	EPA 8270	<100	100	ug/L	CMG	05/04/2011
1,4-Dichlorobenzene	EPA 8270	<50	50	ug/L	CMG	05/04/2011
2-Methylphenol	EPA 8270	<50	50	ug/L	CMG	05/04/2011
3&4-Methylphenol	EPA 8270	<50	50	ug/L	CMG	05/04/2011
Hexachloroethane	EPA 8270	<50	50	ug/L	CMG	05/04/2011
Nitrobenzene	EPA 8270	<50	50	ug/L	CMG	05/04/2011
2,4,6-Trichlorophenol	EPA 8270	<50	50	ug/L	CMG	05/04/2011
2,4,5-Trichlorophenol	EPA 8270	<50	50	ug/L	CMG	05/04/2011
Hexachlorobutadiene	EPA 8270	<50	50	ug/L	CMG	05/04/2011
2,4-Dinitrotoluene	EPA 8270	<50	50	ug/L	CMG	05/04/2011
Hexachlorobenzene	EPA 8270	<50	50	ug/L	CMG	05/04/2011
Pentachlorophenol	EPA 8270	<50	50	ug/L	CMG	05/04/2011
Surrogates:						
***2-Fluorophenol	EPA 8270	45.1		% R	CMG	05/04/2011
***Phenol-D6	EPA 8270	33.4		% R	CMG	05/04/2011
***Nitrobenzene-D5	EPA 8270	60.3		% R	CMG	05/04/2011
***2-Fluorobiphenyl	EPA 8270	58.3		% R	CMG	05/04/2011
***2,4,6-Tribromophenol	EPA 8270	74.9		% R	CMG	05/04/2011



**GZA GeoEnvironmental, Inc.**  
106 South Street  
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**A N A L Y T I C A L   R E P O R T**

GZA GeoEnvironmental of NY

535 Washington Street

11th Floor

Buffalo, NY 14203-1415

Daniel Troy

Project Name.: **312 Maple Street**

Date Received: **05/02/2011**

Project No.: **21.0056127.00**

Date Reported: **05/06/2011**

Work Order No.: **1105-00001**

Sample ID: **WC-1 - (0-4ft.)**

Sample No.: **001**

Sample Date: **04/29/2011**

Test Performed	Method	Results	Reporting Limit	Units	Tech	Analysis Date
***p-Terphenyl-D14	EPA 8270	83.5		% R	CMG	05/04/2011
Extraction (TCLP Leachate)	EPA 3510C	1.0		DF	LRB	05/04/2011
TCLP Bottle Extraction	EPA 1311	1.0		DF	GDD	05/03/2011
TCLP-RCRA METALS				LLZ		05/03/2011
Silver	EPA 1311/6010C	<0.010	0.010	mg/L	LLZ	05/03/2011
Arsenic	EPA 1311/6010C	<0.010	0.010	mg/L	LLZ	05/03/2011
Barium	EPA 1311/6010C	0.11	0.0050	mg/L	LLZ	05/03/2011
Cadmium	EPA 1311/6010C	<0.0050	0.0050	mg/L	LLZ	05/03/2011
Chromium	EPA 1311/6010C	<0.0	0.0	mg/L	LLZ	05/03/2011
Mercury	EPA 1311/7470A	<0.00040	0.00040	mg/L	GDD	05/05/2011
Lead	EPA 1311/6010C	0.023	0.0	mg/L	LLZ	05/03/2011
Selenium	EPA 1311/6010C	<0.050	0.050	mg/L	LLZ	05/03/2011
TCLP Preparation	EPA 1311	1.0	1.0	DF	LLZ	05/02/2011



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**A N A L Y T I C A L   R E P O R T**

GZA GeoEnvironmental of NY

535 Washington Street

11th Floor

Buffalo, NY 14203-1415

Daniel Troy

Project Name.: **312 Maple Street**

Project No.: **21.0056127.00**

Date Received: **05/02/2011**

Date Reported: **05/06/2011**

Work Order No.: **1105-00001**

Sample ID: **WC-1 - (1-2ft.)**

Sample No.: **002**

Sample Date: **04/29/2011**

Test Performed	Method	Results	Reporting Limit	Units	Tech	Analysis Date
TCLP VOLATILE ORGANIC COMPO	EPA 8260				MQS	05/06/2011
Vinyl Chloride	EPA 8260	<10	10	ug/L	MQS	05/06/2011
1,1-Dichloroethene	EPA 8260	<5.0	5.0	ug/L	MQS	05/06/2011
2-Butanone	EPA 8260	<50	50	ug/L	MQS	05/06/2011
Chloroform	EPA 8260	<5.0	5.0	ug/L	MQS	05/06/2011
Carbon Tetrachloride	EPA 8260	<5.0	5.0	ug/L	MQS	05/06/2011
1,2-Dichloroethane	EPA 8260	<5.0	5.0	ug/L	MQS	05/06/2011
Benzene	EPA 8260	<5.0	5.0	ug/L	MQS	05/06/2011
Trichloroethene	EPA 8260	510	5.0	ug/L	MQS	05/06/2011
Tetrachloroethene	EPA 8260	<5.0	5.0	ug/L	MQS	05/06/2011
Chlorobenzene	EPA 8260	<5.0	5.0	ug/L	MQS	05/06/2011
1,4-Dichlorobenzene	EPA 8260	<5.0	5.0	ug/L	MQS	05/06/2011
Surrogates:	EPA 8240					
***1,2-Dichloroethane-D4	EPA 8260	103		% R	MQS	05/06/2011
***Toluene-D8	EPA 8260	112		% R	MQS	05/06/2011
***4-Bromofluorobenzene	EPA 8260	101		% R	MQS	05/06/2011
TCLP ZERO HEADSPACE EXTRACT	EPA 1311	NA	NA		KAC	05/04/2011
Extraction (TCLP Leachate)	EPA 5030B	1.0	1.0	DF	MQS	05/05/2011

GZA GEOENVIRONMENTAL, INC.  
 ENVIRONMENTAL CHEMISTRY LABORATORY  
 106 SOUTH ST, HOPKINTON, MA 01748  
 MASSACHUSETTS LABORATORY I.D. NO. MA092

**EPA METHOD 1311/6010C ANALYSIS  
 Metals by ICP**

**QUALITY CONTROL - TCLP**

**DATE PREPARED: 5/3/2011**

QC Sample Units	Method Blank mg/L	Lab Control Sample % Recovery
Acceptance Limits	Results	80-120
<b>Analyte</b>		
Silver (Ag)	<0.0050	102
Aluminum (Al)	NA	NA
Arsenic (As)	<0.010	114
Boron (B)	NA	NA
Barium (Ba)	<0.0050	102
Beryllium (Be)	NA	NA
Calcium (Ca)	NA	NA
Cadmium (Cd)	<0.0050	109
Cobalt (Co)	NA	NA
Chromium (Cr)	<0.0050	103
Copper (Cu)	NA	NA
Iron (Fe)	NA	NA
Magnesium (Mg)	NA	NA
Manganese (Mn)	NA	NA
Molybdenum (Mo)	NA	NA
Nickel (Ni)	NA	NA
Lead (Pb)	<0.010	101
Antimony (Sb)	NA	NA
Selenium (Se)	<0.025	120
Tin (Sn)	NA	NA
Titanium (Ti)	NA	NA
Thallium (Tl)	NA	NA
Vanadium (V)	NA	NA
Zinc (Zn)	NA	NA
Zirconium (Zr)	NA	NA

RPD = Relative Percent Difference

NA = Not Applicable

NC = Not Calculated

CRM = Certified Reference Material

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106 SOUTH ST, HOPKINTON, MA 01748  
MASSACHUSETTS LABORATORY I.D. NO. MA092

**EPA METHOD 1311/7470A ANALYSIS  
Mercury by Cold Vapor Atomic Absorption**

**QUALITY CONTROL - TCLP**

**Date Prepared: 05/05/2011**

QC Sample	Method Blank	Lab Control Sample
Units	mg/L	% Recovery
Acceptance Limits	Results	80-120
<b>Analyte</b>		
Mercury (Hg)	<0.00020	99.8

RPD = Relative Percent Difference

LC concentration = 0.0050 mg/L

**GZA GEOENVIRONMENTAL, INC.  
ENVIRONMENTAL CHEMISTRY LABORATORY  
106 SOUTH STREET, HOPKINTON, MA 01748  
MASSACHUSETTS LABORATORY I.D. NO. MA092**

**EPA METHOD 8082 ANALYSIS  
QUALITY CONTROL SOLID**

**DATE EXTRACTED: 5/3/2011**

**DATE ANALYZED: 5/3/2011**

<b>METHOD BLANK POLYCHLORINATED BIPHENYLS as AROCLORS</b>	<b>Concentration ug/kg-PPB</b>	<b>Quantitation Limit ug/kg-PPB</b>
Aroclor 1268	ND	100
Aroclor 1262	ND	100
Aroclor 1260	ND	100
Aroclor 1254	ND	100
Aroclor 1248	ND	100
Aroclor 1242/1016	ND	100
Aroclor 1232	ND	100
Aroclor 1221	ND	100
<b>Surrogates:</b>	<b>(A)</b>	<b>(B)</b>
Tetrachloro-m-xylene	105	104
Decachlorobiphenyl	125	124
		30-150
		30-150

<b>LABORATORY CONTROL SAMPLE (LCS)</b>	<b>% Recovery</b>	<b>Acceptance Limits</b>
Aroclor 1016	98.9	90.5
Aroclor 1260	116	107
<b>Surrogates:</b>		
Tetrachloro-m-xylene	91.2	87.9
Decachlorobiphenyl	111	108
		30-150
		30-150

<b>LABORATORY CONTROL SAMPLE DUPLICATE (LCSD)</b>	<b>% Recovery</b>	<b>Acceptance Limits</b>
Aroclor 1016	91.8	83.7
Aroclor 1260	104	92.7
<b>Surrogates:</b>		
Tetrachloro-m-xylene	83.5	79.6
Decachlorobiphenyl	104	101
		30-150
		30-150

<b>RELATIVE PERCENT DIFFERENCE (RPD)</b>	<b>RPD</b>	<b>Acceptance Limits</b>
Aroclor 1016	7.45	7.81
Aroclor 1260	10.9	14.3
<b>Surrogates:</b>		
Tetrachloro-m-xylene	8.82	9.91
Decachlorobiphenyl	6.51	6.70
		<30
		<30
		<30

\*Matrix Spike/Duplicate Spike performed as per method and reported if assigned on Chain of Custody.

GZA GeoEnvironmental, Inc.  
106 South Street  
Hopkinton, MA 01748  
MA092

EPA Method 8270/625 Aqueous Method Blank (MB) and Laboratory Control Sample (LCS) Data

**Method Blank**

Date Extracted:	05/04/11	
Date Analyzed:	5/4/2011	
File Name:	M8378	
Semi-Volatile Organics	Result	Reporting Limit
pyridine	ND	100
1,4-dichlorobenzene	ND	10
2-methylphenol	ND	10
3&4-methylphenol	ND	10
hexachloroethane	ND	10
nitrobenzene	ND	10
hexachlorobutadiene	ND	10
2,4,6-trichlorophenol	ND	10
2,4,5-trichlorophenol	ND	10
2,4-dinitrotoluene	ND	10
hexachlorobenzene	ND	10
pentachlorophenol	ND	50

Surrogates:	Recovery (%)	Acceptance Limits
2-FLUOROPHENOL	41.2	15-110
PHENOL-D6	30.8	15-110
NITROBENZENE-D5	56.3	30-130
2-FLUOROBIPHENYL	54.4	30-130
2,4,6-TRIBROMOPHENOL	58.0	15-100
p-TERPHENYL-D14	76.5	30-130

GZA GeoEnvironmental, Inc.  
106 South Street  
Hopkinton, MA 01748  
MA092

EPA Method 8270/625 Aqueous Method Blank (MB) and Laboratory Control Sample (LCS) Data

**Laboratory Control Sample**

Date Extracted:	05/04/11	Date Analyzed:	5/4/2011	File Name:	M8379
Spike Concentration = 20ug/L		% Recovery	Acceptance Limits	Verdict	
pyridine	34.5	40-140	out		
1,4-dichlorobenzene	69.5	40-140	ok		
2-methylphenol	82.1	30-130	ok		
3&4-methylphenol	79.1	30-130	ok		
hexachloroethane	64.8	40-140	ok		
nitrobenzene	80.5	40-140	ok		
hexachlorobutadiene	62.5	40-140	ok		
2,4,6-trichlorophenol	81.7	30-130	ok		
2,4,5-trichlorophenol	90.0	30-130	ok		
2,4-dinitrotoluene	90.2	40-140	ok		
hexachlorobenzene	85.4	40-140	ok		
pentachlorophenol	91.5	30-130	ok		

CAM criteria allows 15% of analytes to exceed criteria.

Surrogates:	Recovery (%)	Acceptance Limits	Verdict
2-FLUOROPHENOL	67.5	15-110	ok
PHENOL-D6	50.9	15-110	ok
NITROBENZENE-D5	83.5	30-130	ok
2-FLUOROBIPHENYL	77.3	30-130	ok
2,4,6-TRIBROMOPHENOL	94.1	15-110	ok
p-TERPHENYL-D14	91.3	30-130	ok

**Method Blank**

Date Analyzed:	5/5/2011	
Volatile Organics	Conc. ug/L	Acceptance Limit
vinyl chloride	< 0.5	< 0.5
1,1-dichloroethene	< 0.5	< 0.5
2-butanone	< 10	< 10
chloroform	< 0.5	< 0.5
carbon tetrachloride	< 0.5	< 0.5
1,2-dichloroethane	< 0.5	< 0.5
benzene	< 0.5	< 0.5
trichloroethene	< 0.5	< 0.5
tetrachloroethene	< 0.5	< 0.5
chlorobenzene	< 0.5	< 0.5
1,4-dichlorobenzene	< 0.5	< 0.5

**Laboratory Control Sample**

Date Analyzed:	Spike Concentration = 20ug/L	
vinyl chloride	99.8	80-120
1,1-dichloroethene	95.0	80-120
2-butanone	89.7	70-130
chloroform	98.4	80-120
carbon tetrachloride	105	70-130
1,2-dichloroethane	99.0	70-130
benzene	102	70-130
trichloroethene	103	70-130
tetrachloroethene	104	70-130
chlorobenzene	104	70-130
1,4-dichlorobenzene	103	70-130

**Laboratory Control Sample Duplicate**

Date Analyzed:	5/5/2011	
vinyl chloride	99.0	70-130
1,1-dichloroethene	96.4	70-130
2-butanone	87.2	70-130
chloroform	97.4	70-130
carbon tetrachloride	105	70-130
1,2-dichloroethane	97.5	70-130
benzene	101	70-130
trichloroethene	104	70-130
tetrachloroethene	102	70-130
chlorobenzene	101	70-130
1,4-dichlorobenzene	100	70-130

Surrogates:	Recovery (%)	Acceptance Limits
DIBROMOFLUOROMETHANE	108	70-130
1,2-DICHLOROETHANE-D4	104	70-130
TOLUENE-D8	108	70-130
4-BROMOFLUOROBENZENE	102	70-130
1,2-DICHLOROBENZENE-D4	102	70-130

Surrogates:	Recovery (%)	Acceptance Limits	Surrogates:	Recovery (%)	Acceptance Limits	Verdict	Recovery (%)	Acceptance Limits	Verdict	RPD	Acceptance Limits	Verdict
DIBROMOFLUOROMETHANE	108	70-130	DIBROMOFLUOROMETHANE	108	70-130	ok	108	70-130	ok	0.35	<25	ok
1,2-DICHLOROETHANE-D4	104	70-130	1,2-DICHLOROETHANE-D4	102	70-130	ok	101	70-130	ok	0.96	<25	ok
TOLUENE-D8	108	70-130	TOLUENE-D8	109	70-130	ok	109	70-130	ok	0.44	<25	ok
4-BROMOFLUOROBENZENE	102	70-130	4-BROMOFLUOROBENZENE	107	70-130	ok	104	70-130	ok	2.78	<25	ok
1,2-DICHLOROBENZENE-D4	102	70-130	1,2-DICHLOROBENZENE-D4	107	70-130	ok	104	70-130	ok	3.02	<25	ok

## CHAIN-OF-CUSTODY RECORD

10

(for lab use only)

GZA GEOENVIRONMENTAL, INC.

Laboratory Division

106 South Street  
Hopkinton, MA 01748  
(781) 278-4700  
FAX (508) 435-9912

GZA FILE NO: 312 0056127      TASK NO: 7  
PROJECT 312 NAME STREET

GZA FILE NO: J1.0056127 TASK NO: 7

GZA ELE NO: 2) 0056127  
TASK NO: 7

P.O. NO. \_\_\_\_\_

P.O. NO.

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**GZA GeoEnvironmental, Inc.**  
106 South Street  
Hopkinton, MA 01748  
(781) 278-4700

Laboratory Identification Numbers:  
MA and ME: **MA092** NH: **2028**  
CT: **PH0579** RI: **LAO00236**  
NELAC - NYS DOH: **11063**

#### **A N A L Y T I C A L   R E P O R T**

GZA GeoEnvironmental of NY  
535 Washington Street  
11th Floor  
Buffalo, NY 14203-1415  
Daniel Troy

Project No.: **21.0056127.00**  
Work Order No.: **1105-00080**  
Date Received: **05/13/2011**  
Date Reported: **05/19/2011**

#### **SAMPLE INFORMATION**

Date Sampled	Matrix	Laboratory ID	Sample ID
05/12/2011	Solid	1105-00080 001	HA-3 - (1-2ft.)
05/12/2011	Solid	1105-00080 002	HA-4 - (1-2ft.)
05/12/2011	Solid	1105-00080 003	HA-7 - (1-2ft.)

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(781) 278-4700

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## ANALYTICAL REPORT

### GZA GeoEnvironmental of NY

535 Washington Street

11th Floor

Buffalo, NY 14203-1415

Daniel Troy

Project Name.: **312 Maple Street**

Project No.: **21.0056127.00**

Date Received: **05/13/2011**

Date Reported: **05/19/2011**

Work Order No.: **1105-00080**

---

### PROJECT NARRATIVE:

#### **1. Sample Receipt**

The samples were received on 05/13/11 via \_\_GZA courier, \_x\_UPS, \_\_FEDEX, or \_\_\_hand delivered. The temperature of the \_\_temperature blank/\_x\_cooler air, was 3.8 degrees C. The temperature requirement for most analyses is above freezing to 6 degrees C. The samples were received intact for all requested analyses.

The chain of custody indicates that the samples, when required, were chemically preserved in accordance with the method they reference.

#### **2. EPA Method 1311/8260 - VOCs (TCLP)**

The elevated reporting limits for samples HA-4 - (1-2ft) (1105-00080-002) and HA-7 - (1-2ft) (1105-00080-003) are due to initial dilution of the sample in order to get target compounds within the calibration range of the instrument. The dilution was based upon screening data for the sample.

Attach QC 1311/8260 5/18/2011 "S" - Aqueous



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**A N A L Y T I C A L   R E P O R T**

GZA GeoEnvironmental of NY

535 Washington Street

11th Floor

Buffalo, NY 14203-1415

Daniel Troy

Project Name.: **312 Maple Street**

Project No.: **21.0056127.00**

Date Received: **05/13/2011**

Date Reported: **05/19/2011**

Work Order No.: **1105-00080**

Data Authorized By: \_\_\_\_\_

NELAC certification, as indicated by the NELAC Lab ID Number, is per analyte. For a complete list of NELAC validated analytes, please contact the laboratory.

Abbreviations:

% R = % Recovery

DF = Dilution Factor

DFS = Dilution Factor Solids

CF = Calculation Factor

DO = Diluted Out

Method Key:

Method 8260: The current version of the method is 8260B.

Method 8270: The current version of the method is 8270D.

Method 6010: The current version of the method is 6010C.

Method 8081: The current version of the method is 8081B.

Method 8082: The current version of the method is 8082A.

Method 7471: The current version of the method is 7471B.

The current Metals preparation methods are: 3010A (aqueous) and 3051 (solid).

Please note that the laboratory signed copy of the chain of custody record is an integral part of the data report.

The laboratory report shall not be reproduced except in full without the written consent of the laboratory.

Soil data is reported on a dry weight basis unless otherwise specified.

Matrix Spike / Matrix Spike Duplicate sets are performed as per method and are reported at the end of the analytical report if assigned on the Chain of Custody.



