



Submitted to:
City of Meriden
Community Development
142 State Street
Meriden, CT

Submitted by
AECOM
Rocky Hill, CT
March 27, 2014

Final Phase III Environmental Site Assessment

Parking Lot

177 State Street

Meriden, Connecticut 06450





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177 State Street
Meriden, Connecticut 06450

A handwritten signature in black ink that reads "Julie Williams". The signature is written in a cursive, flowing style.

Prepared By Julie Williams
Environmental Scientist

A handwritten signature in blue ink that reads "John A. Bondos, Jr.". The signature is written in a cursive, flowing style.

Reviewed By John A. Bondos, Jr., LEP
Project Manager

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1.0 Introduction

On behalf of the City of Meriden, AECOM (AECOM) is submitting this Phase III Environmental Site Assessment (ESA) investigation to document subsurface investigation activities performed at the parking lot located at 177 State Street in Meriden, Connecticut (hereinafter referred to as “the site”). The location of the site is shown on **Figure 1**.

The purpose of this investigation was to further investigate and characterize contaminants of concern (COCs) in area of concern (AOC) – 1 identified in soil and groundwater in the November 2013 Phase II ESA completed by AECOM. AOC-1 was initially identified in the August 2013 Phase I ESA completed by Lenard Engineering Inc (Lenard). AOC-1 includes a former newspaper publishing company, automotive service and accessory business, paint shop, carpentry shop, blacksmith shop, and carriage works business that occupied the western and southwestern portions of the site. COCs identified in the Phase II ESA (AECOM, 2013) include polycyclic aromatic hydrocarbons (PAHs), extractable total petroleum hydrocarbons (ETPH), and metals.

As requested by the City, this report has been prepared following U.S. Department of Housing and Urban Development’s (HUD) guidelines. As such, this report provides a remediation plan and associated planning level cost estimate. This is presented in Section 7.0 Conclusions and Recommendations.

2.0 Site Description and History

2.1 Site Description

The subject property is currently owned by the CSC Investments, LLC and consists of a 1.24 parcel currently used as a parking lot. A fence is located on the site, creating two separate parking areas. Apart from the fence, there are no other structures on the property.

2.2 Site History

According to the Phase I ESA (Lenard, 2013), the site has been developed as a parking lot since 1963. Prior to 1962, the site consisted of four separate parcels with various uses dating from the late 1800's to 1962. The parcels located on the northern and eastern portions of the site historically contained residences, commercial businesses, and retail businesses. The parcels located on the western and southwestern portions of the site historically contained commercial and industrial businesses including: a newspaper publishing company; an automotive service business; a paint business; a carpentry business; a blacksmith; and a carriage works business. The approximate locations these former buildings are shown on [Figure 2](#).

2.3 Environmental Setting

The subject site is located within a residential and commercial/industrial section of Meriden Connecticut. The topography of the site slopes slightly downward to the south toward Harbor Brook, located in an underground conduit approximately 185-feet south of the site. Groundwater flow direction at the site is not known, but it is assumed groundwater flows in a general southern direction; toward the Harbor Brook. Groundwater in the vicinity of the site is classified as GB and public water is available in this area; however, according to the Phase I ESA (Lenard, 2013) and the City of Meriden 2012 Water Quality Report two public water supply wells, owned by the Meriden Water Division, are located within a 1-mile radius of the site. These wells include the Columbus Park well, located approximately 0.5-miles northwest of the site and the Britannia Street well (also known as Mule Well), located approximately 0.85-miles north northwest of the site. Regulatory requirements associated with drinking water supply wells are discussed in [Section 3.0](#)

3.0 Applicable Remediation Standard Regulations

The Regulations of Connecticut State Agencies (RCSA) Sections 22a-133k-1 through 22a-133k-3, inclusive, comprise the Remediation Standard Regulations (RSRs). These regulations are applicable to various sites in Connecticut including those undergoing investigation and remediation under the Property Transfer Program, an administrative order from the Connecticut Department of Energy and Environmental Protection (CTDEEP), or under one of the CTDEEP Voluntary Remediation Programs (VRPs). A summary of applicable criteria to the site is discussed in the following paragraphs.

Based on the GB designation for site groundwater and the potential land uses of the site following redevelopment, the RSR criteria that apply to soil data obtained from this investigation are the GB pollutant mobility criteria (PMC) and residential direct exposure criteria (R DEC). Since the RDEC are the RSR default criteria, and the RSRs permit Environmental Land Use Restrictions (ELUR) that restrict future use of a site to non-residential uses, comparison to the industrial/commercial direct exposure criteria (I/C DEC) is also provided herein.

Groundwater data are compared to the surface water protection criteria (SWPC), residential volatilization criteria (R VC), and industrial/commercial volatilization criteria (I/C VC).

The significant environmental hazard reporting regulation (pursuant to Section 22a-6(u) of the Connecticut General Statutes) includes a reporting requirement for polluted groundwater identified within 500-feet of a drinking water supply well. Additionally, the CT RSRs include a requirement to use GA criteria in GB areas if groundwater is used for drinking. As per the Water Supply Well Receptor Survey Guidance Document (CTDEEP, Sept. 2009), the accepted minimum source area for a public well is 500-feet. As such, these two requirements are not applicable for this site.

4.0 Investigation Activities

Based on the one AOC identified in the August 2013 Phase I ESA (Lenard) and the results of the Phase II ESA (AECOM, 2013), AECOM conducted sub-surface investigation activities including the collection of soil and groundwater samples. Investigation activities were conducted on February 19, 2014. **Figure 2** depicts the locations soil borings and groundwater sampling locations.

4.1 Soil Investigation

AECOM advanced five soil borings (SB-100 through SB-104) and collected ten soil samples. The soil borings were advanced in the locations described below:

- Soil borings SB-100 was advanced to characterize the southwest limits of identified COCs;
- Soil borings SB-101 was advanced to characterize the northeast limits of identified COCs;
- Soil boring SB-102 was advanced to characterize the northern limits of identified COCs;
- Soil Boring SB-103 was advanced to characterize the northwest limits of identified COCs;
- Soil Boring SB-104 was advanced to characterize the eastern limits of identified COCs;

The locations of the Phase II (AECOM, 2013) and Phase III soil borings in are shown on **Figure 2**.

Each soil boring was hand cleared to approximately 5-feet below ground surface (bgs) and then advanced to terminal depth using direct-push technology. Soil samples were collected continuously and were logged, classified, and field screened for volatile organic vapors using a portable photoionization detector (PID). Soil borings were advanced to either 10- or 12-feet bgs. Soil classification and PID readings are reported on the soil boring logs included as **Attachment A**.

Two soil samples were collected from each boring based on the depth of COCs detected in Phase II ESA (AECOM, 2013) soil samples. Soil samples were submitted to Spectrum Analytical Laboratory of Agawam, Massachusetts for analysis of volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), extractable total petroleum hydrocarbons (ETPH), antimony, arsenic, and/or lead. Analytical results are discussed in **Section 5.2**.

4.2 Temporary Monitoring Well Installation

AECOM installed two temporary monitoring wells at SB-100 and SB-102. Temporary monitoring well locations were installed at assumed upgradient and assumed downgradient locations. The temporary wells were completed as 1-inch diameter wells and, the well screen positioned from the apparent water table to approximately 5- feet below the water table. Following the collection of groundwater samples, as discussed in **Section 4.3**, the temporary monitoring wells were removed.

4.3 Groundwater Sampling

AECOM collected grab groundwater samples from the two temporary monitoring wells using a peristaltic pump. Groundwater samples were submitted to Spectrum Analytical Laboratory of Agawam, Massachusetts for analysis of VOCs, PAHs, ETPH, PCBs, and RCRA 8 Metals. Analytical results are discussed in **Section 5.2**.

5.0 Results

5.1 Geology and Hydrogeology

Soil samples from each of the five soil borings were collected continuously and logged and classified. Soil logging indicated that fine to coarse sand and silt was present from grade to approximately 12-feet bgs at soil borings SB-2 through SB-4. Soil logging indicated that urban fill materials, described as fine to coarse sand and silt with gravel and brick fragments, was present from grade to approximately 5-feet bgs at soil boring SB-1, SB-100, SB-101, SB-102, SB-103, and SB-104 with well graded sand and gravel from approximately 5-feet bgs to approximately 12-feet bgs.

Groundwater was encountered at approximately 6-feet on the southeastern portion on the site and approximately 9-feet at the northwestern portion of the site. Soil classification information is reported on the soil boring logs included as **Attachment A**.