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106 South Street  
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**A N A L Y T I C A L   R E P O R T**

GZA GeoEnvironmental of NY

535 Washington Street

11th Floor

Buffalo, NY 14203-1415

Daniel Troy

Project Name.: **312 Maple Street**

Date Received: **05/13/2011**

Project No.: **21.0056127.00**

Date Reported: **05/19/2011**

Work Order No.: **1105-00080**

Sample ID: **HA-3 - (1-2ft.)**

Sample No.: **001**

Sample Date: **05/12/2011**

Test Performed	Method	Results	Reporting Limit	Units	Tech	Analysis Date
TCLP VOLATILE ORGANIC COMPO	EPA 8260				MQS	05/18/2011
Vinyl Chloride	EPA 8260	<10	10	ug/L	MQS	05/18/2011
1,1-Dichloroethene	EPA 8260	<5.0	5.0	ug/L	MQS	05/18/2011
2-Butanone	EPA 8260	<50	50	ug/L	MQS	05/18/2011
Chloroform	EPA 8260	<5.0	5.0	ug/L	MQS	05/18/2011
Carbon Tetrachloride	EPA 8260	<5.0	5.0	ug/L	MQS	05/18/2011
1,2-Dichloroethane	EPA 8260	<5.0	5.0	ug/L	MQS	05/18/2011
Benzene	EPA 8260	<5.0	5.0	ug/L	MQS	05/18/2011
Trichloroethene	EPA 8260	340	5.0	ug/L	MQS	05/18/2011
Tetrachloroethene	EPA 8260	<5.0	5.0	ug/L	MQS	05/18/2011
Chlorobenzene	EPA 8260	<5.0	5.0	ug/L	MQS	05/18/2011
1,4-Dichlorobenzene	EPA 8260	<5.0	5.0	ug/L	MQS	05/18/2011
Surrogates:	EPA 8240					
***1,2-Dichloroethane-D4	EPA 8260	95.3		% R	MQS	05/18/2011
***Toluene-D8	EPA 8260	106		% R	MQS	05/18/2011
***4-Bromofluorobenzene	EPA 8260	101		% R	MQS	05/18/2011
TCLP ZERO HEADSPACE EXTRACT	EPA 1311	NA	NA		MQS	05/17/2011
Extraction (TCLP Leachate)	EPA 5030B	1.0	1.0	DF	MQS	05/18/2011



**GZA GeoEnvironmental, Inc.**  
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**A N A L Y T I C A L   R E P O R T**

GZA GeoEnvironmental of NY

535 Washington Street

11th Floor

Buffalo, NY 14203-1415

Daniel Troy

Project Name.: **312 Maple Street**

Project No.: **21.0056127.00**

Date Received: **05/13/2011**

Date Reported: **05/19/2011**

Work Order No.: **1105-00080**

Sample ID: **HA-4 - (1-2ft.)**

Sample No.: **002**

Sample Date: **05/12/2011**

Test Performed	Method	Results	Reporting Limit	Units	Tech	Analysis Date
TCLP VOLATILE ORGANIC COMPO	EPA 8260				MQS	05/18/2011
Vinyl Chloride	EPA 8260	<20	20	ug/L	MQS	05/18/2011
1,1-Dichloroethene	EPA 8260	<10	10	ug/L	MQS	05/18/2011
2-Butanone	EPA 8260	<100	100	ug/L	MQS	05/18/2011
Chloroform	EPA 8260	<10	10	ug/L	MQS	05/18/2011
Carbon Tetrachloride	EPA 8260	<10	10	ug/L	MQS	05/18/2011
1,2-Dichloroethane	EPA 8260	<10	10	ug/L	MQS	05/18/2011
Benzene	EPA 8260	<10	10	ug/L	MQS	05/18/2011
Trichloroethene	EPA 8260	730	10	ug/L	MQS	05/18/2011
Tetrachloroethene	EPA 8260	<10	10	ug/L	MQS	05/18/2011
Chlorobenzene	EPA 8260	<10	10	ug/L	MQS	05/18/2011
1,4-Dichlorobenzene	EPA 8260	<10	10	ug/L	MQS	05/18/2011
Surrogates:	EPA 8240					
***1,2-Dichloroethane-D4	EPA 8260	108		% R	MQS	05/18/2011
***Toluene-D8	EPA 8260	112		% R	MQS	05/18/2011
***4-Bromofluorobenzene	EPA 8260	100		% R	MQS	05/18/2011
TCLP ZERO HEADSPACE EXTRACT	EPA 1311	NA	NA		MQS	05/17/2011
Extraction (TCLP Leachate)	EPA 5030B	2.0	1.0	DF	MQS	05/18/2011



**GZA GeoEnvironmental, Inc.**  
106 South Street  
Hopkinton, MA 01748  
(781) 278-4700

Page 6 of 6

**A N A L Y T I C A L   R E P O R T**

GZA GeoEnvironmental of NY

535 Washington Street

11th Floor

Buffalo, NY 14203-1415

Daniel Troy

Project Name.: **312 Maple Street**

Project No.: **21.0056127.00**

Date Received: **05/13/2011**

Date Reported: **05/19/2011**

Work Order No.: **1105-00080**

Sample ID: **HA-7 - (1-2ft.)**

Sample No.: **003**

Sample Date: **05/12/2011**

Test Performed	Method	Results	Reporting Limit	Units	Tech	Analysis Date
TCLP VOLATILE ORGANIC COMPO	EPA 8260				MQS	05/18/2011
Vinyl Chloride	EPA 8260	<20	20	ug/L	MQS	05/18/2011
1,1-Dichloroethene	EPA 8260	<10	10	ug/L	MQS	05/18/2011
2-Butanone	EPA 8260	<100	100	ug/L	MQS	05/18/2011
Chloroform	EPA 8260	<10	10	ug/L	MQS	05/18/2011
Carbon Tetrachloride	EPA 8260	<10	10	ug/L	MQS	05/18/2011
1,2-Dichloroethane	EPA 8260	<10	10	ug/L	MQS	05/18/2011
Benzene	EPA 8260	<10	10	ug/L	MQS	05/18/2011
Trichloroethene	EPA 8260	510	10	ug/L	MQS	05/18/2011
Tetrachloroethene	EPA 8260	<10	10	ug/L	MQS	05/18/2011
Chlorobenzene	EPA 8260	<10	10	ug/L	MQS	05/18/2011
1,4-Dichlorobenzene	EPA 8260	<10	10	ug/L	MQS	05/18/2011
Surrogates:	EPA 8240					
***1,2-Dichloroethane-D4	EPA 8260	98.1		% R	MQS	05/18/2011
***Toluene-D8	EPA 8260	106		% R	MQS	05/18/2011
***4-Bromofluorobenzene	EPA 8260	101		% R	MQS	05/18/2011
TCLP ZERO HEADSPACE EXTRACT	EPA 1311	NA	NA		MQS	05/17/2011
Extraction (TCLP Leachate)	EPA 5030B	2.0	1.0	DF	MQS	05/18/2011

GZA GeoEnvironmental, Inc.  
106 South Street  
Hopkinton, MA 01748

EPA Method 8260 / 524.2 Aqueous Method Blank (MB) and Laboratory Control Sample/Duplicate (LCS/LCSD) Data

**Method Blank**

Date Analyzed:	5/18/2011	Conc. ug/L	Acceptance Limit
Volatile Organics			
vinyl chloride	< 0.5	< 0.5	
1,1-dichloroethene	< 0.5	< 0.5	
2-butanone	< 10	< 10	
chloroform	< 0.5	< 0.5	
carbon tetrachloride	< 0.5	< 0.5	
1,2-dichloroethane	< 0.5	< 0.5	
benzene	< 0.5	< 0.5	
trichloroethene	< 0.5	< 0.5	
tetrachloroethene	< 0.5	< 0.5	
chlorobenzene	< 0.5	< 0.5	
1,4-dichlorobenzene	< 0.5	< 0.5	

**Laboratory Control Sample**

Date Analyzed:	Spike Concentration = 20ug/L	% Recovery	Acceptance Limits	Verdict
vinyl chloride	95.8	80-120	ok	96.0
1,1-dichloroethene	96.3	80-120	ok	96.5
2-butanone	96.4	70-130	ok	101
chloroform	97.7	80-120	ok	99.5
carbon tetrachloride	107	70-130	ok	104
1,2-dichloroethane	103	70-130	ok	107
benzene	99.8	70-130	ok	99.6
trichloroethene	103	70-130	ok	107
tetrachloroethene	103	70-130	ok	94.1
chlorobenzene	102	70-130	ok	98.5
1,4-dichlorobenzene	100	70-130	ok	102

**Laboratory Control Sample Duplicate**

Date Analyzed:	Spike Concentration = 20ug/L	% Recovery	Acceptance Limits	Verdict	RPD	Limit	Verdict
vinyl chloride	95.8	80-120	ok	96.0	0.22	<25	ok
1,1-dichloroethene	96.3	80-120	ok	96.5	0.16	<25	ok
2-butanone	96.4	70-130	ok	101	5.15	<25	ok
chloroform	97.7	80-120	ok	99.5	1.82	<25	ok
carbon tetrachloride	107	70-130	ok	104	2.21	<25	ok
1,2-dichloroethane	103	70-130	ok	107	4.56	<25	ok
benzene	99.8	70-130	ok	99.6	0.14	<25	ok
trichloroethene	103	70-130	ok	107	3.49	<25	ok
tetrachloroethene	103	70-130	ok	94.1	9.37	<25	ok
chlorobenzene	102	70-130	ok	98.5	3.37	<25	ok
1,4-dichlorobenzene	100	70-130	ok	102	2.21	<25	ok

**Surrogates:**

Surrogates:	Recovery (%)	Acceptance Limits	Surrogates:	Recovery (%)	Acceptance Limits	Verdict
DIBROMOFLUOROMETHANE	107	70-130	DIBROMOFLUOROMETHANE	109	70-130	ok
1,2-DICHLOROETHANE-D4	96.7	70-130	1,2-DICHLOROETHANE-D4	106	70-130	ok
TOLUENE-D8	106	70-130	TOLUENE-D8	107	70-130	ok
4-BROMOFLUOROBENZENE	102	70-130	4-BROMOFLUOROBENZENE	103	70-130	ok
1,2-DICHLOROBENZENE-D4	100	70-130	1,2-DICHLOROBENZENE-D4	102	70-130	ok

**Acceptance**

RPD	Limits	Verdict
2.09	<25	ok
4.83	<25	ok
4.72	<25	ok
3.50	<25	ok
2.21	<25	ok

## CHAIN-OF-CUSTODY RECORD

W.O. # IC3 CCC  
(for lab use only)

Report Date:  
20-Sep-11 10:50

- Final Report  
 Re-Issued Report  
 Revised Report



## Laboratory Report

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

Work Order: K1568  
Project : Maple Street  
Project #:

Attn: Daniel Troy

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
K1568-01	HA-1-2-8/25/11	Soil	25-Aug-11 11:42	26-Aug-11 09:06

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 Mitkem Laboratories.

All applicable NELAC or USEPA CLP requirements have been met.

Spectrum Analytical (Rhode Island) is accredited under the National Environmental Laboratory Approval Program (NELAP) and is certified by several States, as well as USEPA and US Department of Defense. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at [www.mitkem.com](http://www.mitkem.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
Maine	2007037
Massachusetts	M-RI907
New Hampshire	2631
New Jersey	RI001
New York	11522
North Carolina	581
Pennsylvania	68-00520
Rhode Island	LAI00301
USDA	P330-08-00023
USEPA - ISM	EP-W-09-039
USEPA - SOM	EP-W-11-033



Authorized by:

Yihai Ding  
Laboratory Director



*SPECTRUM ANALYTICAL, INC.*

*Featuring*

**HANIBAL TECHNOLOGY**

## \* Data Summary Pack \*

# Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

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

Project Name : Maple Street

SDG : K1568

Customer Sample ID	Laboratory Sample ID	Analytical Requirements				
		MSVOA Method #	MSSEMI Method #	GC* Method #	ME	Other
HA-1-2-8/25/11	K1568-01	SW8260_MED_S				

# Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

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

Project Name : Maple Street

SDG : K1568

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8260_MED_S					
K1568-01A	SL	8/25/2011	8/26/2011	9/6/2011	8/31/2011
K1568-01ADL	SL	8/25/2011	8/26/2011	9/6/2011	9/6/2011

# Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

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

Project Name : Maple Street

SDG : K1568

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Low/Medium Level	Dil/Conc Factor
SW8260_MED_S					
K1568-01A	SL	SW8260_MED_S	Methanol	MED	1
K1568-01ADL	SL	SW8260_MED_S	Methanol	MED	20

# Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

WorkOrder: K1568

Client ID: GZA\_BUFFALO  
Project: Maple Street  
WO Name: Maple Street  
Location: MAPLE,  
Comments: N/A

Case: HC Due: 09/16/11  
SDG: Fax Due:  
PO: 21.0056127.00 Fax Report:   
Comments: N/A

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

Lab Samp ID	Client Sample ID	Collection Date	Date Recvd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL Storage
K1568-01A	HA-1-2-8/25/11	08/25/2011 11:42	08/26/2011	Soil	PMoist	/ VOA analysis first				VOA
K1568-01A	HA-1-2-8/25/11	08/25/2011 11:42	08/26/2011	Soil	SW8260_LOW_S	/				VOA
K1568-01A	HA-1-2-8/25/11	08/25/2011 11:42	08/26/2011	Soil	SW8260_MED_S	/				VOA
K1568-02A	HA-1-2-2.5-8/25/11	08/25/2011 11:42	08/26/2011	Soil	PMoist	/				A1

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.**

*Featuring*

**HANIBAL TECHNOLOGY**

## \* Volatiles \*

## **REPORT NARRATIVE**

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

**Client : GZA GeoEnvironmental of NY Buffalo**

**Project: Maple Street**

**Laboratory Workorder / SDG #: K1568**

**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**

Soil Samples were prepared following procedures in laboratory test code: SW5030

### **V. INSTRUMENTATION**

The following instrumentation was used

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.

Instrument Code: V6

Instrument Type: GCMS-VOA

Description: HP6890 / HP5973

Manufacturer: Hewlett-Packard

Model: 6890 / 5973

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:

HA-1-2-8/25/11 (K1568-01ADL) : Dilution Factor: 20

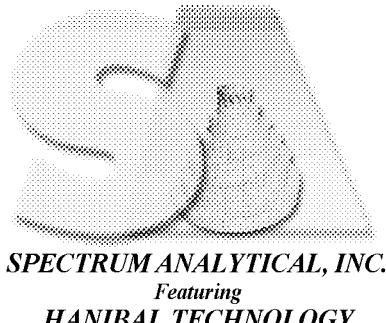
**G. Samples:**

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 RI, 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.

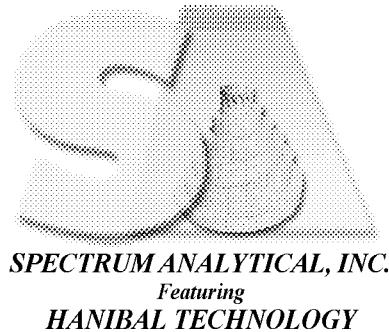
Signed:

Date: 09/20/11



## Data Flag/Qualifiers:

- 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 an 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 aldol condensation byproducts.
- 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.



## 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

CLIENT SAMPLE NO.

HA-1-2-8/25/11

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K1568-01A

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V8A5778.D

Level: (TRACE/LOW/MED) MED Date Received: 08/26/2011

% Moisture: not dec. 20 Date Analyzed: 08/31/2011

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) $\mu$ G/KG	Q
75-71-8	Dichlorodifluoromethane	360	U
74-87-3	Chloromethane	360	U
75-01-4	Vinyl chloride	360	U
74-83-9	Bromomethane	360	U
75-00-3	Chloroethane	360	U
75-69-4	Trichlorofluoromethane	360	U
75-35-4	1,1-Dichloroethene	360	U
67-64-1	Acetone	380	
74-88-4	Iodomethane	360	U
75-15-0	Carbon disulfide	50	J
75-09-2	Methylene chloride	360	U
156-60-5	trans-1,2-Dichloroethene	360	U
1634-04-4	Methyl tert-butyl ether	360	U
75-34-3	1,1-Dichloroethane	360	U
108-05-4	Vinyl acetate	360	U
78-93-3	2-Butanone	360	U
156-59-2	cis-1,2-Dichloroethene	360	U
594-20-7	2,2-Dichloropropane	360	U
74-97-5	Bromochloromethane	360	U
67-66-3	Chloroform	360	U
71-55-6	1,1,1-Trichloroethane	1000	
563-58-6	1,1-Dichloropropene	360	U
56-23-5	Carbon tetrachloride	360	U
107-06-2	1,2-Dichloroethane	360	U
71-43-2	Benzene	360	U
79-01-6	Trichloroethene	68000	E
78-87-5	1,2-Dichloropropane	360	U
74-95-3	Dibromomethane	360	U
75-27-4	Bromodichloromethane	360	U
10061-01-5	cis-1,3-Dichloropropene	360	U
108-10-1	4-Methyl-2-pentanone	360	U
108-88-3	Toluene	360	U
10061-02-6	trans-1,3-Dichloropropene	360	U
79-00-5	1,1,2-Trichloroethane	360	U
142-28-9	1,3-Dichloropropane	360	U

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

HA-1-2-8/25/11

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K1568-01A

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V8A5778.D

Level: (TRACE/LOW/MED) MED Date Received: 08/26/2011

% Moisture: not dec. 20 Date Analyzed: 08/31/2011

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) $\mu$ G/KG	Q
127-18-4	Tetrachloroethene	160	J
591-78-6	2-Hexanone	360	U
124-48-1	Dibromochloromethane	360	U
106-93-4	1,2-Dibromoethane	360	U
108-90-7	Chlorobenzene	360	U
630-20-6	1,1,1,2-Tetrachloroethane	360	U
100-41-4	Ethylbenzene	360	U
1330-20-7	m,p-Xylene	360	U
95-47-6	o-Xylene	360	U
1330-20-7	Xylene (Total)	360	U
100-42-5	Styrene	360	U
75-25-2	Bromoform	360	U
98-82-8	Isopropylbenzene	360	U
79-34-5	1,1,2,2-Tetrachloroethane	360	U
108-86-1	Bromobenzene	360	U
96-18-4	1,2,3-Trichloropropane	360	U
103-65-1	n-Propylbenzene	360	U
95-49-8	2-Chlorotoluene	360	U
108-67-8	1,3,5-Trimethylbenzene	360	U
106-43-4	4-Chlorotoluene	360	U
98-06-6	tert-Butylbenzene	360	U
95-63-6	1,2,4-Trimethylbenzene	360	U
135-98-8	sec-Butylbenzene	360	U
99-87-6	4-Isopropyltoluene	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
104-51-8	n-Butylbenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
96-12-8	1,2-Dibromo-3-chloropropane	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
87-68-3	Hexachlorobutadiene	360	U
87-61-6	1,2,3-Trichlorobenzene	360	U
91-20-3	Naphthalene	60	J

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

HA-1-2-8/25/11DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K1568-01ADL

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V6I2435.D

Level: (TRACE/LOW/MED) MED Date Received: 08/26/2011

% Moisture: not dec. 20 Date Analyzed: 09/06/2011

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

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) <u>  </u> <u>  </u> μG/KG	Q
75-71-8	Dichlorodifluoromethane	7300	U
74-87-3	Chloromethane	7300	U
75-01-4	Vinyl chloride	7300	U
74-83-9	Bromomethane	7300	U
75-00-3	Chloroethane	7300	U
75-69-4	Trichlorofluoromethane	7300	U
75-35-4	1,1-Dichloroethene	7300	U
67-64-1	Acetone	7300	U
74-88-4	Iodomethane	7300	U
75-15-0	Carbon disulfide	7300	U
75-09-2	Methylene chloride	7300	U
156-60-5	trans-1,2-Dichloroethene	7300	U
1634-04-4	Methyl tert-butyl ether	7300	U
75-34-3	1,1-Dichloroethane	7300	U
108-05-4	Vinyl acetate	7300	U
78-93-3	2-Butanone	7300	U
156-59-2	cis-1,2-Dichloroethene	7300	U
594-20-7	2,2-Dichloropropane	7300	U
74-97-5	Bromochloromethane	7300	U
67-66-3	Chloroform	7300	U
71-55-6	1,1,1-Trichloroethane	6300	DJ
563-58-6	1,1-Dichloropropene	7300	U
56-23-5	Carbon tetrachloride	7300	U
107-06-2	1,2-Dichloroethane	7300	U
71-43-2	Benzene	7300	U
79-01-6	Trichloroethene	280000	D
78-87-5	1,2-Dichloropropane	7300	U
74-95-3	Dibromomethane	7300	U
75-27-4	Bromodichloromethane	7300	U
10061-01-5	cis-1,3-Dichloropropene	7300	U
108-10-1	4-Methyl-2-pentanone	7300	U
108-88-3	Toluene	7300	U
10061-02-6	trans-1,3-Dichloropropene	7300	U
79-00-5	1,1,2-Trichloroethane	7300	U
142-28-9	1,3-Dichloropropane	7300	U