5.2 Soil and Groundwater Analytical Results

5.2.1 Soil Analytical Results

Ten soil samples were collected and analyzed for VOCs, PAHs, ETPH, antimony, arsenic, and/or lead. Laboratory analytical results indicated:

ETPH

- ETPH was not detected above laboratory reporting limits in soil sample SB-103(10-12).
- ETPH was detected above laboratory reporting limits but below the R DEC, I/C DEC, and GB PMC in the soil samples SB-100(6-8), SB-101(4-6), SB-101(8-10), SB-102(10-12), SB-103(2-4), SB-103(4-6), and SB-104(6-8).
- ETPH was detected above the RDEC but below the I/C DEC and GB PMC in the soil sample collected from SB-100(10-12) and SB-102(4-6).

Metals

- Antimony was not detected above laboratory reporting limits in soil samples collected from SB-100(10-12), SB-101(4-6), SB-101(8-10), SB-103(2-4), and SB-103(10-12).
- Antimony was detected at concentrations above laboratory reporting limits but below the R DEC and I/C DEC in soil samples collected from SB-104(4-6), and SB-104(6-8).
- Antimony was detected at concentrations above the R DEC but below the I/C DEC in soil sample SB-100(6-8).
- Arsenic was detected at concentrations above laboratory reporting limits but below the R DEC and I/C DEC in soil samples collected from SB-101(4-6), SB-101(8-10), SB-103(2-4), and SB-103(10-12), SB-104(4-6), and SB-104(6-8).
- Lead was detected at concentrations above laboratory reporting limits but below the R DEC and I/C DEC in soil samples collected from SB-101(4-6), SB-101(8-10), SB-102(4-6), SB-102(10-12), SB-103(2-4), and SB-103(10-12), SB-104(4-6), and SB-104(6-8).

VOCs

- VOCs were not detected at concentrations above laboratory reporting limits in the soil samples collected from SB-103(2-4).

PAHs

- PAHs were not detected above laboratory reporting limits in soil samples SB-100(6-8), SB-100(10-12), SB-101(8-10), and SB-103(10-12).
- PAHs were detected at concentrations above laboratory reporting limits but below the R DEC, I/C DEC, and GB PMC in soil samples SB-101(4-6), SB-103(2-4), and SB-104(6-8).
- PAHs were detected at concentrations above the R DEC, I/C DEC, and GB PMC in soil samples SB-102(4-6), SB-102(10-12), and SB-104(4-6).

Soil analytical results are summarized in **Table 1**. Soil laboratory analytical reports are included as **Attachment B**.

5.2.2 Groundwater Analytical Results

Two groundwater samples were collected and analyzed PAHs, ETPH, PCBs, and RCRA 8 Metals. Laboratory analytical results indicated:

ETPH

- ETPH was not detected above laboratory reporting limits in groundwater samples collected from both MW-SB-100 and MW-SB-102.

Metals

- Arsenic was detected at concentrations above SWPC in groundwater sample collected from MW-SB-102.
- Arsenic not detected at concentrations above laboratory reporting limits in MW-SB-100.
- Barium was detected at concentrations above laboratory reporting limits in MW-SB-100 and MW-SB-102. There are no SWPC for barium.
- Lead was detected at concentrations above SWPC in MW-SB-100 and MW-SB-102.

PAHs

- PAHs were not detected at concentrations above laboratory reporting limits in the groundwater sample collected from MW-SB-100.
- Phenanthrene was detected at concentrations above SWPC in the groundwater sample collected from MW-SB-102.

Groundwater analytical results are summarized in **Table 2**. Soil laboratory analytical reports are included as **Attachment B**.

6.0 Conceptual Site Model

The site contains two AOCs. AOC-1 identified in the Phase I ESA (Lenard, 2013), includes a former newspaper publishing company, automotive service and accessory business, paint shop, carpentry shop, blacksmith shop, and carriage works business that occupied the western and southwestern portions of the site; and AOC-2 identified during the Phase I (Lenard, 2013) and Phase II (AECOM, 2013) investigation which includes urban fill present outside of AOC-1 and along the western property line from grade to approximately 5 feet bgs. Additionally, the site is located in an urban area which has been developed as early as the late 1871; based on historic site use and laboratory data the fill likely extends beyond 12-feet bgs.

Release mechanisms for AOC-1 includes potential surface releases to soil, surface releases to interior flooring which may have seeped into soil, and releases from potential former subsurface features (i.e. underground storage tanks, piping, etc.). Release mechanisms for the urban fill include leaching and direct contact with surrounding soils. In addition, contaminants from these AOCs may have been redistributed during historic construction activities at the site.

Soil samples collected during the Phase II (AECOM, 2013) were collected at depths mostly likely to be impacted based on release mechanisms as well as to provide vertical understanding of potential impacts. Soil samples collected as part of the Phase III investigation were collected to further classify exceedances identified in the Phase II (AECOM, 2013).

Soil samples collected during the Phase II and Phase III indicate that PAHs, ETPH, antimony, arsenic, and lead are present in subsurface materials at the site at concentrations above the R DEC, I/C DEC, and/or GB PMC. The following COCs exceeded criteria at the following locations

- PAHs, including Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (g,h,i) perylene, are present above I/C DEC, R DEC, and/or GB PMC in both saturated and unsaturated soils in AOC-1 and AOC-2 at depths ranging from 2- to 12- feet bgs at soil borings SB-1, SB-2, SB-3, SB-102, and SB-104.
- ETPH is present above the R DEC but below the I/C DEC and GB PMC in both saturated and unsaturated soils in AOC-1 and AOC-2 at depths ranging from 2- to 12- feet bgs at soil borings SB-3, SB-100, and SB-102.
- Antimony is present above the R DEC but below the I/C DEC in unsaturated and saturated soils in AOC-2 at depths ranging from 6- to 8- feet bgs at soil borings SB-1 and SB-100.
- Arsenic is present above the R DEC and I/C DEC in unsaturated soils in AOC-2 at a depth of 2- to -4 feet bgs at soil boring SB-2.
- Lead is present above the R DEC in unsaturated and saturated soils in AOC-1 at depths ranging from 2- to -12 feet bgs at soil boring SB-2 and SB-4.

Groundwater samples collected during the Phase II and Phase III indicate that PAHs, ETPH, and metals are present. The following COCs exceed SWPC at the following locations:

- Phenanthrene is present above SWPC in groundwater at TW-1 and MW-SB-102;
- Arsenic is present above SWPC in groundwater at TW-1, TW-2, and MW-SB-102;and
- Mercury and lead is present above SWPC in groundwater at MW-SB-102.

Assumed downgradient well, SB-MW-100 did not contain any COCs above SWPC. Additionally, surface water is not present within 150-feet of the property boundary; therefore, SWPC will likely not exceed at the point of compliance.

The CSM is further described in **Table 3**. Soil and groundwater analytical results from the Phase II ESA (AECOM, 2013) are included in **Attachment C**.

7.0 Conclusions and Recommendations

Soil and groundwater samples were collected as part of a Phase III ESA from AOC-1 to further characterize COCs, including ETPH, PAHs, and metals, in soil above the R DEC, I/C DEC, and/or GB PMC and groundwater above the SWPC, identified in the November 2013 Phase II ESA (AECOM). Additionally, the results of AECOM's Phase II and Phase III ESAs have identified an additional AOC at the site, AOC-2. AOC-2 includes urban fill which is present in soils outside of AOC-1 and at the western property boundary. The CSM has been updated for this site to include this additional AOC.

Based on the soil analytical results from the Phase II and Phase III investigation:

- Arsenic I/C DEC exceedances and lead R DEC exceedances are isolated to within the footprint of AOC-1;
- ETPH are present in soil in excess of the R DEC both within the foot print of AOC-1, within the urban fill material;
- PAHs are present in soil in excess of the R DEC, I/C DEC, and GB PMC within the foot print of AOC-1, within the urban fill material
- Antimony is present in soil in excess of the R DEC within the urban fill material and in deep soils below the urban fill material.

Based on the groundwater analytical results, phenanthrene, arsenic, lead, and mercury are present above SWPC in groundwater at the likely upgradient portion of the property. The likely, downgradient well, SB-MW-100 did not contain any COCs above SWPC indicating compliance with SWPC is met. The Phase III ESA provided sufficient information for preliminary planning of future property use and, if required, preliminary remedial design.

Based on the Phase I ESA report (Lenard, 2013), this site is not in a CT environmental regulatory program. Presently, there are four circumstances in which a property would be required to remediate under the CT RSRs including: (1) properties defined as establishments which are transferred; (2) properties which operated USTs and are subject to the CT UST regulations; (3) properties which are under order by the State of Connecticut; and (4) properties which have entered the voluntary remediation program (VRP). Currently, the site does not fall into one of these categories; therefore the site is not subject to the RSRs. If the site was placed into a CT environmental regulatory program, then compliance with the RSRs would be required.