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

HA-1-2-8/25/11DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K1568-01ADL

Sample wt/vol: 5.20 (g/mL) G Lab File ID: V6I2435.D

Level: (TRACE/LOW/MED) MED Date Received: 08/26/2011

% Moisture: not dec. 20 Date Analyzed: 09/06/2011

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

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) $\mu$ G/KG	Q
127-18-4	Tetrachloroethene	7300	U
591-78-6	2-Hexanone	7300	U
124-48-1	Dibromochloromethane	7300	U
106-93-4	1,2-Dibromoethane	7300	U
108-90-7	Chlorobenzene	7300	U
630-20-6	1,1,1,2-Tetrachloroethane	7300	U
100-41-4	Ethylbenzene	7300	U
1330-20-7	m,p-Xylene	7300	U
95-47-6	o-Xylene	7300	U
1330-20-7	Xylene (Total)	7300	U
100-42-5	Styrene	7300	U
75-25-2	Bromoform	7300	U
98-82-8	Isopropylbenzene	7300	U
79-34-5	1,1,2,2-Tetrachloroethane	7300	U
108-86-1	Bromobenzene	7300	U
96-18-4	1,2,3-Trichloropropane	7300	U
103-65-1	n-Propylbenzene	7300	U
95-49-8	2-Chlorotoluene	7300	U
108-67-8	1,3,5-Trimethylbenzene	7300	U
106-43-4	4-Chlorotoluene	7300	U
98-06-6	tert-Butylbenzene	7300	U
95-63-6	1,2,4-Trimethylbenzene	7300	U
135-98-8	sec-Butylbenzene	7300	U
99-87-6	4-Isopropyltoluene	7300	U
541-73-1	1,3-Dichlorobenzene	7300	U
106-46-7	1,4-Dichlorobenzene	7300	U
104-51-8	n-Butylbenzene	7300	U
95-50-1	1,2-Dichlorobenzene	7300	U
96-12-8	1,2-Dibromo-3-chloropropane	7300	U
120-82-1	1,2,4-Trichlorobenzene	7300	U
87-68-3	Hexachlorobutadiene	7300	U
87-61-6	1,2,3-Trichlorobenzene	7300	U
91-20-3	Naphthalene	7300	U

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-61290

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-61290

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A5766.D

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

% Moisture: not dec. 0.0 Date Analyzed: 08/31/2011

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) $\mu$ G/KG	Q
75-71-8	Dichlorodifluoromethane	250	U
74-87-3	Chloromethane	250	U
75-01-4	Vinyl chloride	250	U
74-83-9	Bromomethane	250	U
75-00-3	Chloroethane	250	U
75-69-4	Trichlorofluoromethane	250	U
75-35-4	1,1-Dichloroethene	250	U
67-64-1	Acetone	250	U
74-88-4	Iodomethane	250	U
75-15-0	Carbon disulfide	250	U
75-09-2	Methylene chloride	250	U
156-60-5	trans-1,2-Dichloroethene	250	U
1634-04-4	Methyl tert-butyl ether	250	U
75-34-3	1,1-Dichloroethane	250	U
108-05-4	Vinyl acetate	250	U
78-93-3	2-Butanone	250	U
156-59-2	cis-1,2-Dichloroethene	250	U
594-20-7	2,2-Dichloropropane	250	U
74-97-5	Bromochloromethane	250	U
67-66-3	Chloroform	250	U
71-55-6	1,1,1-Trichloroethane	250	U
563-58-6	1,1-Dichloropropene	250	U
56-23-5	Carbon tetrachloride	250	U
107-06-2	1,2-Dichloroethane	250	U
71-43-2	Benzene	250	U
79-01-6	Trichloroethene	250	U
78-87-5	1,2-Dichloropropane	250	U
74-95-3	Dibromomethane	250	U
75-27-4	Bromodichloromethane	250	U
10061-01-5	cis-1,3-Dichloropropene	250	U
108-10-1	4-Methyl-2-pentanone	250	U
108-88-3	Toluene	250	U
10061-02-6	trans-1,3-Dichloropropene	250	U
79-00-5	1,1,2-Trichloroethane	250	U
142-28-9	1,3-Dichloropropane	250	U

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-61290

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-61290

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A5766.D

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

% Moisture: not dec. 0.0 Date Analyzed: 08/31/2011

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) $\mu$ G/KG	Q
127-18-4	Tetrachloroethene	250	U
591-78-6	2-Hexanone	250	U
124-48-1	Dibromochloromethane	250	U
106-93-4	1,2-Dibromoethane	250	U
108-90-7	Chlorobenzene	250	U
630-20-6	1,1,1,2-Tetrachloroethane	250	U
100-41-4	Ethylbenzene	250	U
1330-20-7	m,p-Xylene	250	U
95-47-6	o-Xylene	250	U
1330-20-7	Xylene (Total)	250	U
100-42-5	Styrene	250	U
75-25-2	Bromoform	250	U
98-82-8	Isopropylbenzene	250	U
79-34-5	1,1,2,2-Tetrachloroethane	250	U
108-86-1	Bromobenzene	250	U
96-18-4	1,2,3-Trichloropropane	250	U
103-65-1	n-Propylbenzene	250	U
95-49-8	2-Chlorotoluene	250	U
108-67-8	1,3,5-Trimethylbenzene	250	U
106-43-4	4-Chlorotoluene	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
541-73-1	1,3-Dichlorobenzene	250	U
106-46-7	1,4-Dichlorobenzene	250	U
104-51-8	n-Butylbenzene	250	U
95-50-1	1,2-Dichlorobenzene	250	U
96-12-8	1,2-Dibromo-3-chloropropane	250	U
120-82-1	1,2,4-Trichlorobenzene	250	U
87-68-3	Hexachlorobutadiene	250	U
87-61-6	1,2,3-Trichlorobenzene	250	U
91-20-3	Naphthalene	250	U

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-61378

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-61378

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V6I2416.D

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

% Moisture: not dec. 0.0 Date Analyzed: 09/06/2011

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) $\mu$ G/KG	Q
75-71-8	Dichlorodifluoromethane	250	U
74-87-3	Chloromethane	250	U
75-01-4	Vinyl chloride	250	U
74-83-9	Bromomethane	250	U
75-00-3	Chloroethane	250	U
75-69-4	Trichlorofluoromethane	250	U
75-35-4	1,1-Dichloroethene	250	U
67-64-1	Acetone	250	U
74-88-4	Iodomethane	250	U
75-15-0	Carbon disulfide	250	U
75-09-2	Methylene chloride	250	U
156-60-5	trans-1,2-Dichloroethene	250	U
1634-04-4	Methyl tert-butyl ether	250	U
75-34-3	1,1-Dichloroethane	250	U
108-05-4	Vinyl acetate	250	U
78-93-3	2-Butanone	250	U
156-59-2	cis-1,2-Dichloroethene	250	U
594-20-7	2,2-Dichloropropane	250	U
74-97-5	Bromochloromethane	250	U
67-66-3	Chloroform	250	U
71-55-6	1,1,1-Trichloroethane	250	U
563-58-6	1,1-Dichloropropene	250	U
56-23-5	Carbon tetrachloride	250	U
107-06-2	1,2-Dichloroethane	250	U
71-43-2	Benzene	250	U
79-01-6	Trichloroethene	250	U
78-87-5	1,2-Dichloropropane	250	U
74-95-3	Dibromomethane	250	U
75-27-4	Bromodichloromethane	250	U
10061-01-5	cis-1,3-Dichloropropene	250	U
108-10-1	4-Methyl-2-pentanone	250	U
108-88-3	Toluene	250	U
10061-02-6	trans-1,3-Dichloropropene	250	U
79-00-5	1,1,2-Trichloroethane	250	U
142-28-9	1,3-Dichloropropane	250	U

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-61378

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-61378

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V6I2416.D

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

% Moisture: not dec. 0.0 Date Analyzed: 09/06/2011

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) $\mu$ G/KG	Q
127-18-4	Tetrachloroethene	250	U
591-78-6	2-Hexanone	250	U
124-48-1	Dibromochloromethane	250	U
106-93-4	1,2-Dibromoethane	250	U
108-90-7	Chlorobenzene	250	U
630-20-6	1,1,1,2-Tetrachloroethane	250	U
100-41-4	Ethylbenzene	250	U
1330-20-7	m,p-Xylene	250	U
95-47-6	o-Xylene	250	U
1330-20-7	Xylene (Total)	250	U
100-42-5	Styrene	250	U
75-25-2	Bromoform	250	U
98-82-8	Isopropylbenzene	250	U
79-34-5	1,1,2,2-Tetrachloroethane	250	U
108-86-1	Bromobenzene	250	U
96-18-4	1,2,3-Trichloropropane	250	U
103-65-1	n-Propylbenzene	250	U
95-49-8	2-Chlorotoluene	250	U
108-67-8	1,3,5-Trimethylbenzene	250	U
106-43-4	4-Chlorotoluene	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
541-73-1	1,3-Dichlorobenzene	250	U
106-46-7	1,4-Dichlorobenzene	250	U
104-51-8	n-Butylbenzene	250	U
95-50-1	1,2-Dichlorobenzene	250	U
96-12-8	1,2-Dibromo-3-chloropropane	250	U
120-82-1	1,2,4-Trichlorobenzene	250	U
87-68-3	Hexachlorobutadiene	250	U
87-61-6	1,2,3-Trichlorobenzene	250	U
91-20-3	Naphthalene	250	U

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-61290

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-61290

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A5764.D

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

% Moisture: not dec. 0.0 Date Analyzed: 08/31/2011

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) $\mu$ G/KG	Q
75-71-8	Dichlorodifluoromethane	1600	
74-87-3	Chloromethane	2000	
75-01-4	Vinyl chloride	2200	
74-83-9	Bromomethane	1500	
75-00-3	Chloroethane	2300	
75-69-4	Trichlorofluoromethane	2400	
75-35-4	1,1-Dichloroethene	2300	
67-64-1	Acetone	2200	
74-88-4	Iodomethane	2100	
75-15-0	Carbon disulfide	2100	
75-09-2	Methylene chloride	2400	
156-60-5	trans-1,2-Dichloroethene	2300	
1634-04-4	Methyl tert-butyl ether	2300	
75-34-3	1,1-Dichloroethane	2600	
108-05-4	Vinyl acetate	2500	
78-93-3	2-Butanone	2300	
156-59-2	cis-1,2-Dichloroethene	2400	
594-20-7	2,2-Dichloropropane	2500	
74-97-5	Bromochloromethane	2300	
67-66-3	Chloroform	2400	
71-55-6	1,1,1-Trichloroethane	2500	
563-58-6	1,1-Dichloropropene	2400	
56-23-5	Carbon tetrachloride	2600	
107-06-2	1,2-Dichloroethane	2600	
71-43-2	Benzene	2500	
79-01-6	Trichloroethene	2300	
78-87-5	1,2-Dichloropropane	2600	
74-95-3	Dibromomethane	2500	
75-27-4	Bromodichloromethane	2600	
10061-01-5	cis-1,3-Dichloropropene	2500	
108-10-1	4-Methyl-2-pentanone	2400	
108-88-3	Toluene	2500	
10061-02-6	trans-1,3-Dichloropropene	2500	
79-00-5	1,1,2-Trichloroethane	2600	
142-28-9	1,3-Dichloropropane	2500	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-61290

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-61290

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A5764.D

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

% Moisture: not dec. 0.0 Date Analyzed: 08/31/2011

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) $\mu$ G/KG	Q
127-18-4	Tetrachloroethene	2200	
591-78-6	2-Hexanone	2500	
124-48-1	Dibromochloromethane	2600	
106-93-4	1,2-Dibromoethane	2500	
108-90-7	Chlorobenzene	2500	
630-20-6	1,1,1,2-Tetrachloroethane	2400	
100-41-4	Ethylbenzene	2500	
1330-20-7	m,p-Xylene	5100	
95-47-6	o-Xylene	2500	
1330-20-7	Xylene (Total)	7600	
100-42-5	Styrene	2500	
75-25-2	Bromoform	2500	
98-82-8	Isopropylbenzene	2500	
79-34-5	1,1,2,2-Tetrachloroethane	2500	
108-86-1	Bromobenzene	2200	
96-18-4	1,2,3-Trichloropropane	2500	
103-65-1	n-Propylbenzene	2500	
95-49-8	2-Chlorotoluene	2400	
108-67-8	1,3,5-Trimethylbenzene	2400	
106-43-4	4-Chlorotoluene	2500	
98-06-6	tert-Butylbenzene	2500	
95-63-6	1,2,4-Trimethylbenzene	2500	
135-98-8	sec-Butylbenzene	2500	
99-87-6	4-Isopropyltoluene	2500	
541-73-1	1,3-Dichlorobenzene	2400	
106-46-7	1,4-Dichlorobenzene	2400	
104-51-8	n-Butylbenzene	2700	
95-50-1	1,2-Dichlorobenzene	2400	
96-12-8	1,2-Dibromo-3-chloropropane	2700	
120-82-1	1,2,4-Trichlorobenzene	2400	
87-68-3	Hexachlorobutadiene	2100	
87-61-6	1,2,3-Trichlorobenzene	2400	
91-20-3	Naphthalene	2400	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-61378

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-61378

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V6I2414.D

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

% Moisture: not dec. 0.0 Date Analyzed: 09/06/2011

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) <u>  </u> <u>  </u> μG/KG	Q
75-71-8	Dichlorodifluoromethane	2200	
74-87-3	Chloromethane	2300	
75-01-4	Vinyl chloride	2200	
74-83-9	Bromomethane	2300	
75-00-3	Chloroethane	2300	
75-69-4	Trichlorofluoromethane	2200	
75-35-4	1,1-Dichloroethene	2200	
67-64-1	Acetone	2400	
74-88-4	Iodomethane	2400	
75-15-0	Carbon disulfide	2300	
75-09-2	Methylene chloride	2300	
156-60-5	trans-1,2-Dichloroethene	2300	
1634-04-4	Methyl tert-butyl ether	2400	
75-34-3	1,1-Dichloroethane	2300	
108-05-4	Vinyl acetate	2400	
78-93-3	2-Butanone	2600	
156-59-2	cis-1,2-Dichloroethene	2300	
594-20-7	2,2-Dichloropropane	2400	
74-97-5	Bromochloromethane	2400	
67-66-3	Chloroform	2300	
71-55-6	1,1,1-Trichloroethane	2300	
563-58-6	1,1-Dichloropropene	2200	
56-23-5	Carbon tetrachloride	2300	
107-06-2	1,2-Dichloroethane	2400	
71-43-2	Benzene	2300	
79-01-6	Trichloroethene	2200	
78-87-5	1,2-Dichloropropane	2300	
74-95-3	Dibromomethane	2400	
75-27-4	Bromodichloromethane	2400	
10061-01-5	cis-1,3-Dichloropropene	2400	
108-10-1	4-Methyl-2-pentanone	2400	
108-88-3	Toluene	2200	
10061-02-6	trans-1,3-Dichloropropene	2400	
79-00-5	1,1,2-Trichloroethane	2400	
142-28-9	1,3-Dichloropropane	2300	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-61378

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-61378

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V6I2414.D

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

% Moisture: not dec. 0.0 Date Analyzed: 09/06/2011

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) $\mu$ G/KG	Q
127-18-4	Tetrachloroethene	2000	
591-78-6	2-Hexanone	2400	
124-48-1	Dibromochloromethane	2300	
106-93-4	1,2-Dibromoethane	2300	
108-90-7	Chlorobenzene	2200	
630-20-6	1,1,1,2-Tetrachloroethane	2200	
100-41-4	Ethylbenzene	2100	
1330-20-7	m,p-Xylene	4200	
95-47-6	o-Xylene	2200	
1330-20-7	Xylene (Total)	6400	
100-42-5	Styrene	2200	
75-25-2	Bromoform	2400	
98-82-8	Isopropylbenzene	2000	
79-34-5	1,1,2,2-Tetrachloroethane	2300	
108-86-1	Bromobenzene	2200	
96-18-4	1,2,3-Trichloropropane	2300	
103-65-1	n-Propylbenzene	2000	
95-49-8	2-Chlorotoluene	2000	
108-67-8	1,3,5-Trimethylbenzene	2000	
106-43-4	4-Chlorotoluene	2100	
98-06-6	tert-Butylbenzene	2000	
95-63-6	1,2,4-Trimethylbenzene	2100	
135-98-8	sec-Butylbenzene	1900	
99-87-6	4-Isopropyltoluene	2000	
541-73-1	1,3-Dichlorobenzene	2100	
106-46-7	1,4-Dichlorobenzene	2100	
104-51-8	n-Butylbenzene	2000	
95-50-1	1,2-Dichlorobenzene	2100	
96-12-8	1,2-Dibromo-3-chloropropane	2300	
120-82-1	1,2,4-Trichlorobenzene	2100	
87-68-3	Hexachlorobutadiene	1900	
87-61-6	1,2,3-Trichlorobenzene	2100	
91-20-3	Naphthalene	2300	

2D - FORM II VOA-4  
SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: \_\_\_\_\_ SDG No.: SK1568  
 Level: (LOW/MED) MED

	CLIENT SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
01	LCS-61290	104	104	102	104				0
02	MB-61290	110	106	104	92				0
03	HA-1-2-8/25/ 11	105	108	102	94				0
04	LCS-61378	101	102	97	100				0
05	MB-61378	102	102	95	97				0
06	HA-1-2-8/25/ 11DL	107	101	95	99				0

VDMC1 (DBFM) Dibromofluoromethane  
 VDMC2 (DCE) = 1,2-Dichloroethane-d4  
 VDMC3 (TOL) = Toluene-d8  
 VDMC4 (BFB) = Bromofluorobenzene

QC LIMITS  
 (65-132)  
 (65-128)  
 (85-115)  
 (77-111)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits

som11.07.01.A

3 - FORM III  
SOIL LABORATORY CONTROL  
SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-61290

Lab Name: SPECTRUM ANALYTICAL, INC.

Contract:

Lab Code: MITKEM Case No.: K1568

Mod. Ref No.: SDG No.: SK1568

Lab Sample ID: LCS-61290

LCS Lot No.:

Date Extracted: 08/31/2011

Date Analyzed (1): 08/31/2011

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	2500.0000	0.0000	1553.2689	62		35 - 135
Chloromethane	2500.0000	0.0000	1978.3782	79		50 - 130
Vinyl chloride	2500.0000	0.0000	2205.1736	88		60 - 125
Bromomethane	2500.0000	0.0000	1534.8306	61		30 - 160
Chloroethane	2500.0000	0.0000	2275.8505	91		40 - 155
Trichlorofluoromethane	2500.0000	0.0000	2402.3799	96		25 - 185
1,1-Dichloroethene	2500.0000	0.0000	2277.3263	91		65 - 135
Acetone	2500.0000	0.0000	2205.1311	88		20 - 160
Iodomethane	2500.0000	0.0000	2143.1243	86		70 - 126
Carbon disulfide	2500.0000	0.0000	2145.0647	86		45 - 160
Methylene chloride	2500.0000	0.0000	2391.1242	96		55 - 140
trans-1,2-Dichloroethene	2500.0000	0.0000	2291.5733	92		65 - 135
Methyl tert-butyl ether	2500.0000	0.0000	2328.3007	93		75 - 126
1,1-Dichloroethane	2500.0000	0.0000	2602.4316	104		75 - 125
Vinyl acetate	2500.0000	0.0000	2535.4410	101		65 - 138
2-Butanone	2500.0000	0.0000	2257.1178	90		30 - 160
cis-1,2-Dichloroethene	2500.0000	0.0000	2416.5392	97		65 - 125
2,2-Dichloropropane	2500.0000	0.0000	2454.6114	98		65 - 135
Bromochloromethane	2500.0000	0.0000	2335.8795	93		70 - 125
Chloroform	2500.0000	0.0000	2431.4368	97		70 - 125
1,1,1-Trichloroethane	2500.0000	0.0000	2527.8339	101		70 - 135
1,1-Dichloropropene	2500.0000	0.0000	2361.7303	94		70 - 135
Carbon tetrachloride	2500.0000	0.0000	2572.2414	103		65 - 135
1,2-Dichloroethane	2500.0000	0.0000	2578.2752	103		70 - 135
Benzene	2500.0000	0.0000	2478.6145	99		75 - 125
Trichloroethene	2500.0000	0.0000	2303.2645	92		75 - 125
1,2-Dichloropropane	2500.0000	0.0000	2605.4889	104		70 - 120
Dibromomethane	2500.0000	0.0000	2520.1062	101		75 - 130
Bromodichloromethane	2500.0000	0.0000	2645.9428	106		70 - 130
cis-1,3-Dichloropropene	2500.0000	0.0000	2505.9560	100		70 - 125
4-Methyl-2-pentanone	2500.0000	0.0000	2394.5745	96		45 - 145
Toluene	2500.0000	0.0000	2480.1516	99		70 - 125
trans-1,3-Dichloropropene	2500.0000	0.0000	2517.2191	101		65 - 125
1,1,2-Trichloroethane	2500.0000	0.0000	2551.0529	102		60 - 125
1,3-Dichloropropane	2500.0000	0.0000	2542.5184	102		75 - 125
Tetrachloroethene	2500.0000	0.0000	2235.3663	89		65 - 140
2-Hexanone	2500.0000	0.0000	2505.9480	100		45 - 145
Dibromochloromethane	2500.0000	0.0000	2608.5286	104		65 - 130
1,2-Dibromoethane	2500.0000	0.0000	2480.9077	99		70 - 125
Chlorobenzene	2500.0000	0.0000	2518.8685	101		75 - 125
1,1,1,2-Tetrachloroethane	2500.0000	0.0000	2431.3928	97		75 - 125
Ethylbenzene	2500.0000	0.0000	2501.5659	100		75 - 125
m,p-Xylene	5000.0000	0.0000	5100.9919	102		80 - 125
o-Xylene	2500.0000	0.0000	2508.5438	100		75 - 125

3 - FORM III  
SOIL LABORATORY CONTROL  
SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-61290

Lab Name: SPECTRUM ANALYTICAL, INC.