Regardless of whether site remediation is required per the RSRs, the need for, and implementation of, remediation at the site would likely be based on the procedures and criteria presented in the RSRs as these regulations have established a baseline standard of care for remediation sites in the State of Connecticut. As such, the following presents a likely remediation scenario for the site. It is also based on remediation procedures being conducted by the City on an adjacent parcel – the HUB site. Regarding the geological and chemical conditions identified at both sites, the sites exhibit similar conditions. Further, both sites are part of the same redevelopment project.

Remediation Scenario: Engineered Control cap for soil impacted with contaminants that exceed only the direct exposure criteria

- Install a one foot thick clean fill cap on top of a demarcation barrier across the entire site.
- This would include excavation and off-site disposal of the top one foot of existing material.

- This approach would also need CTDEEP approval and assumes all PMC impacts are addressed through remedial confirmation testing and/or hot spot testing.
- Assumes institutional controls (ELUR) for an engineered control, and development and implementation of a maintenance plan for the cap will be performed by the City. Also assumes costs and implementation of the maintenance and groundwater monitoring plans and reporting will be incorporated into the overall downtown redevelopment project.
- Planning level cost estimate to perform this remediation scenario is \$500,000.
- Groundwater at the site contains concentrations of PAHs and metals above SWPC. As surface water is not present within 150-feet of the property boundary and SWPC will likely not exceed at the point of compliance; therefore, remediation of groundwater is not included in this scenario.

It is estimated that the soil remediation and cap installation can be completed within three to six months. This assumes continuous work from the start date. Additional considerations which may alter the schedule include integration of remediation work with redevelopment plans regarding the final capping plans (sidewalks, parking areas, grass/vegetated cover).

As a final note, remediation projects are commonly completed as part of site redevelopment activities. When remediation is integrated with redevelopment, typically efficiencies are realized that results in cost savings for environmental-related activities. An example is construction of a building or a parking lot, which can render the contaminated soil environmentally isolated and inaccessible, respectively and meet the requirements of an environmental cap under the RSRs. Since specific site redevelopment plans are unknown at this time, it is not known if the above scenario will be implemented. However, it is a reasonable approach based on the current project understanding.

8.0 References

City of Meriden, 2012 Water Quality Report, May 14, 2013,
<http://www.cityofmeriden.org/FormRepository/processDownload.asp?ID=340>

Phase I Environmental Site Assessment, Parking Lot, 177 State Street Meriden, Connecticut, Lenard Engineering Inc, August 2013.

Phase II Environmental Site Assessment, Parking Lot, 177 State Street Meriden, Connecticut, AECOM, November 2013.

Water Supply Well Receptor Survey Guidance Document, Connecticut Department of Environmental Protection, September 2009.
http://www.ct.gov/deep/lib/deep/site_clean_up/guidance/site_characterization/water_supply_well_receptor_survey_guidance.pdf

Tables

Table 1
Soil Summary Table
Parking Lot
177 State Street
Meriden, Connecticut

Parameter	RSR DEC		RSR PMC	Sampling Location									
	I/C DEC	RES DEC	GBPMC	SB-100 (6-8)	SB-100 (10-12)†	SB-101 (4-6)	SB-101 (8-10)†	SB-102 (4-6)	SB-102 (10-12)†	SB-103 (2-4)	SB-103 (10-12)†	SB-104 (4-6)	SB-104 (6-8)
Sample Location				SB84992-01	SB84992-02	SB84992-05	SB84992-06	SB84992-07	SB84992-08	SB84992-09	SB84992-10	SB84992-03	SB84992-04
Laboratory ID				2/19/2014	2/19/2014	2/19/2014	2/19/2014	2/19/2014	2/19/2014	2/19/2014	2/19/2014	2/19/2014	2/19/2014
Sample Date													
ETPH (mg/Kg)													
Total Petroleum Hydrocarbons	2500	500	2500	152	539	149	58.7	616	261	107	<31.0	285	238
Percent Solids													
% Solids	~	~	~	72.3	91.4	91.2	74.3	87.8	75.9	90.4	83.3	88.7	74.9
Metals (mg/Kg)													
Antimony	8200	27	~	78.1	<5.22	<4.80	<6.24	NT	NT	<5.21	<5.55	6.42	9.73
Arsenic	10	10	~	NT	NT	3.43	2.75	NT	NT	3.15	2.61	5.39	9.24
Lead	1000	500	~	NT	NT	164	27.5	408	458	65.5	9.85	335	235
VOCs (mg/Kg)													
Total VOCs	Various	Various	Various	NT	NT	NT	NT	NT	NT	ND	NT	NT	NT
SVOCs (µg/Kg)													
Anthracene	~	~	400000	<229	<181	<182	<221	307	506	248	<199	205	<223
Benzo (a) anthracene	7800	1000	1000	<229	<181	504	<221	1160	1980	977	<199	1520	900
Benzo (a) pyrene	1000	1000	1000	<229	<181	658	<221	1230	1780	948	<199	1540	946
Benzo (b) fluoranthene	7800	1000	1000	<229	<181	585	<221	1170	2200	931	<199	1540	852
Benzo (g,h,i) perylene	~	~	~	<229	<181	334	<221	556	767	568	<199	753	488
Benzo (k) fluoranthene	78000	8400	1000	<229	<181	595	<221	892	899	763	<199	807	679
Chrysene	~	~	~	<229	<181	511	<221	1180	1810	1040	<199	1490	860
Dibenzo (a,h) anthracene	~	~	~	<229	<181	<182	<221	<188	269	189	<199	248	<223
Fluoranthene	2500000	1000000	56000	<229	<181	768	<221	2210	4130	2620	<199	2270	1450
Indeno (1,2,3-cd) pyrene	~	~	~	<229	<181	359	<221	536	906	645	<199	849	610
Phenanthrene	2500000	1000000	40000	<229	<181	277	<221	1460	1360	1660	<199	522	585
Pyrene	2500000	1000000	40000	<229	<181	805	<221	1740	2730	1760	<199	1870	1090

NOTES:

- Results compared to 1996 Remediation Standard Regulations (RSR) Criteria
- An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
- NT = Not tested.
- ~ = No Standard available
- For soil samples shaded values exceed the RSR Residential Direct Exposure Criteria (DEC) for the parameter.
- For soil samples shaded values exceed the RSR I/C Direct Exposure Criteria (DEC) for the parameter.
- For soil samples bolded values exceed the GM Pollutant Mobility Criteria (PMC) for the parameter.
- RSR criteria are in the same units as the analyte.
- Only those analytes which were detected above laboratory reporting limits are shown.
- ND = not detected above laboratory reporting limits.
- † = nSample collected from below the water table; therefore the PMC does not apply.

Table 2
Groundwater Summary Table
Parking Lot
177 State Street
Meriden, Connecticut

Parameter	SWPC	Sampling Location	
Sample Location		MW-SB-100	MW-SB-102
Laboratory ID		SB84874-01	SB84874-02
Sample Date		2/19/2014	2/19/2014
CTDEP ETPH (mg/L)			
Total Petroleum Hydrocarbons	~	<0.2	<0.2
Mercury (mg/L)			
Mercury	0.0004	<0.00020	0.00090
Metals (mg/L)			
Arsenic	0.004	<0.0040	0.0448
Barium	~	0.304	0.379
Lead	0.013	0.0132	0.0544
PAHs (µg/L)			
Benzo (a) anthracene	0.3	<0.050	0.153
Benzo (a) pyrene	0.3	<0.050	0.206
Benzo (b) fluoranthene	0.3	<0.050	0.147
Benzo (g,h,i) perylene	~	<0.050	0.094
Benzo (k) fluoranthene	0.3	<0.050	0.139
Chrysene	~	<0.050	0.155
Fluoranthene	3700	<0.050	0.295
Indeno (1,2,3-cd) pyrene	~	<0.050	0.164
Phenanthrene	0.077	<0.050	0.105
Pyrene	110000	<0.050	0.294

NOTES:

1. Results compared to 1996 Remediation Standard Regulations (RSR) Criteria
2. ~ = No Standard available
3. RSR criteria are in the same units as the analyte.
4. SWPC = surface water protection criteria
5. For groundwater samples shaded values exceed the RSR SWPC for the parameter.
6. Only those analytes which were detected above laboratory reporting limits are shown.

**Table 3
CSM Table
177 State Street
Parking Lot
Meriden, CT**

REC Number and Name	REC Description	Soil Sampling Locations	Groundwater Sampling Locations	COCs Investigated	Deepest Sample Collected	Depth to Groundwater	RSR Compliance Issues	Soil Analytical results	Groundwater Monitoring Results	Status	Data Gaps
AOC-1 - Former Commercial/Industrial Property Use	Between the later 1800's and 1963 the southwest portion of the site was occupied by a newspaper publishing company, an automotive service and accessory business, a paint shop, a carpentry shop, a blacksmith shop, and a carriage works business.	SB-1(6-8), SB-2(4-6), SB-3(2-4), SB-4(10-12), SB-101(4-6), SB-101(8-10), SB-102(4-6), SB-102(10-12), SB-103(2-4), SB-103(10-12).	SB/TW-1, SB-TW-2, MW-SB-100, MW-SB-102	VOCs	10'-12'	8'	ETPH, PAHs, Pb, As, Hg	ETPH detected above R DEC in the unsaturated zone AOC-1. Pb was detected in the saturated and unsaturated zone above the R DEC in the northern and southern portion of AOC-1. PAHs were detected above I/C DEC, R DEC, and GB PMC in the southern and western portion of REC-1. PCBs not detected above laboratory reporting limits. VOCs were detected above laboratory reporting limits but below the R DEC, I/C DEC and GB PMC.	PAHs, As, Pb and Hg detected above SWPC. VOCs and PCBs not detected above laboratory reporting limits. ETPH detected; however there are no RSR criteria for ETPH in groundwater.	ETPH, PAHs, As, Pb present above RSR criteria. Based on the groundwater analytical results phenanthrene, arsenic, lead, and mercury are present above SWPC in groundwater at the likely upgradient portion of the property. Likely downgradient well, SB-MW-100 did not contain any COCs above SWPC. Additionally, surface water is not present within 150-feet of the property boundary; therefore, SWPC will likely not exceed at the point of compliance.	Phase III ESA provided sufficient information for preliminary planning of future property use and preliminary remedial design.
				SVOCs/PAHs							
				PCBs							
				Metals							
				ETPH							
AOC-2 - Urban Fill	Urban Fill was observed in soil borings advanced during the Phase II ESA and Phase III ESA outside the footprint of AOC-1 and along the western property line at depths from grade to approximately 5 feet below grade.	SB-1(6-8), SB-100(6-8), SB-100(8-10), SB-101(4-6), SB-101(8-10), SB-102(4-6), SB-102(10-12), SB-104(4-6), SB-104(6-8)	SB/TW-1, SB-TW-2, MW-SB-100, MW-SB-102	VOCs	10'-12'	8'	ETPH, PAHs, As, Pb, Sb, Hg	ETPH detected above R DEC with AOC-2 and soils deeper than the limits of AOC-2. Pb and Sb was detected above the R DEC in the southern portion of AOC-2. PAHs were detected above I/C DEC, R DEC, and GB PMC in AOC-2 and in soils deeper than the limits of AOC-2. PCBs not detected above laboratory reporting limits. VOCs were detected above laboratory reporting limits but below the R DEC, I/C DEC and GB PMC.	PAHs, As, Pb and Hg detected above SWPC. VOCs and PCBs not detected above laboratory reporting limits. ETPH detected; however there are no RSR criteria for ETPH in groundwater.	ETPH, PAHs, Pb, Sb present above RSR criteria in urban fill and in soils below urban fill. Based on the groundwater analytical results phenanthrene, arsenic, lead, and mercury are present above SWPC in groundwater at the likely upgradient portion of the property. Likely, downgradient well, SB-MW-100 did not contain any COCs above SWPC. Additionally, surface water is not present within 150-feet of the property boundary; therefore, SWPC will likely not exceed at the point of compliance.	The Phase III ESA provided sufficient information for preliminary planning of future property use and preliminary remedial design.
				SVOCs/PAHs							
				PCBs							
				Metals							
				ETPH							

Notes:

Abbreviations:

SVOCs - Semi-Volatile Organic Compounds

PAHs - Polycyclic aromatic hydrocarbons

COCs - Constituents of Concern

CSM - Conceptual Site Model

GB PMC - GB Ground Water Classification Pollutant Mobility Criteria

I/C DEC - Industrial/Commercial Direct Exposure Criteria

I/VC - Industrial/Commercial Volatilization Criteria

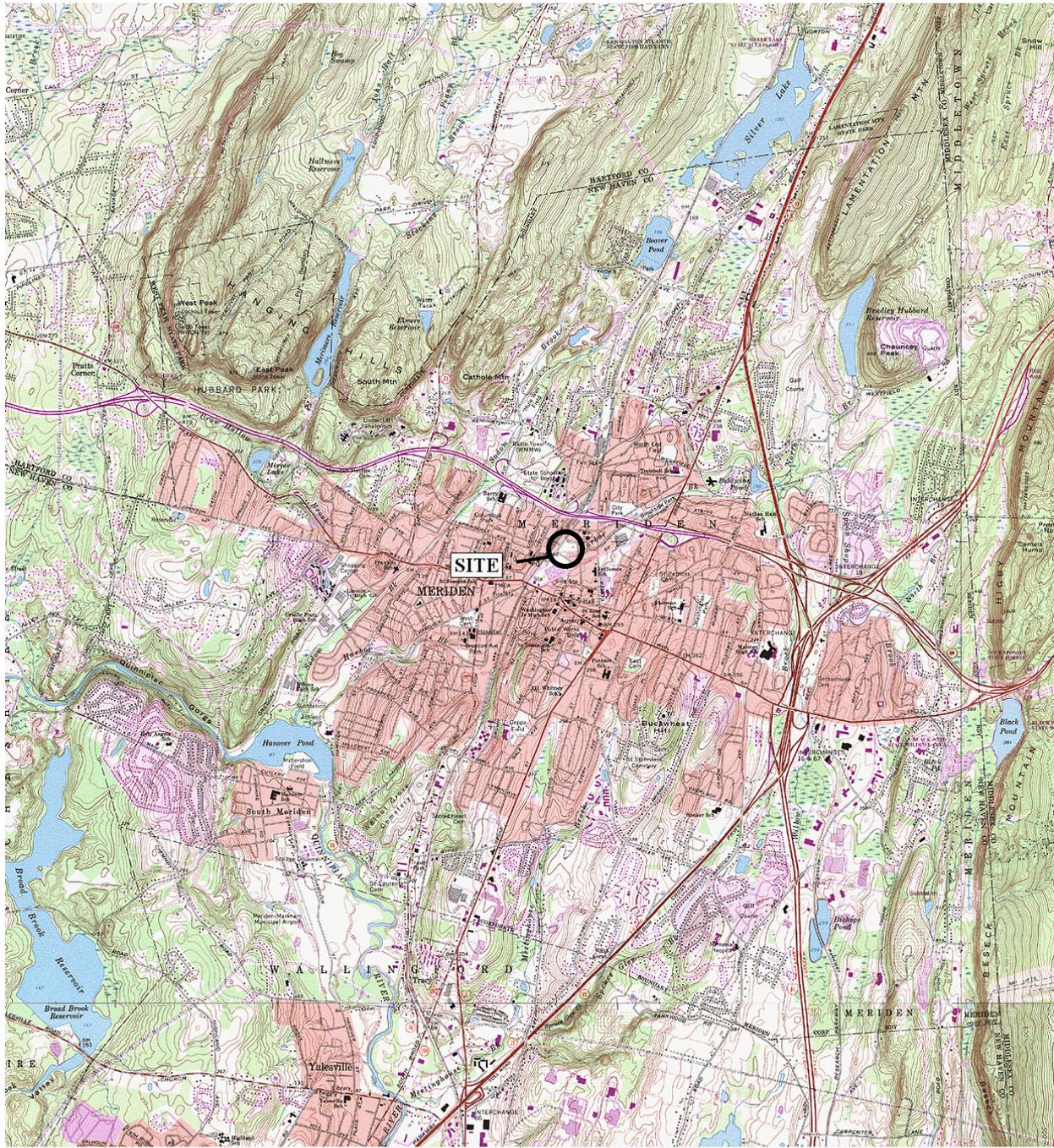
R VC - Residential Volatilization Criteria

PCBs - Polychlorinated Biphenyls

SWPC - Surface Water Protection Criteria

VOCs - Volatile Organic Compounds

Figures



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Figure 1

Locus Plan
Parking Lot

177 State Street
Meriden, Connecticut



Figure 2
 Site Plan
 Parking Lot
 177 State Street
 Meriden, Connecticut



Attachment A
Soil Boring Logs



<i>Client:</i> Meriden	BORING ID: SB-100	
<i>Project Number:</i> 60316060		
<i>Site Location:</i> Parking Lot		
<i>Site Address:</i> 177 State Street Meriden, CT		
<i>Drilling Method:</i> Vac + Geo		
<i>Sample Type(s):</i> macrocore	<i>Boring Diameter:</i>	<i>Screened Interval:</i> NA