Contract:

Lab Code: MITKEM

Case No.: K1568

Mod. Ref No.:

SDG No.: SK1568

Lab Sample ID: LCS-61290

LCS Lot No.:

Date Extracted: 08/31/2011

Date Analyzed (1): 08/31/2011

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Xylene (Total)	7500.0000	0.0000	7609.5357	101		75 - 125
Styrene	2500.0000	0.0000	2542.6343	102		75 - 125
Bromoform	2500.0000	0.0000	2520.1132	101		55 - 135
Isopropylbenzene	2500.0000	0.0000	2532.3525	101		75 - 130
1,1,2,2-Tetrachloroethane	2500.0000	0.0000	2467.2245	99		55 - 130
Bromobenzene	2500.0000	0.0000	2205.0280	88		65 - 120
1,2,3-Trichloropropane	2500.0000	0.0000	2487.0634	99		65 - 130
n-Propylbenzene	2500.0000	0.0000	2493.5365	100		65 - 135
2-Chlorotoluene	2500.0000	0.0000	2376.4326	95		70 - 130
1,3,5-Trimethylbenzene	2500.0000	0.0000	2423.8507	97		65 - 135
4-Chlorotoluene	2500.0000	0.0000	2475.6605	99		75 - 125
tert-Butylbenzene	2500.0000	0.0000	2451.4579	98		65 - 130
1,2,4-Trimethylbenzene	2500.0000	0.0000	2540.3543	102		65 - 135
sec-Butylbenzene	2500.0000	0.0000	2515.3094	101		65 - 130
4-Isopropyltoluene	2500.0000	0.0000	2540.5128	102		75 - 135
1,3-Dichlorobenzene	2500.0000	0.0000	2391.1255	96		70 - 125
1,4-Dichlorobenzene	2500.0000	0.0000	2389.4530	96		70 - 125
n-Butylbenzene	2500.0000	0.0000	2688.2589	108		65 - 140
1,2-Dichlorobenzene	2500.0000	0.0000	2433.6042	97		75 - 120
1,2-Dibromo-3-chloropropan	2500.0000	0.0000	2742.9252	110		40 - 135
1,2,4-Trichlorobenzene	2500.0000	0.0000	2373.3310	95		65 - 130
Hexachlorobutadiene	2500.0000	0.0000	2088.9173	84		55 - 140
1,2,3-Trichlorobenzene	2500.0000	0.0000	2410.0155	96		60 - 135
Naphthalene	2500.0000	0.0000	2359.3779	94		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 68 outside limits

COMMENTS: \_\_\_\_\_

3 - FORM III  
SOIL LABORATORY CONTROL  
SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-61378

Lab Name: SPECTRUM ANALYTICAL, INC.

Contract:

Lab Code: MITKEM Case No.: K1568

Mod. Ref No.: SDG No.: SK1568

Lab Sample ID: LCS-61378

LCS Lot No.:

Date Extracted: 09/06/2011

Date Analyzed (1): 09/06/2011

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	2500.0000	0.0000	2182.7935	87		35 - 135
Chloromethane	2500.0000	0.0000	2333.7196	93		50 - 130
Vinyl chloride	2500.0000	0.0000	2223.5048	89		60 - 125
Bromomethane	2500.0000	0.0000	2312.0036	92		30 - 160
Chloroethane	2500.0000	0.0000	2332.1822	93		40 - 155
Trichlorofluoromethane	2500.0000	0.0000	2206.0232	88		25 - 185
1,1-Dichloroethene	2500.0000	0.0000	2159.1219	86		65 - 135
Acetone	2500.0000	0.0000	2438.2459	98		20 - 160
Iodomethane	2500.0000	0.0000	2384.4898	95		70 - 126
Carbon disulfide	2500.0000	0.0000	2303.0892	92		45 - 160
Methylene chloride	2500.0000	0.0000	2329.5507	93		55 - 140
trans-1,2-Dichloroethene	2500.0000	0.0000	2304.3600	92		65 - 135
Methyl tert-butyl ether	2500.0000	0.0000	2422.1310	97		75 - 126
1,1-Dichloroethane	2500.0000	0.0000	2278.5106	91		75 - 125
Vinyl acetate	2500.0000	0.0000	2350.2979	94		65 - 138
2-Butanone	2500.0000	0.0000	2576.6007	103		30 - 160
cis-1,2-Dichloroethene	2500.0000	0.0000	2340.1206	94		65 - 125
2,2-Dichloropropane	2500.0000	0.0000	2417.2097	97		65 - 135
Bromochloromethane	2500.0000	0.0000	2386.1880	95		70 - 125
Chloroform	2500.0000	0.0000	2290.9236	92		70 - 125
1,1,1-Trichloroethane	2500.0000	0.0000	2288.3027	92		70 - 135
1,1-Dichloropropene	2500.0000	0.0000	2214.5527	89		70 - 135
Carbon tetrachloride	2500.0000	0.0000	2283.0605	91		65 - 135
1,2-Dichloroethane	2500.0000	0.0000	2361.4756	94		70 - 135
Benzene	2500.0000	0.0000	2322.5687	93		75 - 125
Trichloroethene	2500.0000	0.0000	2208.6655	88		75 - 125
1,2-Dichloropropane	2500.0000	0.0000	2300.4376	92		70 - 120
Dibromomethane	2500.0000	0.0000	2414.1804	97		75 - 130
Bromodichloromethane	2500.0000	0.0000	2365.3828	95		70 - 130
cis-1,3-Dichloropropene	2500.0000	0.0000	2399.1265	96		70 - 125
4-Methyl-2-pentanone	2500.0000	0.0000	2383.4961	95		45 - 145
Toluene	2500.0000	0.0000	2238.7175	90		70 - 125
trans-1,3-Dichloropropene	2500.0000	0.0000	2392.2144	96		65 - 125
1,1,2-Trichloroethane	2500.0000	0.0000	2368.4801	95		60 - 125
1,3-Dichloropropane	2500.0000	0.0000	2303.7803	92		75 - 125
Tetrachloroethene	2500.0000	0.0000	2002.9032	80		65 - 140
2-Hexanone	2500.0000	0.0000	2354.5074	94		45 - 145
Dibromochloromethane	2500.0000	0.0000	2329.0941	93		65 - 130
1,2-Dibromoethane	2500.0000	0.0000	2343.3032	94		70 - 125
Chlorobenzene	2500.0000	0.0000	2193.4201	88		75 - 125
1,1,1,2-Tetrachloroethane	2500.0000	0.0000	2225.5681	89		75 - 125
Ethylbenzene	2500.0000	0.0000	2076.5260	83		75 - 125
m,p-Xylene	5000.0000	0.0000	4199.3940	84		80 - 125
o-Xylene	2500.0000	0.0000	2169.3634	87		75 - 125

3 - FORM III  
SOIL LABORATORY CONTROL  
SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-61378

Lab Name:	SPECTRUM ANALYTICAL, INC.	Contract:			
Lab Code:	MITKEM	Case No.:	K1568	Mod. Ref No.:	SDG No.:
Lab Sample ID:	LCS-61378		LCS Lot No.:		
Date Extracted:	09/06/2011		Date Analyzed (1):		09/06/2011

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Xylene (Total)	7500.0000	0.0000	6368.7574	85		75 - 125
Styrene	2500.0000	0.0000	2224.1795	89		75 - 125
Bromoform	2500.0000	0.0000	2380.3444	95		55 - 135
Isopropylbenzene	2500.0000	0.0000	2025.4099	81		75 - 130
1,1,2,2-Tetrachloroethane	2500.0000	0.0000	2324.0613	93		55 - 130
Bromobenzene	2500.0000	0.0000	2164.3245	87		65 - 120
1,2,3-Trichloropropane	2500.0000	0.0000	2316.8646	93		65 - 130
n-Propylbenzene	2500.0000	0.0000	1977.2589	79		65 - 135
2-Chlorotoluene	2500.0000	0.0000	2035.8843	81		70 - 130
1,3,5-Trimethylbenzene	2500.0000	0.0000	2009.8609	80		65 - 135
4-Chlorotoluene	2500.0000	0.0000	2058.1005	82		75 - 125
tert-Butylbenzene	2500.0000	0.0000	2007.4618	80		65 - 130
1,2,4-Trimethylbenzene	2500.0000	0.0000	2053.0165	82		65 - 135
sec-Butylbenzene	2500.0000	0.0000	1947.1987	78		65 - 130
4-Isopropyltoluene	2500.0000	0.0000	1979.2798	79		75 - 135
1,3-Dichlorobenzene	2500.0000	0.0000	2051.4661	82		70 - 125
1,4-Dichlorobenzene	2500.0000	0.0000	2097.7368	84		70 - 125
n-Butylbenzene	2500.0000	0.0000	1956.9496	78		65 - 140
1,2-Dichlorobenzene	2500.0000	0.0000	2133.3914	85		75 - 120
1,2-Dibromo-3-chloropropan	2500.0000	0.0000	2330.7629	93		40 - 135
1,2,4-Trichlorobenzene	2500.0000	0.0000	2056.8051	82		65 - 130
Hexachlorobutadiene	2500.0000	0.0000	1904.5444	76		55 - 140
1,2,3-Trichlorobenzene	2500.0000	0.0000	2130.0240	85		60 - 135
Naphthalene	2500.0000	0.0000	2278.3831	91		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 68 outside limits

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MB-61378

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Lab File ID: V6I2416.D Lab Sample ID: MB-61378

Instrument ID: V6

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 09/06/2011

Level: (TRACE or LOW/MED) MED Time Analyzed: 12:00

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01LCS-61378	LCS-61378	V6I2414.D	11:08
02HA-1-2-8/25/ 11DL	K1568-01ADL	V6I2435.D	20:39

COMMENTS: \_\_\_\_\_

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MB-61290

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: SDG No.: SK1568

Lab File ID: V8A5766.D Lab Sample ID: MB-61290

Instrument ID: V10

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 08/31/2011

Level: (TRACE or LOW/MED) MED Time Analyzed: 12:53

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01LCS-61290	LCS-61290	V8A5764.D	12:07
02HA-1-2-8/25/ 11	K1568-01A	V8A5778.D	17:35

COMMENTS: \_\_\_\_\_

8A - FORM VIII VOA  
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_

Lab Code: MITKEM Case No.: K1568 Mod. Ref No.: \_\_\_\_\_ SDG No.: SK1568

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 09/01/2011 09/01/2011

EPA Sample No.(VSTD#####): VSTD0506C Date Analyzed: 09/06/2011

Lab File ID (Standard): V6I2412.D Time Analyzed: 10:16

Instrument ID: V6 Heated Purge: (Y/N) N

	IS1 (S1 ) AREA #	RT #	IS2 (S2 ) AREA #	RT #	IS3 (S3 ) AREA #	RT #
12 HOUR STD	1536623	5.141	1387133	8.135	835744	10.655
UPPER LIMIT	3073246	5.641	2774266	8.635	1671488	11.155
LOWER LIMIT	768312	4.641	693567	7.635	417872	10.155
SAMPLE NO.						
01 LCS-61378	1507423	5.132	1369222	8.126	828791	10.658
02 MB-61378	1469674	5.140	1363905	8.134	816733	10.654
03 HA-1-2-8/25/ 11DL	1279079	5.142	1192348	8.124	732492	10.656

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.: K1568 Mod. Ref No.: \_\_\_\_\_ SDG No.: SK1568

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 08/16/2011 08/16/2011

EPA Sample No.(VSTD#####): VSTD05010G Date Analyzed: 08/31/2011

Lab File ID (Standard): V8A5762.D Time Analyzed: 10:08

Instrument ID: V10 Heated Purge: (Y/N) N

	IS1 (S1 ) AREA #	RT #	IS2 (S2 ) AREA #	RT #	IS3 (S3 ) AREA #	RT #
12 HOUR STD	231584	5.381	184534	8.377	111104	10.86
UPPER LIMIT	463168	5.881	369068	8.877	222208	11.36
LOWER LIMIT	115792	4.881	92267	7.877	55552	10.36
SAMPLE NO.						
01 LCS-61290	241554	5.381	189663	8.377	113101	10.860
02 MB-61290	211265	5.384	159939	8.378	75331	10.863
03 HA-1-2-8/25/ 11	260723	5.381	199191	8.381	95950	10.863

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.

Report Date:  
16-Nov-11 15:56

- Final Report  
 Re-Issued Report  
 Revised Report



SPECTRUM ANALYTICAL, INC.  
Featuring  
HANIBAL TECHNOLOGY

## Laboratory Report

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

Work Order: K2143  
Project : Maple Street  
Project #:

Attn: Daniel Troy

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
K2143-01	EAST 102511	Soil	25-Oct-11 06:55	26-Oct-11 10:30
K2143-02	WEST 102511	Soil	25-Oct-11 06:30	26-Oct-11 10:30
K2143-03	SOUTH 102511	Soil	25-Oct-11 06:40	26-Oct-11 10:30
K2143-04	BOTTOM 102511	Soil	25-Oct-11 07:05	26-Oct-11 10:30
K2143-05	NORTH 102511	Soil	25-Oct-11 07:10	26-Oct-11 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 Mitkem Laboratories.

All applicable NELAC or USEPA CLP requirements have been met.

Spectrum Analytical (Rhode Island) is accredited under the National Environmental Laboratory Approval Program (NELAP) and is certified by several States, as well as USEPA and US Department of Defense. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at [www.mitkem.com](http://www.mitkem.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
Maine	2007037
Massachusetts	M-RI907
New Hampshire	2631
New Jersey	RI001
New York	11522
North Carolina	581
Pennsylvania	68-00520
Rhode Island	LAI00301
USDA	P330-08-00023
USEPA - ISM	EP-W-09-039
USEPA - SOM	EP-W-11-033



Authorized by:

Yihai Ding  
Laboratory Director



**SPECTRUM ANALYTICAL, INC.**

*Featuring*

**HANIBAL TECHNOLOGY**

## \* Data Summary Pack \*

# Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

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

Project Name : Maple Street

SDG : K2143

Customer Sample ID	Laboratory Sample ID	Analytical Requirements				
		MSVOA Method #	MSSEMI Method #	GC* Method #	ME	Other
EAST 102511	K2143-01	SW8260_LOW_S				
WEST 102511	K2143-02	SW8260_LOW_S				
SOUTH 102511	K2143-03	SW8260_LOW_S				
BOTTOM 102511	K2143-04	SW8260_LOW_S				
NORTH 102511	K2143-05	SW8260_LOW_S				

# Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

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

Project Name : Maple Street

SDG : K2143

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8260_LOW_S					
K2143-01A	SL	10/25/2011	10/26/2011	NA	11/4/2011
K2143-02A	SL	10/25/2011	10/26/2011	NA	11/5/2011
K2143-03A	SL	10/25/2011	10/26/2011	NA	11/7/2011
K2143-04A	SL	10/25/2011	10/26/2011	NA	11/5/2011
K2143-05A	SL	10/25/2011	10/26/2011	NA	11/10/2011

# Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

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

Project Name : Maple Street

SDG : K2143

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Low/Medium Level	Dil/Conc Factor
SW8260_LOW_S					
K2143-01A	SL	SW8260_LOW_S	NA	LOW	1
K2143-02A	SL	SW8260_LOW_S	NA	LOW	1
K2143-03A	SL	SW8260_LOW_S	NA	LOW	1
K2143-04A	SL	SW8260_LOW_S	NA	LOW	1
K2143-05A	SL	SW8260_LOW_S	NA	LOW	1

# Spectrum Analytical, Inc. Featuring Hanibal Technology -- Rhode Island Division

WorkOrder: K2143

**Client ID:** GZA\_BUFFALO  
**Project:** Maple Street  
**WO Name:** Maple Street  
**Location:** MAPLE,  
**Comments:** N/A

<b>Case:</b>	HC Due: 11/16/11	<b>Report Level:</b> ASP-B
<b>SDG:</b>	Fax Due: <input type="checkbox"/>	<b>Special Program:</b>
	Fax Report: <input checked="" type="checkbox"/>	EDD: XL
<b>PO:</b>	21.0056127.00	

Lab Samp ID	Client Sample ID	Collection Date	Date Rec'd	Matrix	Test Code	Samp / Lab Test Comments			HF	HT	MS	SEL	Storage
K2143-01A	EAST 102511	10/25/2011 06:55	10/26/2011	Soil	P_Moist	/			VOA				
K2143-01A	EAST 102511	10/25/2011 06:55	10/26/2011	Soil	SW8260_LOW_S	/			VOA				
K2143-01A	EAST 102511	10/25/2011 06:55	10/26/2011	Soil	SW8260_MED_S	/			VOA				
K2143-02A	WEST 102511	10/25/2011 06:30	10/26/2011	Soil	P_Moist	/			VOA				
K2143-02A	WEST 102511	10/25/2011 06:30	10/26/2011	Soil	SW8260_LOW_S	/			VOA				
K2143-02A	WEST 102511	10/25/2011 06:30	10/26/2011	Soil	SW8260_MED_S	/			VOA				
K2143-03A	SOUTH 102511	10/25/2011 06:40	10/26/2011	Soil	P_Moist	/			VOA				
K2143-03A	SOUTH 102511	10/25/2011 06:40	10/26/2011	Soil	SW8260_LOW_S	/			VOA				
K2143-03A	SOUTH 102511	10/25/2011 06:40	10/26/2011	Soil	SW8260_MED_S	/			VOA				
K2143-04A	BOTTOM 102511	10/25/2011 07:05	10/26/2011	Soil	P_Moist	/			VOA				
K2143-04A	BOTTOM 102511	10/25/2011 07:05	10/26/2011	Soil	SW8260_LOW_S	/			VOA				
K2143-04A	BOTTOM 102511	10/25/2011 07:05	10/26/2011	Soil	SW8260_MED_S	/			VOA				
K2143-05A	NORTH 102511	10/25/2011 07:10	10/26/2011	Soil	P_Moist	/			VOA				
K2143-05A	NORTH 102511	10/25/2011 07:10	10/26/2011	Soil	SW8260_LOW_S	/			VOA				
K2143-05A	NORTH 102511	10/25/2011 07:10	10/26/2011	Soil	SW8260_MED_S	/			VOA				

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.**

*Featuring*

**HANIBAL TECHNOLOGY**

\* Volatiles \*

## **REPORT NARRATIVE**

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

**Client : GZA GeoEnvironmental of NY Buffalo**

**Project: Maple Street**

**Laboratory Workorder / SDG #: K2143**

**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 with the following exceptions:

NORTH 102511 (K2143-05A) exceed by-2 Days

This sample was initially analyzed within hold time but had failed internal standards and surrogate recoveries. It was re-analyzed out of hold time. Only the re-analysis result is reported.

#### **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**

Soil Samples were prepared following procedures in laboratory test code: SW5035

## V. INSTRUMENTATION

The following instrumentation was used

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 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-62750 in batch 62750, Percent Recovery is outside QC

Limits, recovery is above criteria for Dichlorodifluoromethane at 136% with criteria of (35-135), Iodomethane at 129% with criteria of (70-126) and Naphthalene at 130% with criteria of (40-125).

LCS-62758 in batch 62758, Percent Recovery is outside QC  
Limits, recovery is above criteria for 1,2-Dichloropropane at 121% with criteria of (70-120), Bromochloromethane at 125% with criteria of (70-125), Dichlorodifluoromethane at 149% with criteria of (35-135), Iodomethane at 142% with criteria of (70-126) and Methyl tert-butyl ether at 128% with criteria of (75-126).

LCS-62778 in batch 62778, Percent Recovery is outside QC  
Limits, recovery is above criteria for Iodomethane at 128% with criteria of (70-126).

LCS-62890 in batch 62890, Percent Recovery is outside QC  
Limits, recovery is above criteria for Iodomethane at 140% with criteria of (70-126) and Naphthalene at 129% 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:**

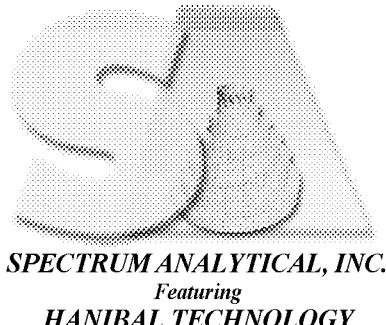
No other unusual occurrences were noted during sample analysis.

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.

A handwritten signature in black ink, appearing to read "T. J. H. R." or a similar variation.

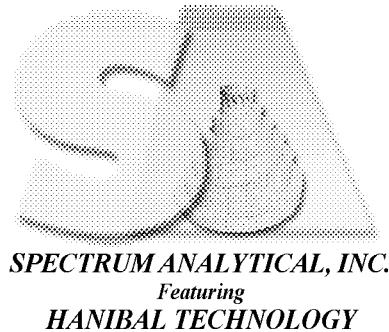
Signed: \_\_\_\_\_

Date: \_\_\_\_\_ 11/16/2011 \_\_\_\_\_



## Data Flag/Qualifiers:

- 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 an 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 aldol condensation byproducts.
- 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.