<i>Weather:</i> Teens	<i>Logged By:</i> S. Gish	<i>Date Started:</i> 02/19/14	<i>Depth of Boring:</i> 12
<i>Drilling Contractor:</i> ADT	<i>Ground Elevation:</i> NA	<i>Date Finished:</i> 02/19/14	<i>Water Level:</i> 6.0

Depth (ft)	Sample Depth (ft)	Penetration/Recovery (inches)	Headspace (ppm)	U.S.C.S	MATERIALS	Lab Sample ID
1	0-4		0.0		Dark brown gravel fine to medium	
2						
3						
4	4-5		0.0		Urban Fill. Orange, blue, gray, reddish brown with black gravel (small)	SB100(6-8)
5						
6	6-8				Brown Fine Gravel	
7						
8	8-12		0.0	SM	Dark Brown/Black Clay	SB100(8-10)
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20					Water @ 6'	

NOTES:



<i>Client:</i> Meriden	BORING ID: SB-101	
<i>Project Number:</i> 60316060		
<i>Site Location:</i> Parking Lot		
<i>Site Address:</i> 177 State Street, Meriden, CT		
<i>Drilling Method:</i> Vac + Geo		
<i>Sample Type(s):</i> macrocore	<i>Boring Diameter:</i>	<i>Screened Interval:</i> NA

<i>Weather:</i> Teens	<i>Logged By:</i> S. Gish	<i>Date Started:</i> 02/19/12	<i>Depth of Boring:</i> 10
<i>Drilling Contractor:</i> ADT	<i>Ground Elevation:</i> NA	<i>Date Finished:</i> 02/19/12	<i>Water Level:</i>

Depth (ft)	Sample Depth (ft)	Penetration/Recovery (inches)	Headspace (ppm)	U.S.C.S	MATERIALS	Lab Sample ID
1	1-2		0.0		Gray Gravel	
2	2-4		0.0		Brown Gravel Fine	
3						
4	4	24/24	0.0		Black Gravel	SB101(4-6)
5	5-6		0.0		Urban Fill - Brick, Fine-Medium Gravel	
6	6-9		0.0		Dark Brown Gravel	
7						
8		24/24				
9	9-10		0.0		Dark Brown Clay	SB101(8-10)
10						
11						
12						
13						
14						
15						
16	16-20	48/12				
17						
18						
19						
20						

NOTES:



<i>Client:</i> Meriden	BORING ID: SB-102	
<i>Project Number:</i> 60316060		
<i>Site Location:</i> Parking Lot		
<i>Site Address:</i> 177 State Street, Meriden, CT		
<i>Drilling Method:</i> Vac + Geo		
<i>Sample Type(s):</i> macrocore	<i>Boring Diameter:</i>	<i>Screened Interval:</i> NA

<i>Weather:</i> Teens	<i>Logged By:</i> S. Gish	<i>Date Started:</i> 02/19/14	<i>Depth of Boring:</i> 12
<i>Drilling Contractor:</i> ADT	<i>Ground Elevation:</i> NA	<i>Date Finished:</i> 02/19/14	<i>Water Level:</i> 9.5

Depth (ft)	Sample Depth (ft)	Penetration/Recovery (inches)	Headspace (ppm)	U.S.C.S	MATERIALS	Lab Sample ID
1	0-5		0.0		Reddish brown till with small to medium cobble Hand auger down to 5'	
2						
3						
4						
5	5-7	48/40	0.0		Fill Material - Dark brown till	
6						
7	7-9	48/32	0.0		Brown Gravel Fine to medium	
8						
9	9-10		0.0		At 9' Clay. At 9-10' Brown Fine Gravel	
10	10-12		0.0		Tan Fine Gravel	SB-102(10-12)
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

NOTES:

Soil: ETPH+PAH+Lead
 Water: PAH, ETPH, RCRA 8 Filtered + Unfiltered



<i>Client:</i> Meriden	BORING ID: SB-103	
<i>Project Number:</i> 60316060		
<i>Site Location:</i> Parking Lot		
<i>Site Address:</i> 177 State Street, Meriden, CT		
<i>Drilling Method:</i> Vac + Geo		
<i>Sample Type(s):</i> macrocore	<i>Boring Diameter:</i>	<i>Screened Interval:</i> NA

<i>Weather:</i> Teens	<i>Logged By:</i> S. Gish	<i>Date Started:</i> 02/19/14	<i>Depth of Boring:</i> 12
<i>Drilling Contractor:</i> ADT	<i>Ground Elevation:</i> NA	<i>Date Finished:</i> 02/19/14	<i>Water Level:</i> 9.5

Depth (ft)	Sample Depth (ft)	Penetration/Recovery (inches)	Headspace (ppm)	U.S.C.S	MATERIALS	Lab Sample ID
1	0-5				Reddish brown till with small gravel Hand auger down to 4'	
2						
3	5-7	48/36	2.8		Urban fill: Bick and fine gravel	
4						
5						
6	7-10		2.8		Brown Gravel Fine	
7						
8						
9						
10	10-12	24/20			Red Brown Gravel	SB-103(10-12)
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

NOTES:



<i>Client:</i> Meriden	BORING ID: SB-104	
<i>Project Number:</i> 60316060		
<i>Site Location:</i> Parking Lot		
<i>Site Address:</i> 177 State Street, Meriden, CT		
<i>Drilling Method:</i> Vac + Geo		
<i>Sample Type(s):</i> macrocore	<i>Boring Diameter:</i>	<i>Screened Interval:</i> NA

<i>Weather:</i> Teens	<i>Logged By:</i> S. Gish	<i>Date Started:</i> 02/19/14	<i>Depth of Boring:</i> 10
<i>Drilling Contractor:</i> ADT	<i>Ground Elevation:</i> NA	<i>Date Finished:</i> 02/19/14	<i>Water Level:</i> 8.0

Depth (ft)	Sample Depth (ft)	Penetration/Recovery (inches)	Headspace (ppm)	U.S.C.S	MATERIALS	Lab Sample ID
1	0-6		0.0		Fill: Brown Gravel Small to Medium	
2						
3						
4	6-7	24/20	0.0		Rock	SB-104(4-6)
5						
6	7-10		0.0		Dark Brown Gravel Fine to Small	SB-104(6-8)
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

NOTES:

**Attachment B
Soil and Groundwater
Analytical Data**

Report Date:
04-Mar-14 14:27

- Final Report
- Re-Issued Report
- Revised Report



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY
Laboratory Report

AECOM Environment
500 Enterprise Drive, Suite 1A
Rocky Hill, CT 06067
Attn: Julie Williams

Project: 177 State St - Meriden, CT
Project #: 60316060

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB84874-01	MW-SB-100	Ground Water	19-Feb-14 10:30	20-Feb-14 14:55
SB84874-02	MW-SB-102	Ground Water	19-Feb-14 14:30	20-Feb-14 14:55

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435



Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 20 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, NJ-MA012, PA-68-04426 and FL-E87936).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

**Reasonable Confidence Protocols
Laboratory Analysis
QA/QC Certification Form**

Laboratory Name: Spectrum Analytical, Inc.

Client: AECOM Environment - Rocky Hill, CT

Project Location: 177 State St - Meriden, CT

Project Number: 60316060

Sampling Date(s):

Laboratory Sample ID(s):

2/19/2014

SB84874-01 through SB84874-02

RCP Methods Used:

CT ETPH
EPA 200.7/3005A/6010
EPA 245.1/7470A
SW846 6010C
SW846 8270D SIM

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	✓ Yes	No
1A	Were the method specified preservation and holding time requirements met?	Yes	✓ No
1B	<i>VPH and EPH methods only:</i> Was the VPH or EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	Yes	No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	✓ Yes	No
3	Were samples received at an appropriate temperature?	✓ Yes	No
4	Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved?	✓ Yes	No
5	a) Were reporting limits specified or referenced on the chain-of-custody? b) Were these reporting limits met?	Yes Yes	✓ No No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes	✓ No
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	✓ Yes	No

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for obtaining the information contained in this analytical report, such information is accurate and complete.


 Nicole Leja
 Laboratory Director
 Date: 3/4/2014

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

The samples were received 0.7 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

Required site-specific Matrix Spike/Matrix Spike Duplicate (MS/MSD) must be requested by the client and sufficient sample must be submitted for the additional analyses. Samples submitted with insufficient volume/weight will not be analyzed for site specific MS/MSD, however a batch MS/MSD may be analyzed from a non-site specific sample.

CTDEP has published a list of analytical methods which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of decisions being made utilizing the Reasonable Confidence Protocol (RCP). "Reasonable Confidence" can be established only for those methods published by the CTDEP in the RCP guidelines. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

The CTDEP RCP requests that "all non-detects and all results below the reporting limit are reported as ND (Not Detected at the Specified Reporting Limit)". All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

If no reporting limits were specified or referenced on the chain-of-custody the laboratory's practical quantitation limits were applied.

For this work order, the reporting limits have not been referenced or specified.

Effective 8/8/2012, the reporting limit for CT ETPH has been raised as proposed by the CT DEP from 0.100 mg/L to 0.200 mg/L for aqueous samples. This Reporting Limit is still lower than the CT DEP proposed Reporting Limit of 0.250 mg/L.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8270D SIM

Calibration:

1402021

Analyte quantified by quadratic equation type calibration.

- Benzo (a) pyrene
- Indeno (1,2,3-cd) pyrene

This affected the following samples:

- 1404234-BLK2
- 1404234-BS2
- 1404234-BSD2
- MW-SB-100
- MW-SB-102
- S401398-ICV1
- S402071-CCV1
- S402170-CCV1

Sample Acceptance Check Form

Client: AECOM Environment - Rocky Hill, CT
 Project: 177 State St - Meriden, CT / 60316060
 Work Order: SB84874
 Sample(s) received on: 2/20/2014
 Received by: Allison Edens

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
1. Were custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Were custody seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were samples cooled on ice upon transfer to laboratory representative?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Were samples refrigerated upon transfer to laboratory representative?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Were sample containers received intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were samples accompanied by a Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Did sample container labels agree with Chain of Custody document?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Were samples received within method-specific holding times?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sample Identification

MW-SB-100
SB84874-01

Client Project #
60316060

Matrix
Ground Water

Collection Date/Time
19-Feb-14 10:30

Received
20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
---------	------------	--------	------	-------	------	-----	----------	-------------	----------	----------	---------	-------	-------

Semivolatile Organic Compounds by GCMS

SVOCs by SIM

Prepared by method SW846 3510C

83-32-9	Acenaphthene	< 0.050		µg/l	0.050	0.007	1	SW846 8270D SIM	26-Feb-14	28-Feb-14	ML/	1404234	X
208-96-8	Acenaphthylene	< 0.050		µg/l	0.050	0.013	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 0.050		µg/l	0.050	0.010	1	"	"	"	"	"	X
120-12-7	Anthracene	< 0.050		µg/l	0.050	0.013	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	< 0.050		µg/l	0.050	0.036	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	< 0.050		µg/l	0.050	0.036	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	< 0.050		µg/l	0.050	0.031	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 0.050		µg/l	0.050	0.026	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	< 0.050		µg/l	0.050	0.026	1	"	"	"	"	"	X
218-01-9	Chrysene	< 0.050		µg/l	0.050	0.022	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 0.050		µg/l	0.050	0.030	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 0.050		µg/l	0.050	0.017	1	"	"	"	"	"	X
86-73-7	Fluorene	< 0.050		µg/l	0.050	0.012	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 0.050		µg/l	0.050	0.029	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 0.050		µg/l	0.050	0.008	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 0.050		µg/l	0.050	0.016	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 0.050		µg/l	0.050	0.019	1	"	"	"	"	"	X
129-00-0	Pyrene	< 0.050		µg/l	0.050	0.017	1	"	"	"	"	"	X

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	55			30-130 %			"	"	"	"	"	
1718-51-0	Terphenyl-d14	73			30-130 %			"	"	"	"	"	
205440-82-0	Benzo (e) pyrene-d12	62			30-130 %			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Extractable Total Petroleum Hydrocarbons

Prepared by method SW846 3510C

8006-61-9	Gasoline	< 0.2		mg/l	0.2	0.01	1	CT ETPH	25-Feb-14	26-Feb-14	SEP	1404116	
68476-30-2	Fuel Oil #2	< 0.2		mg/l	0.2	0.02	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 0.2		mg/l	0.2	0.02	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 0.2		mg/l	0.2	0.05	1	"	"	"	"	"	
M09800000	Motor Oil	< 0.2		mg/l	0.2	0.02	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 0.2		mg/l	0.2	0.05	1	"	"	"	"	"	
	Unidentified	< 0.2		mg/l	0.2	0.05	1	"	"	"	"	"	
	Other Oil	< 0.2		mg/l	0.2	0.02	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	< 0.2		mg/l	0.2	0.05	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	< 0.2		mg/l	0.2	0.05	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	68			50-150 %			"	"	"	"	"	
-----------	--------------------	----	--	--	----------	--	--	---	---	---	---	---	--

Total Metals by EPA 200/6000 Series Methods

	Preservation	Field Preserved		N/A			1	EPA 200/6000 methods			LNB	1403964	
--	--------------	-----------------	--	-----	--	--	---	----------------------	--	--	-----	---------	--

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0009	1	SW846 6010C	27-Feb-14	01-Mar-14	arf	1404370	X
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0018	1	"	"	"	"	"	X

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Sample Identification

MW-SB-100

SB84874-01

Client Project #

60316060

Matrix

Ground Water

Collection Date/Time

19-Feb-14 10:30

Received

20-Feb-14

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Total Metals by EPA 6000/7000 Series Methods													
7440-39-3	Barium	0.304		mg/l	0.0050	0.0007	1	SW846 6010C	27-Feb-14	01-Mar-14	arf	1404370	X
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0008	1	"	"	"	"	"	X
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0009	1	"	"	"	"	"	X
7439-92-1	Lead	0.0132		mg/l	0.0075	0.0020	1	"	"	"	"	"	X
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0030	1	"	"	"	"	"	X
Total Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00008	1	EPA 245.1/7470A	27-Feb-14	27-Feb-14	LR	1404371	X
Soluble Metals by EPA 200/6000 Series Methods													
	Filtration	Lab Filtered		N/A			1	EPA 200.7/3005A/6010	20-Feb-14 18:45	20-Feb-14 18:45	CPA	1403819	
Soluble Metals by EPA 6000/7000 Series Methods													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0009	1	SW846 6010C	27-Feb-14	01-Mar-14	arf	1404372	X
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0018	1	"	"	"	"	"	X
7440-39-3	Barium	0.279		mg/l	0.0050	0.0007	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0008	1	"	"	"	"	"	X
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0009	1	"	"	"	"	"	X
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0020	1	"	"	"	"	"	X
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0030	1	"	"	"	"	"	X
Soluble Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00008	1	EPA 245.1/7470A	27-Feb-14	28-Feb-14	LR	1404373	X

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Sample Identification

MW-SB-102
SB84874-02

Client Project #
60316060

Matrix
Ground Water

Collection Date/Time
19-Feb-14 14:30

Received
20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

SVOCs by SIM

Prepared by method SW846 3510C

83-32-9	Acenaphthene	< 0.050		µg/l	0.050	0.007	1	SW846 8270D SIM	26-Feb-14	28-Feb-14	ML/	1404234	X
208-96-8	Acenaphthylene	< 0.050		µg/l	0.050	0.013	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 0.050		µg/l	0.050	0.010	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.050		µg/l	0.050	0.013	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	0.153		µg/l	0.050	0.036	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	0.206		µg/l	0.050	0.036	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	0.147		µg/l	0.050	0.031	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	0.094		µg/l	0.050	0.026	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	0.139		µg/l	0.050	0.026	1	"	"	"	"	"	X
218-01-9	Chrysene	0.155		µg/l	0.050	0.022	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 0.050		µg/l	0.050	0.030	1	"	"	"	"	"	X
206-44-0	Fluoranthene	0.295		µg/l	0.050	0.017	1	"	"	"	"	"	X
86-73-7	Fluorene	< 0.050		µg/l	0.050	0.012	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	0.164		µg/l	0.050	0.029	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 0.050		µg/l	0.050	0.008	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.050		µg/l	0.050	0.016	1	"	"	"	"	"	X
85-01-8	Phenanthrene	0.105		µg/l	0.050	0.019	1	"	"	"	"	"	X
129-00-0	Pyrene	0.294		µg/l	0.050	0.017	1	"	"	"	"	"	X

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	66			30-130 %			"	"	"	"	"	
1718-51-0	Terphenyl-d14	78			30-130 %			"	"	"	"	"	
205440-82-0	Benzo (e) pyrene-d12	70			30-130 %			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Extractable Total Petroleum Hydrocarbons