## 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

CLIENT SAMPLE NO.

EAST 102511

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2143-01A

Sample wt/vol: 5.50 (g/mL) G Lab File ID: V8A7354.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/26/2011

% Moisture: not dec. 17 Date Analyzed: 11/04/2011

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
75-71-8	Dichlorodifluoromethane	5.5	U	
74-87-3	Chloromethane	5.5	U	
75-01-4	Vinyl chloride	5.5	U	
74-83-9	Bromomethane	5.5	U	
75-00-3	Chloroethane	5.5	U	
75-69-4	Trichlorofluoromethane	5.5	U	
75-35-4	1,1-Dichloroethene	5.5	U	
67-64-1	Acetone	5.5	U	
74-88-4	Iodomethane	5.5	U	
75-15-0	Carbon disulfide	5.5	U	
75-09-2	Methylene chloride	5.5	U	
156-60-5	trans-1,2-Dichloroethene	5.5	U	
1634-04-4	Methyl tert-butyl ether	5.5	U	
75-34-3	1,1-Dichloroethane	5.5	U	
108-05-4	Vinyl acetate	5.5	U	
78-93-3	2-Butanone	5.5	U	
156-59-2	cis-1,2-Dichloroethene	5.5	U	
594-20-7	2,2-Dichloropropane	5.5	U	
74-97-5	Bromochloromethane	5.5	U	
67-66-3	Chloroform	5.5	U	
71-55-6	1,1,1-Trichloroethane	1.6	J	
563-58-6	1,1-Dichloropropene	5.5	U	
56-23-5	Carbon tetrachloride	5.5	U	
107-06-2	1,2-Dichloroethane	5.5	U	
71-43-2	Benzene	5.5	U	
79-01-6	Trichloroethene	49		
78-87-5	1,2-Dichloropropane	5.5	U	
74-95-3	Dibromomethane	5.5	U	
75-27-4	Bromodichloromethane	5.5	U	
10061-01-5	cis-1,3-Dichloropropene	5.5	U	
108-10-1	4-Methyl-2-pentanone	5.5	U	
108-88-3	Toluene	5.5	U	
10061-02-6	trans-1,3-Dichloropropene	5.5	U	
79-00-5	1,1,2-Trichloroethane	5.5	U	
142-28-9	1,3-Dichloropropane	5.5	U	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EAST 102511

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2143-01A

Sample wt/vol: 5.50 (g/mL) G Lab File ID: V8A7354.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/26/2011

% Moisture: not dec. 17 Date Analyzed: 11/04/2011

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
127-18-4	Tetrachloroethene	5.5	U	
591-78-6	2-Hexanone	5.5	U	
124-48-1	Dibromochloromethane	5.5	U	
106-93-4	1,2-Dibromoethane	5.5	U	
108-90-7	Chlorobenzene	5.5	U	
630-20-6	1,1,1,2-Tetrachloroethane	5.5	U	
100-41-4	Ethylbenzene	5.5	U	
1330-20-7	m,p-Xylene	5.5	U	
95-47-6	o-Xylene	5.5	U	
1330-20-7	Xylene (Total)	5.5	U	
100-42-5	Styrene	5.5	U	
75-25-2	Bromoform	5.5	U	
98-82-8	Isopropylbenzene	5.5	U	
79-34-5	1,1,2,2-Tetrachloroethane	5.5	U	
108-86-1	Bromobenzene	5.5	U	
96-18-4	1,2,3-Trichloropropane	5.5	U	
103-65-1	n-Propylbenzene	5.5	U	
95-49-8	2-Chlorotoluene	5.5	U	
108-67-8	1,3,5-Trimethylbenzene	5.5	U	
106-43-4	4-Chlorotoluene	5.5	U	
98-06-6	tert-Butylbenzene	5.5	U	
95-63-6	1,2,4-Trimethylbenzene	5.5	U	
135-98-8	sec-Butylbenzene	5.5	U	
99-87-6	4-Isopropyltoluene	5.5	U	
541-73-1	1,3-Dichlorobenzene	5.5	U	
106-46-7	1,4-Dichlorobenzene	5.5	U	
104-51-8	n-Butylbenzene	5.5	U	
95-50-1	1,2-Dichlorobenzene	5.5	U	
96-12-8	1,2-Dibromo-3-chloropropane	5.5	U	
120-82-1	1,2,4-Trichlorobenzene	5.5	U	
87-68-3	Hexachlorobutadiene	5.5	U	
87-61-6	1,2,3-Trichlorobenzene	5.5	U	
91-20-3	Naphthalene	5.5	U	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

WEST 102511

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2143-02A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7380.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/26/2011

% Moisture: not dec. 16 Date Analyzed: 11/05/2011

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
75-71-8	Dichlorodifluoromethane	6.0	U	
74-87-3	Chloromethane	6.0	U	
75-01-4	Vinyl chloride	6.0	U	
74-83-9	Bromomethane	6.0	U	
75-00-3	Chloroethane	6.0	U	
75-69-4	Trichlorofluoromethane	6.0	U	
75-35-4	1,1-Dichloroethene	6.0	U	
67-64-1	Acetone	6.0	U	
74-88-4	Iodomethane	6.0	U	
75-15-0	Carbon disulfide	6.0	U	
75-09-2	Methylene chloride	6.0	U	
156-60-5	trans-1,2-Dichloroethene	6.0	U	
1634-04-4	Methyl tert-butyl ether	6.0	U	
75-34-3	1,1-Dichloroethane	6.0	U	
108-05-4	Vinyl acetate	6.0	U	
78-93-3	2-Butanone	6.0	U	
156-59-2	cis-1,2-Dichloroethene	6.0	U	
594-20-7	2,2-Dichloropropane	6.0	U	
74-97-5	Bromochloromethane	6.0	U	
67-66-3	Chloroform	6.0	U	
71-55-6	1,1,1-Trichloroethane	6.0	U	
563-58-6	1,1-Dichloropropene	6.0	U	
56-23-5	Carbon tetrachloride	6.0	U	
107-06-2	1,2-Dichloroethane	6.0	U	
71-43-2	Benzene	6.0	U	
79-01-6	Trichloroethene	80		
78-87-5	1,2-Dichloropropane	6.0	U	
74-95-3	Dibromomethane	6.0	U	
75-27-4	Bromodichloromethane	6.0	U	
10061-01-5	cis-1,3-Dichloropropene	6.0	U	
108-10-1	4-Methyl-2-pentanone	6.0	U	
108-88-3	Toluene	6.0	U	
10061-02-6	trans-1,3-Dichloropropene	6.0	U	
79-00-5	1,1,2-Trichloroethane	6.0	U	
142-28-9	1,3-Dichloropropane	6.0	U	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

WEST 102511

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2143-02A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7380.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/26/2011

% Moisture: not dec. 16 Date Analyzed: 11/05/2011

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
127-18-4	Tetrachloroethene	6.0	U	
591-78-6	2-Hexanone	6.0	U	
124-48-1	Dibromochloromethane	6.0	U	
106-93-4	1,2-Dibromoethane	6.0	U	
108-90-7	Chlorobenzene	6.0	U	
630-20-6	1,1,1,2-Tetrachloroethane	6.0	U	
100-41-4	Ethylbenzene	6.0	U	
1330-20-7	m,p-Xylene	6.0	U	
95-47-6	o-Xylene	6.0	U	
1330-20-7	Xylene (Total)	6.0	U	
100-42-5	Styrene	6.0	U	
75-25-2	Bromoform	6.0	U	
98-82-8	Isopropylbenzene	6.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	6.0	U	
108-86-1	Bromobenzene	6.0	U	
96-18-4	1,2,3-Trichloropropane	6.0	U	
103-65-1	n-Propylbenzene	6.0	U	
95-49-8	2-Chlorotoluene	6.0	U	
108-67-8	1,3,5-Trimethylbenzene	6.0	U	
106-43-4	4-Chlorotoluene	6.0	U	
98-06-6	tert-Butylbenzene	6.0	U	
95-63-6	1,2,4-Trimethylbenzene	6.0	U	
135-98-8	sec-Butylbenzene	6.0	U	
99-87-6	4-Isopropyltoluene	6.0	U	
541-73-1	1,3-Dichlorobenzene	6.0	U	
106-46-7	1,4-Dichlorobenzene	6.0	U	
104-51-8	n-Butylbenzene	6.0	U	
95-50-1	1,2-Dichlorobenzene	6.0	U	
96-12-8	1,2-Dibromo-3-chloropropane	6.0	U	
120-82-1	1,2,4-Trichlorobenzene	6.0	U	
87-68-3	Hexachlorobutadiene	6.0	U	
87-61-6	1,2,3-Trichlorobenzene	6.0	U	
91-20-3	Naphthalene	6.0	U	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SOUTH 102511

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2143-03A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7405.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/26/2011

% Moisture: not dec. 14 Date Analyzed: 11/07/2011

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
75-71-8	Dichlorodifluoromethane	5.8	U	
74-87-3	Chloromethane	5.8	U	
75-01-4	Vinyl chloride	5.8	U	
74-83-9	Bromomethane	5.8	U	
75-00-3	Chloroethane	5.8	U	
75-69-4	Trichlorofluoromethane	5.8	U	
75-35-4	1,1-Dichloroethene	5.8	U	
67-64-1	Acetone	5.8	U	
74-88-4	Iodomethane	5.8	U	
75-15-0	Carbon disulfide	5.8	U	
75-09-2	Methylene chloride	5.8	U	
156-60-5	trans-1,2-Dichloroethene	5.8	U	
1634-04-4	Methyl tert-butyl ether	5.8	U	
75-34-3	1,1-Dichloroethane	5.8	U	
108-05-4	Vinyl acetate	5.8	U	
78-93-3	2-Butanone	5.8	U	
156-59-2	cis-1,2-Dichloroethene	5.8	U	
594-20-7	2,2-Dichloropropane	5.8	U	
74-97-5	Bromochloromethane	5.8	U	
67-66-3	Chloroform	5.8	U	
71-55-6	1,1,1-Trichloroethane	5.8	U	
563-58-6	1,1-Dichloropropene	5.8	U	
56-23-5	Carbon tetrachloride	5.8	U	
107-06-2	1,2-Dichloroethane	5.8	U	
71-43-2	Benzene	5.8	U	
79-01-6	Trichloroethene	22		
78-87-5	1,2-Dichloropropane	5.8	U	
74-95-3	Dibromomethane	5.8	U	
75-27-4	Bromodichloromethane	5.8	U	
10061-01-5	cis-1,3-Dichloropropene	5.8	U	
108-10-1	4-Methyl-2-pentanone	5.8	U	
108-88-3	Toluene	5.8	U	
10061-02-6	trans-1,3-Dichloropropene	5.8	U	
79-00-5	1,1,2-Trichloroethane	5.8	U	
142-28-9	1,3-Dichloropropane	5.8	U	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SOUTH 102511

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2143-03A

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7405.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/26/2011

% Moisture: not dec. 14 Date Analyzed: 11/07/2011

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
127-18-4	Tetrachloroethene	5.8	U	
591-78-6	2-Hexanone	5.8	U	
124-48-1	Dibromochloromethane	5.8	U	
106-93-4	1,2-Dibromoethane	5.8	U	
108-90-7	Chlorobenzene	5.8	U	
630-20-6	1,1,1,2-Tetrachloroethane	5.8	U	
100-41-4	Ethylbenzene	5.8	U	
1330-20-7	m,p-Xylene	5.8	U	
95-47-6	o-Xylene	5.8	U	
1330-20-7	Xylene (Total)	5.8	U	
100-42-5	Styrene	5.8	U	
75-25-2	Bromoform	5.8	U	
98-82-8	Isopropylbenzene	5.8	U	
79-34-5	1,1,2,2-Tetrachloroethane	5.8	U	
108-86-1	Bromobenzene	5.8	U	
96-18-4	1,2,3-Trichloropropane	5.8	U	
103-65-1	n-Propylbenzene	5.8	U	
95-49-8	2-Chlorotoluene	5.8	U	
108-67-8	1,3,5-Trimethylbenzene	5.8	U	
106-43-4	4-Chlorotoluene	5.8	U	
98-06-6	tert-Butylbenzene	5.8	U	
95-63-6	1,2,4-Trimethylbenzene	5.8	U	
135-98-8	sec-Butylbenzene	5.8	U	
99-87-6	4-Isopropyltoluene	5.8	U	
541-73-1	1,3-Dichlorobenzene	5.8	U	
106-46-7	1,4-Dichlorobenzene	5.8	U	
104-51-8	n-Butylbenzene	5.8	U	
95-50-1	1,2-Dichlorobenzene	5.8	U	
96-12-8	1,2-Dibromo-3-chloropropane	5.8	U	
120-82-1	1,2,4-Trichlorobenzene	5.8	U	
87-68-3	Hexachlorobutadiene	5.8	U	
87-61-6	1,2,3-Trichlorobenzene	5.8	U	
91-20-3	Naphthalene	5.8	U	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

BOTTOM 102511

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2143-04A

Sample wt/vol: 5.70 (g/mL) G Lab File ID: V8A7381.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/26/2011

% Moisture: not dec. 13 Date Analyzed: 11/05/2011

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
75-71-8	Dichlorodifluoromethane	5.1	U	
74-87-3	Chloromethane	5.1	U	
75-01-4	Vinyl chloride	5.1	U	
74-83-9	Bromomethane	5.1	U	
75-00-3	Chloroethane	5.1	U	
75-69-4	Trichlorofluoromethane	5.1	U	
75-35-4	1,1-Dichloroethene	5.1	U	
67-64-1	Acetone	5.1	U	
74-88-4	Iodomethane	5.1	U	
75-15-0	Carbon disulfide	5.1	U	
75-09-2	Methylene chloride	5.1	U	
156-60-5	trans-1,2-Dichloroethene	5.1	U	
1634-04-4	Methyl tert-butyl ether	5.1	U	
75-34-3	1,1-Dichloroethane	5.1	U	
108-05-4	Vinyl acetate	5.1	U	
78-93-3	2-Butanone	5.1	U	
156-59-2	cis-1,2-Dichloroethene	5.1	U	
594-20-7	2,2-Dichloropropane	5.1	U	
74-97-5	Bromochloromethane	5.1	U	
67-66-3	Chloroform	5.1	U	
71-55-6	1,1,1-Trichloroethane	5.1	U	
563-58-6	1,1-Dichloropropene	5.1	U	
56-23-5	Carbon tetrachloride	5.1	U	
107-06-2	1,2-Dichloroethane	5.1	U	
71-43-2	Benzene	5.1	U	
79-01-6	Trichloroethene	15		
78-87-5	1,2-Dichloropropane	5.1	U	
74-95-3	Dibromomethane	5.1	U	
75-27-4	Bromodichloromethane	5.1	U	
10061-01-5	cis-1,3-Dichloropropene	5.1	U	
108-10-1	4-Methyl-2-pentanone	5.1	U	
108-88-3	Toluene	5.1	U	
10061-02-6	trans-1,3-Dichloropropene	5.1	U	
79-00-5	1,1,2-Trichloroethane	5.1	U	
142-28-9	1,3-Dichloropropane	5.1	U	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

BOTTOM 102511

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2143-04A

Sample wt/vol: 5.70 (g/mL) G Lab File ID: V8A7381.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/26/2011

% Moisture: not dec. 13 Date Analyzed: 11/05/2011

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
127-18-4	Tetrachloroethene	5.1	U	
591-78-6	2-Hexanone	5.1	U	
124-48-1	Dibromochloromethane	5.1	U	
106-93-4	1,2-Dibromoethane	5.1	U	
108-90-7	Chlorobenzene	5.1	U	
630-20-6	1,1,1,2-Tetrachloroethane	5.1	U	
100-41-4	Ethylbenzene	5.1	U	
1330-20-7	m,p-Xylene	5.1	U	
95-47-6	o-Xylene	5.1	U	
1330-20-7	Xylene (Total)	5.1	U	
100-42-5	Styrene	5.1	U	
75-25-2	Bromoform	5.1	U	
98-82-8	Isopropylbenzene	5.1	U	
79-34-5	1,1,2,2-Tetrachloroethane	5.1	U	
108-86-1	Bromobenzene	5.1	U	
96-18-4	1,2,3-Trichloropropane	5.1	U	
103-65-1	n-Propylbenzene	5.1	U	
95-49-8	2-Chlorotoluene	5.1	U	
108-67-8	1,3,5-Trimethylbenzene	5.1	U	
106-43-4	4-Chlorotoluene	5.1	U	
98-06-6	tert-Butylbenzene	5.1	U	
95-63-6	1,2,4-Trimethylbenzene	5.1	U	
135-98-8	sec-Butylbenzene	5.1	U	
99-87-6	4-Isopropyltoluene	5.1	U	
541-73-1	1,3-Dichlorobenzene	5.1	U	
106-46-7	1,4-Dichlorobenzene	5.1	U	
104-51-8	n-Butylbenzene	5.1	U	
95-50-1	1,2-Dichlorobenzene	5.1	U	
96-12-8	1,2-Dibromo-3-chloropropane	5.1	U	
120-82-1	1,2,4-Trichlorobenzene	5.1	U	
87-68-3	Hexachlorobutadiene	5.1	U	
87-61-6	1,2,3-Trichlorobenzene	5.1	U	
91-20-3	Naphthalene	5.1	U	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

NORTH 102511

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2143-05A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V8A7461.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/26/2011

% Moisture: not dec. 11 Date Analyzed: 11/10/2011

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
75-71-8	Dichlorodifluoromethane	5.5	U	
74-87-3	Chloromethane	5.5	U	
75-01-4	Vinyl chloride	5.5	U	
74-83-9	Bromomethane	5.5	U	
75-00-3	Chloroethane	5.5	U	
75-69-4	Trichlorofluoromethane	5.5	U	
75-35-4	1,1-Dichloroethene	5.5	U	
67-64-1	Acetone	5.5	U	
74-88-4	Iodomethane	5.5	U	
75-15-0	Carbon disulfide	5.5	U	
75-09-2	Methylene chloride	3.4	BJ	
156-60-5	trans-1,2-Dichloroethene	5.5	U	
1634-04-4	Methyl tert-butyl ether	5.5	U	
75-34-3	1,1-Dichloroethane	5.5	U	
108-05-4	Vinyl acetate	5.5	U	
78-93-3	2-Butanone	5.5	U	
156-59-2	cis-1,2-Dichloroethene	5.5	U	
594-20-7	2,2-Dichloropropane	5.5	U	
74-97-5	Bromochloromethane	5.5	U	
67-66-3	Chloroform	5.5	U	
71-55-6	1,1,1-Trichloroethane	5.5	U	
563-58-6	1,1-Dichloropropene	5.5	U	
56-23-5	Carbon tetrachloride	5.5	U	
107-06-2	1,2-Dichloroethane	5.5	U	
71-43-2	Benzene	5.5	U	
79-01-6	Trichloroethene	6.6		
78-87-5	1,2-Dichloropropane	5.5	U	
74-95-3	Dibromomethane	5.5	U	
75-27-4	Bromodichloromethane	5.5	U	
10061-01-5	cis-1,3-Dichloropropene	5.5	U	
108-10-1	4-Methyl-2-pentanone	5.5	U	
108-88-3	Toluene	5.5	U	
10061-02-6	trans-1,3-Dichloropropene	5.5	U	
79-00-5	1,1,2-Trichloroethane	5.5	U	
142-28-9	1,3-Dichloropropane	5.5	U	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

NORTH 102511

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: K2143-05A

Sample wt/vol: 5.10 (g/mL) G Lab File ID: V8A7461.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/26/2011

% Moisture: not dec. 11 Date Analyzed: 11/10/2011

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
127-18-4	Tetrachloroethene	5.5	U	
591-78-6	2-Hexanone	5.5	U	
124-48-1	Dibromochloromethane	5.5	U	
106-93-4	1,2-Dibromoethane	5.5	U	
108-90-7	Chlorobenzene	5.5	U	
630-20-6	1,1,1,2-Tetrachloroethane	5.5	U	
100-41-4	Ethylbenzene	5.5	U	
1330-20-7	m,p-Xylene	5.5	U	
95-47-6	o-Xylene	5.5	U	
1330-20-7	Xylene (Total)	5.5	U	
100-42-5	Styrene	5.5	U	
75-25-2	Bromoform	5.5	U	
98-82-8	Isopropylbenzene	5.5	U	
79-34-5	1,1,2,2-Tetrachloroethane	5.5	U	
108-86-1	Bromobenzene	5.5	U	
96-18-4	1,2,3-Trichloropropane	5.5	U	
103-65-1	n-Propylbenzene	5.5	U	
95-49-8	2-Chlorotoluene	5.5	U	
108-67-8	1,3,5-Trimethylbenzene	5.5	U	
106-43-4	4-Chlorotoluene	5.5	U	
98-06-6	tert-Butylbenzene	5.5	U	
95-63-6	1,2,4-Trimethylbenzene	5.5	U	
135-98-8	sec-Butylbenzene	5.5	U	
99-87-6	4-Isopropyltoluene	5.5	U	
541-73-1	1,3-Dichlorobenzene	5.5	U	
106-46-7	1,4-Dichlorobenzene	5.5	U	
104-51-8	n-Butylbenzene	5.5	U	
95-50-1	1,2-Dichlorobenzene	5.5	U	
96-12-8	1,2-Dibromo-3-chloropropane	5.5	U	
120-82-1	1,2,4-Trichlorobenzene	5.5	U	
87-68-3	Hexachlorobutadiene	5.5	U	
87-61-6	1,2,3-Trichlorobenzene	5.5	U	
91-20-3	Naphthalene	1.7	BJ	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-62750