Prepared by method SW846 3510C

8006-61-9	Gasoline	< 0.2		mg/l	0.2	0.01	1	CT ETPH	25-Feb-14	26-Feb-14	SEP	1404116	
68476-30-2	Fuel Oil #2	< 0.2		mg/l	0.2	0.02	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 0.2		mg/l	0.2	0.02	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 0.2		mg/l	0.2	0.05	1	"	"	"	"	"	
M09800000	Motor Oil	< 0.2		mg/l	0.2	0.02	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 0.2		mg/l	0.2	0.05	1	"	"	"	"	"	
	Unidentified	< 0.2		mg/l	0.2	0.05	1	"	"	"	"	"	
	Other Oil	< 0.2		mg/l	0.2	0.02	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	< 0.2		mg/l	0.2	0.05	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	< 0.2		mg/l	0.2	0.05	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	71			50-150 %			"	"	"	"	"	
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Total Metals by EPA 200/6000 Series Methods

	Preservation	Field Preserved		N/A			1	EPA 200/6000 methods			LNB	1403964	
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Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0009	1	SW846 6010C	27-Feb-14	01-Mar-14	arf	1404370	X
7440-38-2	Arsenic	0.240		mg/l	0.0040	0.0018	1	"	"	"	"	"	X

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Sample Identification

MW-SB-102

SB84874-02

Client Project #

60316060

Matrix

Ground Water

Collection Date/Time

19-Feb-14 14:30

Received

20-Feb-14

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Total Metals by EPA 6000/7000 Series Methods													
7440-39-3	Barium	0.379		mg/l	0.0050	0.0007	1	SW846 6010C	27-Feb-14	01-Mar-14	arf	1404370	X
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0008	1	"	"	"	"	"	X
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0009	1	"	"	"	"	"	X
7439-92-1	Lead	0.0544		mg/l	0.0075	0.0020	1	"	"	"	"	"	X
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0030	1	"	"	"	"	"	X
Total Metals by EPA 200 Series Methods													
7439-97-6	Mercury	0.00090		mg/l	0.00020	0.00008	1	EPA 245.1/7470A	27-Feb-14	27-Feb-14	LR	1404371	X
Soluble Metals by EPA 200/6000 Series Methods													
	Filtration	Lab Filtered		N/A			1	EPA 200.7/3005A/6010	20-Feb-14 18:45	20-Feb-14 18:45	CPA	1403819	
Soluble Metals by EPA 6000/7000 Series Methods													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0009	1	SW846 6010C	27-Feb-14	01-Mar-14	arf	1404372	X
7440-38-2	Arsenic	0.0448		mg/l	0.0040	0.0018	1	"	"	"	"	"	X
7440-39-3	Barium	0.209		mg/l	0.0050	0.0007	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0008	1	"	"	"	"	"	X
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0009	1	"	"	"	"	"	X
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0020	1	"	"	"	"	"	X
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0030	1	"	"	"	"	"	X
Soluble Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00008	1	EPA 245.1/7470A	27-Feb-14	28-Feb-14	LR	1404373	X

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404234 - SW846 3510C										
Blank (1404234-BLK2)					<u>Prepared & Analyzed: 26-Feb-14</u>					
Acenaphthene	< 0.050		µg/l	0.050						
Acenaphthylene	< 0.050		µg/l	0.050						
1-Methylnaphthalene	< 0.050		µg/l	0.050						
Anthracene	< 0.050		µg/l	0.050						
Benzo (a) anthracene	< 0.050		µg/l	0.050						
Benzo (a) pyrene	< 0.050		µg/l	0.050						
Benzo (b) fluoranthene	< 0.050		µg/l	0.050						
Benzo (g,h,i) perylene	< 0.050		µg/l	0.050						
Benzo (k) fluoranthene	< 0.050		µg/l	0.050						
Chrysene	< 0.050		µg/l	0.050						
Dibenzo (a,h) anthracene	< 0.050		µg/l	0.050						
Fluoranthene	< 0.050		µg/l	0.050						
Fluorene	< 0.050		µg/l	0.050						
Indeno (1,2,3-cd) pyrene	< 0.050		µg/l	0.050						
2-Methylnaphthalene	< 0.050		µg/l	0.050						
Naphthalene	< 0.050		µg/l	0.050						
Phenanthrene	< 0.050		µg/l	0.050						
Pyrene	< 0.050		µg/l	0.050						
<i>Surrogate: 2-Fluorobiphenyl</i>	28.0		µg/l		50.0		56	30-130		
<i>Surrogate: Terphenyl-d14</i>	36.6		µg/l		50.0		73	30-130		
<i>Surrogate: Benzo (e) pyrene-d12</i>	0.640		µg/l		1.00		64	30-130		
LCS (1404234-BS2)					<u>Prepared & Analyzed: 26-Feb-14</u>					
Acenaphthene	0.534		µg/l	0.050	1.00		53	40-140		
Acenaphthylene	0.521		µg/l	0.050	1.00		52	40-140		
1-Methylnaphthalene	0.482		µg/l	0.050	1.00		48	40-140		
Anthracene	0.501		µg/l	0.050	1.00		50	40-140		
Benzo (a) anthracene	0.557		µg/l	0.050	1.00		56	40-140		
Benzo (a) pyrene	0.704		µg/l	0.050	1.00		70	40-140		
Benzo (b) fluoranthene	0.609		µg/l	0.050	1.00		61	40-140		
Benzo (g,h,i) perylene	0.599		µg/l	0.050	1.00		60	40-140		
Benzo (k) fluoranthene	0.678		µg/l	0.050	1.00		68	40-140		
Chrysene	0.575		µg/l	0.050	1.00		58	40-140		
Dibenzo (a,h) anthracene	0.694		µg/l	0.050	1.00		69	40-140		
Fluoranthene	0.534		µg/l	0.050	1.00		53	40-140		
Fluorene	0.541		µg/l	0.050	1.00		54	40-140		
Indeno (1,2,3-cd) pyrene	0.720		µg/l	0.050	1.00		72	40-140		
2-Methylnaphthalene	0.490		µg/l	0.050	1.00		49	40-140		
Naphthalene	0.468		µg/l	0.050	1.00		47	40-140		
Phenanthrene	0.457		µg/l	0.050	1.00		46	40-140		
Pyrene	0.549		µg/l	0.050	1.00		55	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	29.6		µg/l		50.0		59	30-130		
<i>Surrogate: Terphenyl-d14</i>	39.1		µg/l		50.0		78	30-130		
<i>Surrogate: Benzo (e) pyrene-d12</i>	0.720		µg/l		1.00		72	30-130		
LCS Dup (1404234-BSD2)					<u>Prepared & Analyzed: 26-Feb-14</u>					
Acenaphthene	0.648		µg/l	0.050	1.00		65	40-140	19	20
Acenaphthylene	0.606		µg/l	0.050	1.00		61	40-140	15	20
1-Methylnaphthalene	0.545		µg/l	0.050	1.00		54	40-140	12	20
Anthracene	0.505		µg/l	0.050	1.00		50	40-140	0.8	20
Benzo (a) anthracene	0.525		µg/l	0.050	1.00		52	40-140	6	20
Benzo (a) pyrene	0.659		µg/l	0.050	1.00		66	40-140	7	20
Benzo (b) fluoranthene	0.559		µg/l	0.050	1.00		56	40-140	9	20

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404234 - SW846 3510C										
<u>LCS Dup (1404234-BSD2)</u>					<u>Prepared & Analyzed: 26-Feb-14</u>					
Benzo (g,h,i) perylene	0.571		µg/l	0.050	1.00		57	40-140	5	20
Benzo (k) fluoranthene	0.687		µg/l	0.050	1.00		69	40-140	1	20
Chrysene	0.598		µg/l	0.050	1.00		60	40-140	4	20
Dibenzo (a,h) anthracene	0.640		µg/l	0.050	1.00		64	40-140	8	20
Fluoranthene	0.543		µg/l	0.050	1.00		54	40-140	2	20
Fluorene	0.649		µg/l	0.050	1.00		65	40-140	18	20
Indeno (1,2,3-cd) pyrene	0.638		µg/l	0.050	1.00		64	40-140	12	20
2-Methylnaphthalene	0.499		µg/l	0.050	1.00		50	40-140	2	20
Naphthalene	0.543		µg/l	0.050	1.00		54	40-140	15	20
Phenanthrene	0.495		µg/l	0.050	1.00		50	40-140	8	20
Pyrene	0.550		µg/l	0.050	1.00		55	40-140	0.2	20
Surrogate: 2-Fluorobiphenyl	31.8		µg/l		50.0		64	30-130		
Surrogate: Terphenyl-d14	37.3		µg/l		50.0		75	30-130		
Surrogate: Benzo (e) pyrene-d12	0.680		µg/l		1.00		68	30-130		