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62750

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7336.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/04/2011

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
75-71-8	Dichlorodifluoromethane	5.0	U	
74-87-3	Chloromethane	5.0	U	
75-01-4	Vinyl chloride	5.0	U	
74-83-9	Bromomethane	5.0	U	
75-00-3	Chloroethane	5.0	U	
75-69-4	Trichlorofluoromethane	5.0	U	
75-35-4	1,1-Dichloroethene	5.0	U	
67-64-1	Acetone	5.0	U	
74-88-4	Iodomethane	5.0	U	
75-15-0	Carbon disulfide	5.0	U	
75-09-2	Methylene chloride	5.0	U	
156-60-5	trans-1,2-Dichloroethene	5.0	U	
1634-04-4	Methyl tert-butyl ether	5.0	U	
75-34-3	1,1-Dichloroethane	5.0	U	
108-05-4	Vinyl acetate	5.0	U	
78-93-3	2-Butanone	5.0	U	
156-59-2	cis-1,2-Dichloroethene	5.0	U	
594-20-7	2,2-Dichloropropane	5.0	U	
74-97-5	Bromochloromethane	5.0	U	
67-66-3	Chloroform	5.0	U	
71-55-6	1,1,1-Trichloroethane	5.0	U	
563-58-6	1,1-Dichloropropene	5.0	U	
56-23-5	Carbon tetrachloride	5.0	U	
107-06-2	1,2-Dichloroethane	5.0	U	
71-43-2	Benzene	5.0	U	
79-01-6	Trichloroethene	5.0	U	
78-87-5	1,2-Dichloropropane	5.0	U	
74-95-3	Dibromomethane	5.0	U	
75-27-4	Bromodichloromethane	5.0	U	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	5.0	U	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	
79-00-5	1,1,2-Trichloroethane	5.0	U	
142-28-9	1,3-Dichloropropane	5.0	U	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-62750

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62750

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7336.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/04/2011

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
127-18-4	Tetrachloroethene	5.0	U	
591-78-6	2-Hexanone	5.0	U	
124-48-1	Dibromochloromethane	5.0	U	
106-93-4	1,2-Dibromoethane	5.0	U	
108-90-7	Chlorobenzene	5.0	U	
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	
100-41-4	Ethylbenzene	5.0	U	
1330-20-7	m,p-Xylene	5.0	U	
95-47-6	o-Xylene	5.0	U	
1330-20-7	Xylene (Total)	5.0	U	
100-42-5	Styrene	5.0	U	
75-25-2	Bromoform	5.0	U	
98-82-8	Isopropylbenzene	5.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	
108-86-1	Bromobenzene	5.0	U	
96-18-4	1,2,3-Trichloropropane	5.0	U	
103-65-1	n-Propylbenzene	5.0	U	
95-49-8	2-Chlorotoluene	5.0	U	
108-67-8	1,3,5-Trimethylbenzene	5.0	U	
106-43-4	4-Chlorotoluene	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	
541-73-1	1,3-Dichlorobenzene	5.0	U	
106-46-7	1,4-Dichlorobenzene	5.0	U	
104-51-8	n-Butylbenzene	5.0	U	
95-50-1	1,2-Dichlorobenzene	5.0	U	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	
120-82-1	1,2,4-Trichlorobenzene	5.0	U	
87-68-3	Hexachlorobutadiene	5.0	U	
87-61-6	1,2,3-Trichlorobenzene	5.0	U	
91-20-3	Naphthalene	5.0	U	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-62758

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62758

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7367.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/05/2011

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
75-71-8	Dichlorodifluoromethane	5.0	U	
74-87-3	Chloromethane	5.0	U	
75-01-4	Vinyl chloride	5.0	U	
74-83-9	Bromomethane	5.0	U	
75-00-3	Chloroethane	5.0	U	
75-69-4	Trichlorofluoromethane	5.0	U	
75-35-4	1,1-Dichloroethene	5.0	U	
67-64-1	Acetone	5.0	U	
74-88-4	Iodomethane	5.0	U	
75-15-0	Carbon disulfide	5.0	U	
75-09-2	Methylene chloride	2.2	J	
156-60-5	trans-1,2-Dichloroethene	5.0	U	
1634-04-4	Methyl tert-butyl ether	5.0	U	
75-34-3	1,1-Dichloroethane	5.0	U	
108-05-4	Vinyl acetate	5.0	U	
78-93-3	2-Butanone	5.0	U	
156-59-2	cis-1,2-Dichloroethene	5.0	U	
594-20-7	2,2-Dichloropropane	5.0	U	
74-97-5	Bromochloromethane	5.0	U	
67-66-3	Chloroform	5.0	U	
71-55-6	1,1,1-Trichloroethane	5.0	U	
563-58-6	1,1-Dichloropropene	5.0	U	
56-23-5	Carbon tetrachloride	5.0	U	
107-06-2	1,2-Dichloroethane	5.0	U	
71-43-2	Benzene	5.0	U	
79-01-6	Trichloroethene	5.0	U	
78-87-5	1,2-Dichloropropane	5.0	U	
74-95-3	Dibromomethane	5.0	U	
75-27-4	Bromodichloromethane	5.0	U	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	5.0	U	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	
79-00-5	1,1,2-Trichloroethane	5.0	U	
142-28-9	1,3-Dichloropropane	5.0	U	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-62758

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62758

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7367.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/05/2011

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
127-18-4	Tetrachloroethene	5.0	U	
591-78-6	2-Hexanone	5.0	U	
124-48-1	Dibromochloromethane	5.0	U	
106-93-4	1,2-Dibromoethane	5.0	U	
108-90-7	Chlorobenzene	5.0	U	
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	
100-41-4	Ethylbenzene	5.0	U	
1330-20-7	m,p-Xylene	5.0	U	
95-47-6	o-Xylene	5.0	U	
1330-20-7	Xylene (Total)	5.0	U	
100-42-5	Styrene	5.0	U	
75-25-2	Bromoform	5.0	U	
98-82-8	Isopropylbenzene	5.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	
108-86-1	Bromobenzene	5.0	U	
96-18-4	1,2,3-Trichloropropane	5.0	U	
103-65-1	n-Propylbenzene	5.0	U	
95-49-8	2-Chlorotoluene	5.0	U	
108-67-8	1,3,5-Trimethylbenzene	5.0	U	
106-43-4	4-Chlorotoluene	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	
541-73-1	1,3-Dichlorobenzene	5.0	U	
106-46-7	1,4-Dichlorobenzene	5.0	U	
104-51-8	n-Butylbenzene	5.0	U	
95-50-1	1,2-Dichlorobenzene	5.0	U	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	
120-82-1	1,2,4-Trichlorobenzene	5.0	U	
87-68-3	Hexachlorobutadiene	5.0	U	
87-61-6	1,2,3-Trichlorobenzene	5.0	U	
91-20-3	Naphthalene	5.0	U	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-62778

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62778

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7396.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/07/2011

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
75-71-8	Dichlorodifluoromethane	5.0	U	
74-87-3	Chloromethane	5.0	U	
75-01-4	Vinyl chloride	5.0	U	
74-83-9	Bromomethane	5.0	U	
75-00-3	Chloroethane	5.0	U	
75-69-4	Trichlorofluoromethane	5.0	U	
75-35-4	1,1-Dichloroethene	5.0	U	
67-64-1	Acetone	5.0	U	
74-88-4	Iodomethane	5.0	U	
75-15-0	Carbon disulfide	5.0	U	
75-09-2	Methylene chloride	5.0	U	
156-60-5	trans-1,2-Dichloroethene	5.0	U	
1634-04-4	Methyl tert-butyl ether	5.0	U	
75-34-3	1,1-Dichloroethane	5.0	U	
108-05-4	Vinyl acetate	5.0	U	
78-93-3	2-Butanone	5.0	U	
156-59-2	cis-1,2-Dichloroethene	5.0	U	
594-20-7	2,2-Dichloropropane	5.0	U	
74-97-5	Bromochloromethane	5.0	U	
67-66-3	Chloroform	5.0	U	
71-55-6	1,1,1-Trichloroethane	5.0	U	
563-58-6	1,1-Dichloropropene	5.0	U	
56-23-5	Carbon tetrachloride	5.0	U	
107-06-2	1,2-Dichloroethane	5.0	U	
71-43-2	Benzene	5.0	U	
79-01-6	Trichloroethene	5.0	U	
78-87-5	1,2-Dichloropropane	5.0	U	
74-95-3	Dibromomethane	5.0	U	
75-27-4	Bromodichloromethane	5.0	U	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	5.0	U	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	
79-00-5	1,1,2-Trichloroethane	5.0	U	
142-28-9	1,3-Dichloropropane	5.0	U	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-62778

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62778

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7396.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/07/2011

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
127-18-4	Tetrachloroethene	5.0	U	
591-78-6	2-Hexanone	5.0	U	
124-48-1	Dibromochloromethane	5.0	U	
106-93-4	1,2-Dibromoethane	5.0	U	
108-90-7	Chlorobenzene	5.0	U	
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	
100-41-4	Ethylbenzene	5.0	U	
1330-20-7	m,p-Xylene	5.0	U	
95-47-6	o-Xylene	5.0	U	
1330-20-7	Xylene (Total)	5.0	U	
100-42-5	Styrene	5.0	U	
75-25-2	Bromoform	5.0	U	
98-82-8	Isopropylbenzene	5.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	
108-86-1	Bromobenzene	5.0	U	
96-18-4	1,2,3-Trichloropropane	5.0	U	
103-65-1	n-Propylbenzene	5.0	U	
95-49-8	2-Chlorotoluene	5.0	U	
108-67-8	1,3,5-Trimethylbenzene	5.0	U	
106-43-4	4-Chlorotoluene	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	
541-73-1	1,3-Dichlorobenzene	5.0	U	
106-46-7	1,4-Dichlorobenzene	5.0	U	
104-51-8	n-Butylbenzene	5.0	U	
95-50-1	1,2-Dichlorobenzene	5.0	U	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	
120-82-1	1,2,4-Trichlorobenzene	5.0	U	
87-68-3	Hexachlorobutadiene	5.0	U	
87-61-6	1,2,3-Trichlorobenzene	5.0	U	
91-20-3	Naphthalene	5.0	U	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-62890

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62890

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7459.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/10/2011

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
75-71-8	Dichlorodifluoromethane	5.0	U	
74-87-3	Chloromethane	5.0	U	
75-01-4	Vinyl chloride	5.0	U	
74-83-9	Bromomethane	5.0	U	
75-00-3	Chloroethane	5.0	U	
75-69-4	Trichlorofluoromethane	5.0	U	
75-35-4	1,1-Dichloroethene	5.0	U	
67-64-1	Acetone	5.0	U	
74-88-4	Iodomethane	5.0	U	
75-15-0	Carbon disulfide	5.0	U	
75-09-2	Methylene chloride	1.9	J	
156-60-5	trans-1,2-Dichloroethene	5.0	U	
1634-04-4	Methyl tert-butyl ether	5.0	U	
75-34-3	1,1-Dichloroethane	5.0	U	
108-05-4	Vinyl acetate	5.0	U	
78-93-3	2-Butanone	5.0	U	
156-59-2	cis-1,2-Dichloroethene	5.0	U	
594-20-7	2,2-Dichloropropane	5.0	U	
74-97-5	Bromochloromethane	5.0	U	
67-66-3	Chloroform	5.0	U	
71-55-6	1,1,1-Trichloroethane	5.0	U	
563-58-6	1,1-Dichloropropene	5.0	U	
56-23-5	Carbon tetrachloride	5.0	U	
107-06-2	1,2-Dichloroethane	5.0	U	
71-43-2	Benzene	5.0	U	
79-01-6	Trichloroethene	5.0	U	
78-87-5	1,2-Dichloropropane	5.0	U	
74-95-3	Dibromomethane	5.0	U	
75-27-4	Bromodichloromethane	5.0	U	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	5.0	U	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	
79-00-5	1,1,2-Trichloroethane	5.0	U	
142-28-9	1,3-Dichloropropane	5.0	U	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-62890

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-62890

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7459.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/10/2011

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
127-18-4	Tetrachloroethene	5.0	U	
591-78-6	2-Hexanone	5.0	U	
124-48-1	Dibromochloromethane	5.0	U	
106-93-4	1,2-Dibromoethane	5.0	U	
108-90-7	Chlorobenzene	5.0	U	
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	
100-41-4	Ethylbenzene	5.0	U	
1330-20-7	m,p-Xylene	5.0	U	
95-47-6	o-Xylene	5.0	U	
1330-20-7	Xylene (Total)	5.0	U	
100-42-5	Styrene	5.0	U	
75-25-2	Bromoform	5.0	U	
98-82-8	Isopropylbenzene	5.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	
108-86-1	Bromobenzene	5.0	U	
96-18-4	1,2,3-Trichloropropane	5.0	U	
103-65-1	n-Propylbenzene	5.0	U	
95-49-8	2-Chlorotoluene	5.0	U	
108-67-8	1,3,5-Trimethylbenzene	5.0	U	
106-43-4	4-Chlorotoluene	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	
541-73-1	1,3-Dichlorobenzene	5.0	U	
106-46-7	1,4-Dichlorobenzene	5.0	U	
104-51-8	n-Butylbenzene	1.3	J	
95-50-1	1,2-Dichlorobenzene	5.0	U	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	
120-82-1	1,2,4-Trichlorobenzene	1.6	J	
87-68-3	Hexachlorobutadiene	1.8	J	
87-61-6	1,2,3-Trichlorobenzene	1.6	J	
91-20-3	Naphthalene	3.6	J	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-62750

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-62750

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7334.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/04/2011

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
75-71-8	Dichlorodifluoromethane	68	
74-87-3	Chloromethane	57	
75-01-4	Vinyl chloride	58	
74-83-9	Bromomethane	48	
75-00-3	Chloroethane	57	
75-69-4	Trichlorofluoromethane	56	
75-35-4	1,1-Dichloroethene	56	
67-64-1	Acetone	66	
74-88-4	Iodomethane	65	
75-15-0	Carbon disulfide	51	
75-09-2	Methylene chloride	56	
156-60-5	trans-1,2-Dichloroethene	55	
1634-04-4	Methyl tert-butyl ether	62	
75-34-3	1,1-Dichloroethane	55	
108-05-4	Vinyl acetate	57	
78-93-3	2-Butanone	61	
156-59-2	cis-1,2-Dichloroethene	58	
594-20-7	2,2-Dichloropropane	56	
74-97-5	Bromochloromethane	59	
67-66-3	Chloroform	56	
71-55-6	1,1,1-Trichloroethane	57	
563-58-6	1,1-Dichloropropene	58	
56-23-5	Carbon tetrachloride	57	
107-06-2	1,2-Dichloroethane	58	
71-43-2	Benzene	56	
79-01-6	Trichloroethene	57	
78-87-5	1,2-Dichloropropane	56	
74-95-3	Dibromomethane	58	
75-27-4	Bromodichloromethane	57	
10061-01-5	cis-1,3-Dichloropropene	60	
108-10-1	4-Methyl-2-pentanone	57	
108-88-3	Toluene	58	
10061-02-6	trans-1,3-Dichloropropene	60	
79-00-5	1,1,2-Trichloroethane	58	
142-28-9	1,3-Dichloropropane	53	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-62750

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-62750

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7334.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/04/2011

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
127-18-4	Tetrachloroethene	52	
591-78-6	2-Hexanone	57	
124-48-1	Dibromochloromethane	55	
106-93-4	1,2-Dibromoethane	54	
108-90-7	Chlorobenzene	51	
630-20-6	1,1,1,2-Tetrachloroethane	54	
100-41-4	Ethylbenzene	53	
1330-20-7	m,p-Xylene	110	
95-47-6	o-Xylene	54	
1330-20-7	Xylene (Total)	160	
100-42-5	Styrene	55	
75-25-2	Bromoform	55	
98-82-8	Isopropylbenzene	54	
79-34-5	1,1,2,2-Tetrachloroethane	50	
108-86-1	Bromobenzene	54	
96-18-4	1,2,3-Trichloropropane	50	
103-65-1	n-Propylbenzene	53	
95-49-8	2-Chlorotoluene	52	
108-67-8	1,3,5-Trimethylbenzene	53	
106-43-4	4-Chlorotoluene	53	
98-06-6	tert-Butylbenzene	55	
95-63-6	1,2,4-Trimethylbenzene	54	
135-98-8	sec-Butylbenzene	52	
99-87-6	4-Isopropyltoluene	54	
541-73-1	1,3-Dichlorobenzene	52	
106-46-7	1,4-Dichlorobenzene	52	
104-51-8	n-Butylbenzene	53	
95-50-1	1,2-Dichlorobenzene	53	
96-12-8	1,2-Dibromo-3-chloropropane	46	
120-82-1	1,2,4-Trichlorobenzene	61	
87-68-3	Hexachlorobutadiene	51	
87-61-6	1,2,3-Trichlorobenzene	61	
91-20-3	Naphthalene	65	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-62758

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-62758

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7361.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/04/2011

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
75-71-8	Dichlorodifluoromethane	74		
74-87-3	Chloromethane	64		
75-01-4	Vinyl chloride	60		
74-83-9	Bromomethane	56		
75-00-3	Chloroethane	60		
75-69-4	Trichlorofluoromethane	61		
75-35-4	1,1-Dichloroethene	57		
67-64-1	Acetone	43		
74-88-4	Iodomethane	71		
75-15-0	Carbon disulfide	54		
75-09-2	Methylene chloride	60		B
156-60-5	trans-1,2-Dichloroethene	57		
1634-04-4	Methyl tert-butyl ether	64		
75-34-3	1,1-Dichloroethane	59		
108-05-4	Vinyl acetate	60		
78-93-3	2-Butanone	55		
156-59-2	cis-1,2-Dichloroethene	60		
594-20-7	2,2-Dichloropropane	56		
74-97-5	Bromochloromethane	63		
67-66-3	Chloroform	61		
71-55-6	1,1,1-Trichloroethane	60		
563-58-6	1,1-Dichloropropene	58		
56-23-5	Carbon tetrachloride	60		
107-06-2	1,2-Dichloroethane	63		
71-43-2	Benzene	59		
79-01-6	Trichloroethene	57		
78-87-5	1,2-Dichloropropane	61		
74-95-3	Dibromomethane	64		
75-27-4	Bromodichloromethane	63		
10061-01-5	cis-1,3-Dichloropropene	61		
108-10-1	4-Methyl-2-pentanone	59		
108-88-3	Toluene	60		
10061-02-6	trans-1,3-Dichloropropene	61		
79-00-5	1,1,2-Trichloroethane	62		
142-28-9	1,3-Dichloropropane	54		

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-62758

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-62758

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7361.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/04/2011

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
127-18-4	Tetrachloroethene	51	
591-78-6	2-Hexanone	49	
124-48-1	Dibromochloromethane	55	
106-93-4	1,2-Dibromoethane	54	
108-90-7	Chlorobenzene	52	
630-20-6	1,1,1,2-Tetrachloroethane	54	
100-41-4	Ethylbenzene	52	
1330-20-7	m,p-Xylene	100	
95-47-6	o-Xylene	53	
1330-20-7	Xylene (Total)	160	
100-42-5	Styrene	55	
75-25-2	Bromoform	55	
98-82-8	Isopropylbenzene	52	
79-34-5	1,1,2,2-Tetrachloroethane	51	
108-86-1	Bromobenzene	51	
96-18-4	1,2,3-Trichloropropane	50	
103-65-1	n-Propylbenzene	51	
95-49-8	2-Chlorotoluene	50	
108-67-8	1,3,5-Trimethylbenzene	51	
106-43-4	4-Chlorotoluene	51	
98-06-6	tert-Butylbenzene	52	
95-63-6	1,2,4-Trimethylbenzene	52	
135-98-8	sec-Butylbenzene	51	
99-87-6	4-Isopropyltoluene	51	
541-73-1	1,3-Dichlorobenzene	50	
106-46-7	1,4-Dichlorobenzene	49	
104-51-8	n-Butylbenzene	50	
95-50-1	1,2-Dichlorobenzene	52	
96-12-8	1,2-Dibromo-3-chloropropane	49	
120-82-1	1,2,4-Trichlorobenzene	49	
87-68-3	Hexachlorobutadiene	46	
87-61-6	1,2,3-Trichlorobenzene	53	
91-20-3	Naphthalene	56	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-62778

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-62778

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7394.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/07/2011

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
75-71-8	Dichlorodifluoromethane	66	
74-87-3	Chloromethane	59	
75-01-4	Vinyl chloride	57	
74-83-9	Bromomethane	58	
75-00-3	Chloroethane	54	
75-69-4	Trichlorofluoromethane	54	
75-35-4	1,1-Dichloroethene	52	
67-64-1	Acetone	59	
74-88-4	Iodomethane	64	
75-15-0	Carbon disulfide	48	
75-09-2	Methylene chloride	50	
156-60-5	trans-1,2-Dichloroethene	51	
1634-04-4	Methyl tert-butyl ether	48	
75-34-3	1,1-Dichloroethane	51	
108-05-4	Vinyl acetate	47	
78-93-3	2-Butanone	52	
156-59-2	cis-1,2-Dichloroethene	51	
594-20-7	2,2-Dichloropropane	50	
74-97-5	Bromochloromethane	50	
67-66-3	Chloroform	51	
71-55-6	1,1,1-Trichloroethane	51	
563-58-6	1,1-Dichloropropene	50	
56-23-5	Carbon tetrachloride	53	
107-06-2	1,2-Dichloroethane	50	
71-43-2	Benzene	51	
79-01-6	Trichloroethene	48	
78-87-5	1,2-Dichloropropane	50	
74-95-3	Dibromomethane	48	
75-27-4	Bromodichloromethane	52	
10061-01-5	cis-1,3-Dichloropropene	49	
108-10-1	4-Methyl-2-pentanone	44	
108-88-3	Toluene	50	
10061-02-6	trans-1,3-Dichloropropene	48	
79-00-5	1,1,2-Trichloroethane	50	
142-28-9	1,3-Dichloropropane	49	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-62778

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-62778

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7394.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/07/2011

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
127-18-4	Tetrachloroethene	48	
591-78-6	2-Hexanone	47	
124-48-1	Dibromochloromethane	52	
106-93-4	1,2-Dibromoethane	47	
108-90-7	Chlorobenzene	50	
630-20-6	1,1,1,2-Tetrachloroethane	51	
100-41-4	Ethylbenzene	49	
1330-20-7	m,p-Xylene	99	
95-47-6	o-Xylene	48	
1330-20-7	Xylene (Total)	150	
100-42-5	Styrene	51	
75-25-2	Bromoform	52	
98-82-8	Isopropylbenzene	47	
79-34-5	1,1,2,2-Tetrachloroethane	48	
108-86-1	Bromobenzene	48	
96-18-4	1,2,3-Trichloropropane	48	
103-65-1	n-Propylbenzene	51	
95-49-8	2-Chlorotoluene	50	
108-67-8	1,3,5-Trimethylbenzene	50	
106-43-4	4-Chlorotoluene	51	
98-06-6	tert-Butylbenzene	50	
95-63-6	1,2,4-Trimethylbenzene	50	
135-98-8	sec-Butylbenzene	49	
99-87-6	4-Isopropyltoluene	50	
541-73-1	1,3-Dichlorobenzene	49	
106-46-7	1,4-Dichlorobenzene	48	
104-51-8	n-Butylbenzene	49	
95-50-1	1,2-Dichlorobenzene	50	
96-12-8	1,2-Dibromo-3-chloropropane	44	
120-82-1	1,2,4-Trichlorobenzene	44	
87-68-3	Hexachlorobutadiene	42	
87-61-6	1,2,3-Trichlorobenzene	47	
91-20-3	Naphthalene	42	

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-62890

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-62890

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7457.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/10/2011

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
75-71-8	Dichlorodifluoromethane	52	
74-87-3	Chloromethane	49	
75-01-4	Vinyl chloride	50	
74-83-9	Bromomethane	58	
75-00-3	Chloroethane	50	
75-69-4	Trichlorofluoromethane	52	
75-35-4	1,1-Dichloroethene	50	
67-64-1	Acetone	44	
74-88-4	Iodomethane	70	
75-15-0	Carbon disulfide	51	
75-09-2	Methylene chloride	54	B
156-60-5	trans-1,2-Dichloroethene	52	
1634-04-4	Methyl tert-butyl ether	56	
75-34-3	1,1-Dichloroethane	54	
108-05-4	Vinyl acetate	58	
78-93-3	2-Butanone	54	
156-59-2	cis-1,2-Dichloroethene	53	
594-20-7	2,2-Dichloropropane	55	
74-97-5	Bromochloromethane	56	
67-66-3	Chloroform	53	
71-55-6	1,1,1-Trichloroethane	54	
563-58-6	1,1-Dichloropropene	55	
56-23-5	Carbon tetrachloride	53	
107-06-2	1,2-Dichloroethane	54	
71-43-2	Benzene	54	
79-01-6	Trichloroethene	54	
78-87-5	1,2-Dichloropropane	56	
74-95-3	Dibromomethane	56	
75-27-4	Bromodichloromethane	55	
10061-01-5	cis-1,3-Dichloropropene	58	
108-10-1	4-Methyl-2-pentanone	54	
108-88-3	Toluene	54	
10061-02-6	trans-1,3-Dichloropropene	60	
79-00-5	1,1,2-Trichloroethane	56	
142-28-9	1,3-Dichloropropane	56	

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-62890

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-62890

Sample wt/vol: 5.00 (g/mL) G Lab File ID: V8A7457.D

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

% Moisture: not dec. 0.0 Date Analyzed: 11/10/2011

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
127-18-4	Tetrachloroethene	54	
591-78-6	2-Hexanone	56	
124-48-1	Dibromochloromethane	57	
106-93-4	1,2-Dibromoethane	57	
108-90-7	Chlorobenzene	55	
630-20-6	1,1,1,2-Tetrachloroethane	55	
100-41-4	Ethylbenzene	56	
1330-20-7	m,p-Xylene	110	
95-47-6	o-Xylene	56	
1330-20-7	Xylene (Total)	170	
100-42-5	Styrene	58	
75-25-2	Bromoform	56	
98-82-8	Isopropylbenzene	56	
79-34-5	1,1,2,2-Tetrachloroethane	56	
108-86-1	Bromobenzene	55	
96-18-4	1,2,3-Trichloropropane	57	
103-65-1	n-Propylbenzene	54	
95-49-8	2-Chlorotoluene	53	
108-67-8	1,3,5-Trimethylbenzene	55	
106-43-4	4-Chlorotoluene	54	
98-06-6	tert-Butylbenzene	55	
95-63-6	1,2,4-Trimethylbenzene	54	
135-98-8	sec-Butylbenzene	53	
99-87-6	4-Isopropyltoluene	54	
541-73-1	1,3-Dichlorobenzene	54	
106-46-7	1,4-Dichlorobenzene	54	
104-51-8	n-Butylbenzene	54	B
95-50-1	1,2-Dichlorobenzene	55	
96-12-8	1,2-Dibromo-3-chloropropane	54	
120-82-1	1,2,4-Trichlorobenzene	63	B
87-68-3	Hexachlorobutadiene	52	B
87-61-6	1,2,3-Trichlorobenzene	62	B
91-20-3	Naphthalene	64	B

2D - FORM II VOA-4  
SOIL VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: \_\_\_\_\_ SDG No.: SK2143  
 Level: (LOW/MED) LOW

	CLIENT SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
01	LCS-62750	103	105	95	101				0
02	MB-62750	105	107	97	93				0
03	EAST 102511	116	115	97	86				0
04	LCS-62758	107	107	92	101				0
05	MB-62758	114	111	96	88				0
06	WEST 102511	124	120	93	88				0
07	BOTTOM 102511	124	121	93	87				0
08	LCS-62778	101	101	98	95				0
09	MB-62778	107	86	105	92				0
10	SOUTH 102511	107	105	100	88				0
11	LCS-62890	102	99	99	102				0
12	MB-62890	101	99	100	93				0
13	NORTH 102511	104	106	98	91				0

VDMC1	(DBFM)	Dibromofluoromethane	QC LIMITS
VDMC2	(DCE)	= 1,2-Dichloroethane-d4	(65-132)
VDMC3	(TOL)	= Toluene-d8	(65-128)
VDMC4	(BFB)	= Bromofluorobenzene	(85-115)
			(77-111)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits

som111.10.27.A

3 - FORM III  
SOIL LABORATORY CONTROL  
SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-62750

Lab Name: SPECTRUM ANALYTICAL, INC.

Contract:

Lab Code: MITKEM Case No.: K2143

Mod. Ref No.: SDG No.: SK2143

Lab Sample ID: LCS-62750

LCS Lot No.:

Date Extracted: 11/04/2011

Date Analyzed (1): 11/04/2011

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	50.0000	0.0000	68.1824	136	*	35 - 135
Chloromethane	50.0000	0.0000	56.7367	113		50 - 130
Vinyl chloride	50.0000	0.0000	57.8628	116		60 - 125
Bromomethane	50.0000	0.0000	48.4064	97		30 - 160
Chloroethane	50.0000	0.0000	56.8402	114		40 - 155
Trichlorofluoromethane	50.0000	0.0000	56.3159	113		25 - 185
1,1-Dichloroethene	50.0000	0.0000	55.7401	111		65 - 135
Acetone	50.0000	0.0000	66.3953	133		20 - 160
Iodomethane	50.0000	0.0000	64.6713	129	*	70 - 126
Carbon disulfide	50.0000	0.0000	50.8240	102		45 - 160
Methylene chloride	50.0000	0.0000	56.3537	113		55 - 140
trans-1,2-Dichloroethene	50.0000	0.0000	54.8267	110		65 - 135
Methyl tert-butyl ether	50.0000	0.0000	62.2064	124		75 - 126
1,1-Dichloroethane	50.0000	0.0000	54.9989	110		75 - 125
Vinyl acetate	50.0000	0.0000	56.9686	114		65 - 138
2-Butanone	50.0000	0.0000	61.3337	123		30 - 160
cis-1,2-Dichloroethene	50.0000	0.0000	57.6105	115		65 - 125
2,2-Dichloropropane	50.0000	0.0000	56.4953	113		65 - 135
Bromochloromethane	50.0000	0.0000	58.8670	118		70 - 125
Chloroform	50.0000	0.0000	56.0200	112		70 - 125
1,1,1-Trichloroethane	50.0000	0.0000	56.5208	113		70 - 135
1,1-Dichloropropene	50.0000	0.0000	57.8339	116		70 - 135
Carbon tetrachloride	50.0000	0.0000	56.8276	114		65 - 135
1,2-Dichloroethane	50.0000	0.0000	57.6359	115		70 - 135
Benzene	50.0000	0.0000	55.8724	112		75 - 125
Trichloroethene	50.0000	0.0000	57.2148	114		75 - 125
1,2-Dichloropropane	50.0000	0.0000	56.2702	113		70 - 120
Dibromomethane	50.0000	0.0000	57.9812	116		75 - 130
Bromodichloromethane	50.0000	0.0000	57.4409	115		70 - 130
cis-1,3-Dichloropropene	50.0000	0.0000	60.3203	121		70 - 125
4-Methyl-2-pentanone	50.0000	0.0000	56.8434	114		45 - 145
Toluene	50.0000	0.0000	57.6090	115		70 - 125
trans-1,3-Dichloropropene	50.0000	0.0000	60.3861	121		65 - 125
1,1,2-Trichloroethane	50.0000	0.0000	57.9453	116		60 - 125
1,3-Dichloropropane	50.0000	0.0000	52.7963	106		75 - 125
Tetrachloroethene	50.0000	0.0000	52.0660	104		65 - 140
2-Hexanone	50.0000	0.0000	57.1561	114		45 - 145
Dibromochloromethane	50.0000	0.0000	55.1613	110		65 - 130
1,2-Dibromoethane	50.0000	0.0000	53.8483	108		70 - 125
Chlorobenzene	50.0000	0.0000	51.4907	103		75 - 125
1,1,1,2-Tetrachloroethane	50.0000	0.0000	53.5219	107		75 - 125
Ethylbenzene	50.0000	0.0000	52.7620	106		75 - 125
m,p-Xylene	100.0000	0.0000	105.1634	105		80 - 125
o-Xylene	50.0000	0.0000	53.9424	108		75 - 125

3 - FORM III  
 SOIL LABORATORY CONTROL  
 SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-62750

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Lab Sample ID: LCS-62750 LCS Lot No.:

Date Extracted: 11/04/2011 Date Analyzed (1): 11/04/2011

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Xylene (Total)	150.0000	0.0000	159.1058	106		83 - 125
Styrene	50.0000	0.0000	54.8601	110		75 - 125
Bromoform	50.0000	0.0000	54.5629	109		55 - 135
Isopropylbenzene	50.0000	0.0000	53.6035	107		75 - 130
1,1,2,2-Tetrachloroethane	50.0000	0.0000	50.0932	100		55 - 130
Bromobenzene	50.0000	0.0000	53.8717	108		65 - 120
1,2,3-Trichloropropane	50.0000	0.0000	50.0933	100		65 - 130
n-Propylbenzene	50.0000	0.0000	53.4241	107		65 - 135
2-Chlorotoluene	50.0000	0.0000	52.1281	104		70 - 130
1,3,5-Trimethylbenzene	50.0000	0.0000	53.3282	107		65 - 135
4-Chlorotoluene	50.0000	0.0000	52.6936	105		75 - 125
tert-Butylbenzene	50.0000	0.0000	54.6532	109		65 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	53.5414	107		65 - 135
sec-Butylbenzene	50.0000	0.0000	52.0743	104		65 - 130
4-Isopropyltoluene	50.0000	0.0000	53.7684	108		75 - 135
1,3-Dichlorobenzene	50.0000	0.0000	52.3625	105		70 - 125
1,4-Dichlorobenzene	50.0000	0.0000	52.1217	104		70 - 125
n-Butylbenzene	50.0000	0.0000	53.0216	106		65 - 140
1,2-Dichlorobenzene	50.0000	0.0000	52.8002	106		75 - 120
1,2-Dibromo-3-chloropropan	50.0000	0.0000	45.9276	92		40 - 135
1,2,4-Trichlorobenzene	50.0000	0.0000	60.6062	121		65 - 130
Hexachlorobutadiene	50.0000	0.0000	50.7689	102		55 - 140
1,2,3-Trichlorobenzene	50.0000	0.0000	60.5032	121		60 - 135
Naphthalene	50.0000	0.0000	64.9502	130	*	40 - 125

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

\* Values outside of QC limits

Spike Recovery: 3 out of 68 outside limits

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

3 - FORM III  
SOIL LABORATORY CONTROL  
SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-62758

Lab Name: SPECTRUM ANALYTICAL, INC.

Contract:

Lab Code: MITKEM Case No.: K2143

Mod. Ref No.:

SDG No.: SK2143

Lab Sample ID: LCS-62758

LCS Lot No.:

Date Extracted: 11/04/2011

Date Analyzed (1): 11/04/2011

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	50.0000	0.0000	74.4811	149	*	35 - 135
Chloromethane	50.0000	0.0000	63.6696	127		50 - 130
Vinyl chloride	50.0000	0.0000	60.3722	121		60 - 125
Bromomethane	50.0000	0.0000	55.7412	111		30 - 160
Chloroethane	50.0000	0.0000	60.0220	120		40 - 155
Trichlorofluoromethane	50.0000	0.0000	61.3833	123		25 - 185
1,1-Dichloroethene	50.0000	0.0000	57.3970	115		65 - 135
Acetone	50.0000	0.0000	42.7292	85		20 - 160
Iodomethane	50.0000	0.0000	70.9931	142	*	70 - 126
Carbon disulfide	50.0000	0.0000	53.5696	107		45 - 160
Methylene chloride	50.0000	0.0000	60.2208	120		55 - 140
trans-1,2-Dichloroethene	50.0000	0.0000	57.0500	114		65 - 135
Methyl tert-butyl ether	50.0000	0.0000	64.0074	128	*	75 - 126
1,1-Dichloroethane	50.0000	0.0000	58.8919	118		75 - 125
Vinyl acetate	50.0000	0.0000	60.3738	121		65 - 138
2-Butanone	50.0000	0.0000	54.5231	109		30 - 160
cis-1,2-Dichloroethene	50.0000	0.0000	60.0182	120		65 - 125
2,2-Dichloropropane	50.0000	0.0000	55.9834	112		65 - 135
Bromochloromethane	50.0000	0.0000	62.5900	125	*	70 - 125
Chloroform	50.0000	0.0000	60.8770	122		70 - 125
1,1,1-Trichloroethane	50.0000	0.0000	60.1151	120		70 - 135
1,1-Dichloropropene	50.0000	0.0000	58.1835	116		70 - 135
Carbon tetrachloride	50.0000	0.0000	60.0508	120		65 - 135
1,2-Dichloroethane	50.0000	0.0000	62.9553	126		70 - 135
Benzene	50.0000	0.0000	58.5738	117		75 - 125
Trichloroethene	50.0000	0.0000	56.6868	113		75 - 125
1,2-Dichloropropane	50.0000	0.0000	60.6338	121	*	70 - 120
Dibromomethane	50.0000	0.0000	63.6623	127		75 - 130
Bromodichloromethane	50.0000	0.0000	62.5156	125		70 - 130
cis-1,3-Dichloropropene	50.0000	0.0000	61.0085	122		70 - 125
4-Methyl-2-pentanone	50.0000	0.0000	58.9424	118		45 - 145
Toluene	50.0000	0.0000	59.5026	119		70 - 125
trans-1,3-Dichloropropene	50.0000	0.0000	61.1963	122		65 - 125
1,1,2-Trichloroethane	50.0000	0.0000	62.1412	124		60 - 125
1,3-Dichloropropane	50.0000	0.0000	53.9250	108		75 - 125
Tetrachloroethene	50.0000	0.0000	51.4872	103		65 - 140
2-Hexanone	50.0000	0.0000	49.3107	99		45 - 145
Dibromochloromethane	50.0000	0.0000	55.1244	110		65 - 130
1,2-Dibromoethane	50.0000	0.0000	53.7997	108		70 - 125
Chlorobenzene	50.0000	0.0000	51.8363	104		75 - 125
1,1,1,2-Tetrachloroethane	50.0000	0.0000	54.4722	109		75 - 125
Ethylbenzene	50.0000	0.0000	52.2346	104		75 - 125
m,p-Xylene	100.0000	0.0000	104.8761	105		80 - 125
o-Xylene	50.0000	0.0000	53.1769	106		75 - 125

3 - FORM III  
 SOIL LABORATORY CONTROL  
 SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-62758

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Lab Sample ID: LCS-62758 LCS Lot No.:

Date Extracted: 11/04/2011 Date Analyzed (1): 11/04/2011

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Xylene (Total)	150.0000	0.0000	158.0529	105		83 - 125
Styrene	50.0000	0.0000	55.1068	110		75 - 125
Bromoform	50.0000	0.0000	54.6466	109		55 - 135
Isopropylbenzene	50.0000	0.0000	51.8351	104		75 - 130
1,1,2,2-Tetrachloroethane	50.0000	0.0000	50.8572	102		55 - 130
Bromobenzene	50.0000	0.0000	51.3416	103		65 - 120
1,2,3-Trichloropropane	50.0000	0.0000	50.4634	101		65 - 130
n-Propylbenzene	50.0000	0.0000	51.3324	103		65 - 135
2-Chlorotoluene	50.0000	0.0000	50.2845	101		70 - 130
1,3,5-Trimethylbenzene	50.0000	0.0000	51.4022	103		65 - 135
4-Chlorotoluene	50.0000	0.0000	50.7785	102		75 - 125
tert-Butylbenzene	50.0000	0.0000	52.2767	105		65 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	52.2035	104		65 - 135
sec-Butylbenzene	50.0000	0.0000	50.8344	102		65 - 130
4-Isopropyltoluene	50.0000	0.0000	51.3847	103		75 - 135
1,3-Dichlorobenzene	50.0000	0.0000	49.9367	100		70 - 125
1,4-Dichlorobenzene	50.0000	0.0000	49.2890	99		70 - 125
n-Butylbenzene	50.0000	0.0000	49.7315	99		65 - 140
1,2-Dichlorobenzene	50.0000	0.0000	51.5603	103		75 - 120
1,2-Dibromo-3-chloropropan	50.0000	0.0000	49.4772	99		40 - 135
1,2,4-Trichlorobenzene	50.0000	0.0000	48.9279	98		65 - 130
Hexachlorobutadiene	50.0000	0.0000	45.8489	92		55 - 140
1,2,3-Trichlorobenzene	50.0000	0.0000	53.2667	107		60 - 135
Naphthalene	50.0000	0.0000	56.1885	112		40 - 125

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

\* Values outside of QC limits

Spike Recovery: 5 out of 68 outside limits

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

3 - FORM III  
SOIL LABORATORY CONTROL  
SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-62778

Lab Name: SPECTRUM ANALYTICAL, INC.

Contract:

Lab Code: MITKEM Case No.: K2143

Mod. Ref No.: SDG No.: SK2143

Lab Sample ID: LCS-62778

LCS Lot No.:

Date Extracted: 11/07/2011

Date Analyzed (1): 11/07/2011

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	50.0000	0.0000	65.8563	132		35 - 135
Chloromethane	50.0000	0.0000	58.9923	118		50 - 130
Vinyl chloride	50.0000	0.0000	56.7261	113		60 - 125
Bromomethane	50.0000	0.0000	58.3319	117		30 - 160
Chloroethane	50.0000	0.0000	53.8410	108		40 - 155
Trichlorofluoromethane	50.0000	0.0000	54.2510	109		25 - 185
1,1-Dichloroethene	50.0000	0.0000	51.8887	104		65 - 135
Acetone	50.0000	0.0000	58.6361	117		20 - 160
Iodomethane	50.0000	0.0000	64.0185	128	*	70 - 126
Carbon disulfide	50.0000	0.0000	47.5528	95		45 - 160
Methylene chloride	50.0000	0.0000	50.3860	101		55 - 140
trans-1,2-Dichloroethene	50.0000	0.0000	50.6879	101		65 - 135
Methyl tert-butyl ether	50.0000	0.0000	48.1880	96		75 - 126
1,1-Dichloroethane	50.0000	0.0000	50.6452	101		75 - 125
Vinyl acetate	50.0000	0.0000	47.4848	95		65 - 138
2-Butanone	50.0000	0.0000	51.9771	104		30 - 160
cis-1,2-Dichloroethene	50.0000	0.0000	50.8785	102		65 - 125
2,2-Dichloropropane	50.0000	0.0000	49.5027	99		65 - 135
Bromochloromethane	50.0000	0.0000	50.2831	101		70 - 125
Chloroform	50.0000	0.0000	51.3477	103		70 - 125
1,1,1-Trichloroethane	50.0000	0.0000	51.2033	102		70 - 135
1,1-Dichloropropene	50.0000	0.0000	50.1791	100		70 - 135
Carbon tetrachloride	50.0000	0.0000	53.2067	106		65 - 135
1,2-Dichloroethane	50.0000	0.0000	50.2820	101		70 - 135
Benzene	50.0000	0.0000	50.7812	102		75 - 125
Trichloroethene	50.0000	0.0000	48.2492	96		75 - 125
1,2-Dichloropropane	50.0000	0.0000	50.2560	101		70 - 120
Dibromomethane	50.0000	0.0000	48.4227	97		75 - 130
Bromodichloromethane	50.0000	0.0000	52.4512	105		70 - 130
cis-1,3-Dichloropropene	50.0000	0.0000	48.6242	97		70 - 125
4-Methyl-2-pentanone	50.0000	0.0000	43.5909	87		45 - 145
Toluene	50.0000	0.0000	50.2204	100		70 - 125
trans-1,3-Dichloropropene	50.0000	0.0000	48.1014	96		65 - 125
1,1,2-Trichloroethane	50.0000	0.0000	49.5203	99		60 - 125
1,3-Dichloropropane	50.0000	0.0000	48.9812	98		75 - 125
Tetrachloroethene	50.0000	0.0000	47.8635	96		65 - 140
2-Hexanone	50.0000	0.0000	46.7825	94		45 - 145
Dibromochloromethane	50.0000	0.0000	52.4788	105		65 - 130
1,2-Dibromoethane	50.0000	0.0000	47.3471	95		70 - 125
Chlorobenzene	50.0000	0.0000	49.6654	99		75 - 125
1,1,1,2-Tetrachloroethane	50.0000	0.0000	51.4185	103		75 - 125
Ethylbenzene	50.0000	0.0000	49.3094	99		75 - 125
m,p-Xylene	100.0000	0.0000	99.2821	99		80 - 125
o-Xylene	50.0000	0.0000	48.0696	96		75 - 125

3 - FORM III  
 SOIL LABORATORY CONTROL  
 SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-62778

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Lab Sample ID: LCS-62778 LCS Lot No.:

Date Extracted: 11/07/2011 Date Analyzed (1): 11/07/2011

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Xylene (Total)	150.0000	0.0000	147.3517	98		83 - 125
Styrene	50.0000	0.0000	50.5276	101		75 - 125
Bromoform	50.0000	0.0000	51.6333	103		55 - 135
Isopropylbenzene	50.0000	0.0000	47.4543	95		75 - 130
1,1,2,2-Tetrachloroethane	50.0000	0.0000	48.1266	96		55 - 130
Bromobenzene	50.0000	0.0000	48.4861	97		65 - 120
1,2,3-Trichloropropane	50.0000	0.0000	48.0647	96		65 - 130
n-Propylbenzene	50.0000	0.0000	50.6018	101		65 - 135
2-Chlorotoluene	50.0000	0.0000	49.6910	99		70 - 130
1,3,5-Trimethylbenzene	50.0000	0.0000	50.4860	101		65 - 135
4-Chlorotoluene	50.0000	0.0000	50.8147	102		75 - 125
tert-Butylbenzene	50.0000	0.0000	50.2391	100		65 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	50.3302	101		65 - 135
sec-Butylbenzene	50.0000	0.0000	48.9930	98		65 - 130
4-Isopropyltoluene	50.0000	0.0000	50.1342	100		75 - 135
1,3-Dichlorobenzene	50.0000	0.0000	48.5020	97		70 - 125
1,4-Dichlorobenzene	50.0000	0.0000	48.4540	97		70 - 125
n-Butylbenzene	50.0000	0.0000	48.7590	98		65 - 140
1,2-Dichlorobenzene	50.0000	0.0000	49.6716	99		75 - 120
1,2-Dibromo-3-chloropropan	50.0000	0.0000	43.9286	88		40 - 135
1,2,4-Trichlorobenzene	50.0000	0.0000	43.7422	87		65 - 130
Hexachlorobutadiene	50.0000	0.0000	42.4692	85		55 - 140
1,2,3-Trichlorobenzene	50.0000	0.0000	46.5383	93		60 - 135
Naphthalene	50.0000	0.0000	41.7820	84		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 68 outside limits

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

3 - FORM III  
SOIL LABORATORY CONTROL  
SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-62890

Lab Name: SPECTRUM ANALYTICAL, INC.

Contract:

Lab Code: MITKEM Case No.: K2143

Mod. Ref No.: SDG No.: SK2143

Lab Sample ID: LCS-62890

LCS Lot No.:

Date Extracted: 11/10/2011

Date Analyzed (1): 11/10/2011

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	50.0000	0.0000	51.8114	104		35 - 135
Chloromethane	50.0000	0.0000	48.7886	98		50 - 130
Vinyl chloride	50.0000	0.0000	50.3553	101		60 - 125
Bromomethane	50.0000	0.0000	58.2276	116		30 - 160
Chloroethane	50.0000	0.0000	49.9510	100		40 - 155
Trichlorofluoromethane	50.0000	0.0000	51.8796	104		25 - 185
1,1-Dichloroethene	50.0000	0.0000	50.1649	100		65 - 135
Acetone	50.0000	0.0000	43.6691	87		20 - 160
Iodomethane	50.0000	0.0000	70.1177	140	*	70 - 126
Carbon disulfide	50.0000	0.0000	51.0095	102		45 - 160
Methylene chloride	50.0000	0.0000	53.6875	107		55 - 140
trans-1,2-Dichloroethene	50.0000	0.0000	52.2400	104		65 - 135
Methyl tert-butyl ether	50.0000	0.0000	56.1348	112		75 - 126
1,1-Dichloroethane	50.0000	0.0000	54.3677	109		75 - 125
Vinyl acetate	50.0000	0.0000	58.4881	117		65 - 138
2-Butanone	50.0000	0.0000	53.7920	108		30 - 160
cis-1,2-Dichloroethene	50.0000	0.0000	52.8928	106		65 - 125
2,2-Dichloropropane	50.0000	0.0000	54.9300	110		65 - 135
Bromochloromethane	50.0000	0.0000	55.9881	112		70 - 125
Chloroform	50.0000	0.0000	53.4924	107		70 - 125
1,1,1-Trichloroethane	50.0000	0.0000	53.6066	107		70 - 135
1,1-Dichloropropene	50.0000	0.0000	54.8366	110		70 - 135
Carbon tetrachloride	50.0000	0.0000	53.3143	107		65 - 135
1,2-Dichloroethane	50.0000	0.0000	54.4959	109		70 - 135
Benzene	50.0000	0.0000	53.6898	107		75 - 125
Trichloroethene	50.0000	0.0000	54.2800	109		75 - 125
1,2-Dichloropropane	50.0000	0.0000	56.1867	112		70 - 120
Dibromomethane	50.0000	0.0000	56.0778	112		75 - 130
Bromodichloromethane	50.0000	0.0000	55.1632	110		70 - 130
cis-1,3-Dichloropropene	50.0000	0.0000	57.6722	115		70 - 125
4-Methyl-2-pentanone	50.0000	0.0000	53.7953	108		45 - 145
Toluene	50.0000	0.0000	54.3218	109		70 - 125
trans-1,3-Dichloropropene	50.0000	0.0000	60.2326	120		65 - 125
1,1,2-Trichloroethane	50.0000	0.0000	55.6288	111		60 - 125
1,3-Dichloropropane	50.0000	0.0000	55.9951	112		75 - 125
Tetrachloroethene	50.0000	0.0000	53.5767	107		65 - 140
2-Hexanone	50.0000	0.0000	55.6573	111		45 - 145
Dibromochloromethane	50.0000	0.0000	57.1443	114		65 - 130
1,2-Dibromoethane	50.0000	0.0000	57.3935	115		70 - 125
Chlorobenzene	50.0000	0.0000	54.8496	110		75 - 125
1,1,1,2-Tetrachloroethane	50.0000	0.0000	55.4774	111		75 - 125
Ethylbenzene	50.0000	0.0000	55.6415	111		75 - 125
m,p-Xylene	100.0000	0.0000	109.4693	109		80 - 125
o-Xylene	50.0000	0.0000	56.1382	112		75 - 125

3 - FORM III  
 SOIL LABORATORY CONTROL  
 SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-62890

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Lab Sample ID: LCS-62890 LCS Lot No.:

Date Extracted: 11/10/2011 Date Analyzed (1): 11/10/2011

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Xylene (Total)	150.0000	0.0000	165.6076	110		83 - 125
Styrene	50.0000	0.0000	57.5004	115		75 - 125
Bromoform	50.0000	0.0000	56.3114	113		55 - 135
Isopropylbenzene	50.0000	0.0000	55.6035	111		75 - 130
1,1,2,2-Tetrachloroethane	50.0000	0.0000	55.8354	112		55 - 130
Bromobenzene	50.0000	0.0000	54.5196	109		65 - 120
1,2,3-Trichloropropane	50.0000	0.0000	57.2814	115		65 - 130
n-Propylbenzene	50.0000	0.0000	54.2932	109		65 - 135
2-Chlorotoluene	50.0000	0.0000	53.3711	107		70 - 130
1,3,5-Trimethylbenzene	50.0000	0.0000	54.7187	109		65 - 135
4-Chlorotoluene	50.0000	0.0000	53.6302	107		75 - 125
tert-Butylbenzene	50.0000	0.0000	55.1361	110		65 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	53.7425	107		65 - 135
sec-Butylbenzene	50.0000	0.0000	53.4627	107		65 - 130
4-Isopropyltoluene	50.0000	0.0000	53.5530	107		75 - 135
1,3-Dichlorobenzene	50.0000	0.0000	54.1993	108		70 - 125
1,4-Dichlorobenzene	50.0000	0.0000	53.5381	107		70 - 125
n-Butylbenzene	50.0000	0.0000	54.1911	108		65 - 140
1,2-Dichlorobenzene	50.0000	0.0000	54.5751	109		75 - 120
1,2-Dibromo-3-chloropropan	50.0000	0.0000	53.9152	108		40 - 135
1,2,4-Trichlorobenzene	50.0000	0.0000	63.1918	126		65 - 130
Hexachlorobutadiene	50.0000	0.0000	52.3793	105		55 - 140
1,2,3-Trichlorobenzene	50.0000	0.0000	62.3669	125		60 - 135
Naphthalene	50.0000	0.0000	64.3314	129	*	40 - 125

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

\* Values outside of QC limits

Spike Recovery: 2 out of 68 outside limits

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MB-62750

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Lab File ID: V8A7336.D Lab Sample ID: MB-62750

Instrument ID: V10

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 11/04/2011

Level: (TRACE or LOW/MED) LOW Time Analyzed: 13:18

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-62750	LCS-62750	V8A7334.D	12:18
02 EAST 102511	K2143-01A	V8A7354.D	20:54

COMMENTS: \_\_\_\_\_

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MB-62758

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Lab File ID: V8A7367.D Lab Sample ID: MB-62758

Instrument ID: V10

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 11/05/2011

Level: (TRACE or LOW/MED) LOW Time Analyzed: 2:22

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-62758	LCS-62758	V8A7361.D	23:51
02 WEST 102511	K2143-02A	V8A7380.D	7:50
03 BOTTOM 102511	K2143-04A	V8A7381.D	8:15

COMMENTS: \_\_\_\_\_

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MB-62778

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Lab File ID: V8A7396.D Lab Sample ID: MB-62778

Instrument ID: V10

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 11/07/2011

Level: (TRACE or LOW/MED) LOW Time Analyzed: 10:32

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-62778	LCS-62778	V8A7394.D	9:30
02 SOUTH 102511	K2143-03A	V8A7405.D	14:20

COMMENTS: \_\_\_\_\_

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MB-62890

Lab Name: SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: SDG No.: SK2143

Lab File ID: V8A7459.D Lab Sample ID: MB-62890

Instrument ID: V10

Matrix: (SOIL/SED/WATER) SOIL Date Analyzed: 11/10/2011

Level: (TRACE or LOW/MED) LOW Time Analyzed: 10:31

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-62890	LCS-62890	V8A7457.D	9:40
02 NORTH 102511	K2143-05A	V8A7461.D	11:22

COMMENTS: \_\_\_\_\_

8A - FORM VIII VOA  
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_

Lab Code: MITKEM Case No.: K2143 Mod. Ref No.: \_\_\_\_\_ SDG No.: SK2143

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 10/21/2011 10/21/2011

EPA Sample No.(VSTD#####): VSTD05010N Date Analyzed: 11/04/2011

Lab File ID (Standard): V8A7333.D Time Analyzed: 11:43

Instrument ID: V10 Heated Purge: (Y/N) Y

	IS1 (S1 ) AREA #	RT #	IS2 (S2 ) AREA #	RT #	IS3 (S3 ) AREA #	RT #
12 HOUR STD	425799	5.381	327806	8.377	151118	10.86
UPPER LIMIT	851598	5.881	655612	8.877	302236	11.36
LOWER LIMIT	212900	4.881	163903	7.877	75559	10.36
SAMPLE NO.						
01 LCS-62750	434754	5.381	338795	8.374	154205	10.860
02 MB-62750	407818	5.381	301688	8.378	123999	10.860
03 EAST 102511	352264	5.381	266206	8.377	95939	10.863

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.: K2143 Mod. Ref No.: \_\_\_\_\_ SDG No.: SK2143

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 10/21/2011 10/21/2011

EPA Sample No.(VSTD#####): VSTD050100 Date Analyzed: 11/04/2011

Lab File ID (Standard): V8A7360.D Time Analyzed: 23:26

Instrument ID: V10 Heated Purge: (Y/N) Y

	IS1 (S1 ) AREA #	RT #	IS2 (S2 ) AREA #	RT #	IS3 (S3 ) AREA #	RT #
12 HOUR STD	396506	5.381	325433	8.374	153156	10.86
UPPER LIMIT	793012	5.881	650866	8.874	306312	11.36
LOWER LIMIT	198253	4.881	162717	7.874	76578	10.36
SAMPLE NO.						
01 LCS-62758	386756	5.381	316619	8.374	147293	10.856
02 MB-62758	377852	5.381	290427	8.378	103346	10.860
03 WEST 102511	329757	5.381	278306	8.378	103972	10.860
04 BOTTOM 102511	316381	5.381	262200	8.377	96565	10.863

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.: K2143 Mod. Ref No.: \_\_\_\_\_ SDG No.: SK2143

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 10/21/2011 10/21/2011

EPA Sample No.(VSTD#####): VSTD05010P Date Analyzed: 11/07/2011

Lab File ID (Standard): V8A7393.D Time Analyzed: 8:47

Instrument ID: V10 Heated Purge: (Y/N) Y

	IS1 (S1 ) AREA #	RT #	IS2 (S2 ) AREA #	RT #	IS3 (S3 ) AREA #	RT #
12 HOUR STD	378299	5.378	265433	8.374	113499	10.86
UPPER LIMIT	756598	5.878	530866	8.874	226998	11.36
LOWER LIMIT	189150	4.878	132717	7.874	56750	10.36
SAMPLE NO.						
01 LCS-62778	371207	5.381	263494	8.377	115235	10.860
02 MB-62778	348811	5.381	228298	8.377	77955	10.860
03 SOUTH 102511	421006	5.381	289085	8.378	111100	10.860

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.: K2143 Mod. Ref No.: \_\_\_\_\_ SDG No.: SK2143

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 11/10/2011 11/10/2011

EPA Sample No.(VSTD#####): VSTD05010R Date Analyzed: 11/10/2011

Lab File ID (Standard): V8A7451.D Time Analyzed: 6:56

Instrument ID: V10 Heated Purge: (Y/N) Y

	IS1 (S1 ) AREA #	RT #	IS2 (S2 ) AREA #	RT #	IS3 (S3 ) AREA #	RT #
12 HOUR STD	383385	5.304	270756	8.291	122977	10.783
UPPER LIMIT	766770	5.804	541512	8.791	245954	11.283
LOWER LIMIT	191693	4.804	135378	7.791	61489	10.283
SAMPLE NO.						
01 LCS-62890	420315	5.304	302122	8.291	137192	10.783
02 MB-62890	395118	5.304	280388	8.291	112324	10.786
03 NORTH 102511	391007	5.304	284811	8.291	108654	10.786

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.

**ATTACHMENT C**  
**IMPORTED BACKFILL DOCUMENTATION**

## GRANULAR MATERIAL DOCUMENTATION FORM

## ORIGINATOR

BARBARA MARKS  
REGIONAL GEOTECHNICAL ENGINEER  
545 OLD FRONT STREET  
BINGHAMTON, NY 13905

SAMPLED BY: D. Scott

DATE: 08/13/2010

## SOURCE IDENTIFICATION &amp; LOCATION

SOURCE IDENTIFICATION: 5886  
GREGORY & SONS

U.S.G.S. QUAD LOCATION: 86-1-D-31  
TOWNSHIP: OWEGO  
COUNTY: TIoga

STOCKPILED MATERIAL      ITEM NO. 304.15      PILE NO. 0910NPS03      EST. QTY. 2000 m<sup>3</sup>  
 TIER NO.  I  II  III  
 CASE FOR SUBSEQUENT STOCKPILE  CASE A  CASE B  CASE C

 NON-STOCKPILED MATERIAL

## TEST RESULTS (OPTIONAL)

GRADATION		REG. SAMPLE DESIGN.	0910NPS03N	0910NPS03E	0910NPS03S	0910NPS03W	
SIEVE SIZES	% PASSING BY WEIGHT	100.0 mm	100	100	100	100	
		75.0 mm	100	100	100	100	
		50.0 mm	100	100	100	100	
		37.5 mm	—	—	—	—	
		25.0 mm	90	90	87	91	
		19.0 mm	—	—	—	—	
		12.5 mm	69	69	58	66	
		6.3 mm	58	58	42	54	
		2.00 mm	47	46	29	43	
		0.850 mm	37	36	22	36	
		0.425 mm	20	19	12	22	
		0.150 mm	8	7	5	8	
		0.076 mm	6	6	4	6	
QUALITY		MOM					
Mg So <sub>4</sub> Soundness							
% Loss by Wt							
Plasticity Index							
pH							

 ACCEPTED:

## NON-STOCKPILED MATERIAL

FOR THE YEAR OF 2010, MATERIAL FROM THIS SOURCE MEETS THE QUALITY REQUIREMENTS FOR ITEMS:

THIS EVALUATION IS SUBJECT TO THE FOLLOWING CONDITIONS:

## STOCKPILED MATERIAL

SUBBASE      ITEM 304.15      TYPE 1,3,4  
 UNDERDRAIN FILTER      ITEM \_\_\_\_\_      TYPE \_\_\_\_\_  
 OTHER      ITEM(S) \_\_\_\_\_

NAME


 Regional Geotechnical Engineer

TITLE

DATE 09/17/10

 REJECTED:

MATERIAL MEETING THE SPECIFICATION REQUIREMENTS CANNOT BE OBTAINED FROM THIS

SOURCE  
 STOCKPILE

FOR ITEM(S) \_\_\_\_\_

NAME

TITLE

DATE

OCT 25 11 09:53:38AM

CONTRACTING  
ID 52,  
TRUCK 0  
CUSTOMER-Natures  
Item 4 15.10 ton

THREE WEIGH TICKETS FOR IMPARTED  
BACK FILL DELIVERED TO SITE ON 10/25/11  
BY GREGORY AND SONS

OCT 25 11 10:28:03AM

CONTRACTING  
ID 52,  
TRUCK 0  
CUSTOMER 0  
Item 4 15.05 ton

OCT 25 11 08:54:08AM

CONTRACTING  
ID 52,  
TRUCK 0  
CUSTOMER 0  
Item 4 15.10 ton

Natures Way Ticket  
To Cott N. Duran &  
Mgael, End., alk