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Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404116 - SW846 3510C										
Blank (1404116-BLK1)					<u>Prepared & Analyzed: 25-Feb-14</u>					
Gasoline	< 0.2		mg/l	0.2						
Fuel Oil #2	< 0.2		mg/l	0.2						
Fuel Oil #4	< 0.2		mg/l	0.2						
Fuel Oil #6	< 0.2		mg/l	0.2						
Motor Oil	< 0.2		mg/l	0.2						
Aviation Fuel	< 0.2		mg/l	0.2						
Unidentified	< 0.2		mg/l	0.2						
Other Oil	< 0.2		mg/l	0.2						
Total Petroleum Hydrocarbons	< 0.2		mg/l	0.2						
C9-C36 Aliphatic Hydrocarbons	< 0.1		mg/l	0.1						
n-Nonadecane	< 0.005		mg/l	0.005						
n-Nonane	< 0.005		mg/l	0.005						
n-Decane	< 0.005		mg/l	0.005						
n-Dodecane	< 0.005		mg/l	0.005						
n-Tetradecane	< 0.005		mg/l	0.005						
n-Hexadecane	< 0.005		mg/l	0.005						
n-Octadecane	< 0.005		mg/l	0.005						
n-Eicosane	< 0.005		mg/l	0.005						
n-Docosane	< 0.005		mg/l	0.005						
n-Tetracosane	< 0.005		mg/l	0.005						
n-Hexacosane	< 0.005		mg/l	0.005						
n-Octacosane	< 0.005		mg/l	0.005						
n-Triacontane	< 0.005		mg/l	0.005						
n-Hexatriacontane	< 0.005		mg/l	0.005						
<i>Surrogate: 1-Chlorooctadecane</i>	<i>0.0489</i>		<i>mg/l</i>		<i>0.0500</i>		<i>98</i>	<i>50-150</i>		
LCS (1404116-BS1)					<u>Prepared & Analyzed: 25-Feb-14</u>					
C9-C36 Aliphatic Hydrocarbons	1.1		mg/l	0.2	1.40		81	60-120		
<i>Surrogate: 1-Chlorooctadecane</i>	<i>0.0380</i>		<i>mg/l</i>		<i>0.0500</i>		<i>76</i>	<i>50-150</i>		
LCS Dup (1404116-BSD1)					<u>Prepared & Analyzed: 25-Feb-14</u>					
C9-C36 Aliphatic Hydrocarbons	1.0		mg/l	0.2	1.40		74	60-120	9	200
<i>Surrogate: 1-Chlorooctadecane</i>	<i>0.0399</i>		<i>mg/l</i>		<i>0.0500</i>		<i>80</i>	<i>50-150</i>		

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Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404370 - SW846 3005A										
<u>Blank (1404370-BLK1)</u>					<u>Prepared: 27-Feb-14 Analyzed: 01-Mar-14</u>					
Selenium	< 0.0150		mg/l	0.0150						
Lead	< 0.0075		mg/l	0.0075						
Chromium	< 0.0050		mg/l	0.0050						
Cadmium	< 0.0025		mg/l	0.0025						
Barium	< 0.0050		mg/l	0.0050						
Silver	< 0.0050		mg/l	0.0050						
Arsenic	< 0.0040		mg/l	0.0040						
<u>LCS (1404370-BS1)</u>					<u>Prepared: 27-Feb-14 Analyzed: 01-Mar-14</u>					
Arsenic	1.28		mg/l	0.0040	1.25		102	85-115		
Selenium	1.27		mg/l	0.0150	1.25		102	85-115		
Silver	1.38		mg/l	0.0050	1.25		111	85-115		
Barium	1.40		mg/l	0.0050	1.25		112	85-115		
Cadmium	1.31		mg/l	0.0025	1.25		105	85-115		
Lead	1.36		mg/l	0.0075	1.25		108	85-115		
Chromium	1.43		mg/l	0.0050	1.25		114	85-115		
<u>LCS Dup (1404370-BSD1)</u>					<u>Prepared: 27-Feb-14 Analyzed: 01-Mar-14</u>					
Silver	1.37		mg/l	0.0050	1.25		110	85-115	0.6	20
Arsenic	1.27		mg/l	0.0040	1.25		102	85-115	0.9	20
Barium	1.39		mg/l	0.0050	1.25		112	85-115	0.7	20
Cadmium	1.29		mg/l	0.0025	1.25		104	85-115	0.9	20
Chromium	1.42		mg/l	0.0050	1.25		114	85-115	0.7	20
Lead	1.35		mg/l	0.0075	1.25		108	85-115	0.4	20
Selenium	1.27		mg/l	0.0150	1.25		101	85-115	0.6	20

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Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404371 - EPA200/SW7000 Series										
<u>Blank (1404371-BLK1)</u>										
Mercury	< 0.00020		mg/l	0.00020						
<u>LCS (1404371-BS1)</u>										
Mercury	0.00521		mg/l	0.00020	0.00500		104	85-115		
<u>Duplicate (1404371-DUP1)</u>										
Mercury	0.00083		mg/l	0.00020		0.00090			9	20
<u>Matrix Spike (1404371-MS1)</u>										
Mercury	0.00526		mg/l	0.00020	0.00500	0.00090	87	80-120		
<u>Matrix Spike Dup (1404371-MSD1)</u>										
Mercury	0.00538		mg/l	0.00020	0.00500	0.00090	90	80-120	2	20
<u>Post Spike (1404371-PS1)</u>										
Mercury	0.00523		mg/l	0.00020	0.00500	0.00090	87	85-115		

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Soluble Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404372 - SW846 3005A										
Blank (1404372-BLK1)					<u>Prepared: 27-Feb-14 Analyzed: 01-Mar-14</u>					
Cadmium	< 0.0025		mg/l	0.0025						
Arsenic	< 0.0040		mg/l	0.0040						
Barium	< 0.0050		mg/l	0.0050						
Chromium	< 0.0050		mg/l	0.0050						
Lead	< 0.0075		mg/l	0.0075						
Selenium	< 0.0150		mg/l	0.0150						
Silver	< 0.0050		mg/l	0.0050						
LCS (1404372-BS1)					<u>Prepared: 27-Feb-14 Analyzed: 01-Mar-14</u>					
Arsenic	1.23		mg/l	0.0040	1.25		98	85-115		
Barium	1.36		mg/l	0.0050	1.25		109	85-115		
Silver	1.33		mg/l	0.0050	1.25		107	85-115		
Chromium	1.38		mg/l	0.0050	1.25		111	85-115		
Lead	1.32		mg/l	0.0075	1.25		105	85-115		
Selenium	1.22		mg/l	0.0150	1.25		98	85-115		
Cadmium	1.26		mg/l	0.0025	1.25		101	85-115		
LCS Dup (1404372-BSD1)					<u>Prepared: 27-Feb-14 Analyzed: 01-Mar-14</u>					
Silver	1.31		mg/l	0.0050	1.25		105	85-115	1	20
Cadmium	1.24		mg/l	0.0025	1.25		99	85-115	2	20
Selenium	1.21		mg/l	0.0150	1.25		97	85-115	1	20
Chromium	1.37		mg/l	0.0050	1.25		109	85-115	1	20
Barium	1.35		mg/l	0.0050	1.25		108	85-115	1	20
Lead	1.29		mg/l	0.0075	1.25		104	85-115	2	20
Arsenic	1.22		mg/l	0.0040	1.25		97	85-115	1	20
Duplicate (1404372-DUP1)					<u>Source: SB84874-01</u> <u>Prepared: 27-Feb-14 Analyzed: 01-Mar-14</u>					
Silver	< 0.0050		mg/l	0.0050		BRL				20
Selenium	< 0.0150		mg/l	0.0150		BRL				20
Barium	0.279		mg/l	0.0050		0.279			0.05	20
Chromium	< 0.0050		mg/l	0.0050		0.0010				20
Cadmium	< 0.0025		mg/l	0.0025		BRL				20
Lead	< 0.0075		mg/l	0.0075		BRL				20
Arsenic	< 0.0040		mg/l	0.0040		BRL				20
Matrix Spike (1404372-MS1)					<u>Source: SB84874-02</u> <u>Prepared: 27-Feb-14 Analyzed: 01-Mar-14</u>					
Chromium	1.34		mg/l	0.0050	1.25	BRL	107	75-125		
Arsenic	1.32		mg/l	0.0040	1.25	0.0448	102	75-125		
Barium	1.56		mg/l	0.0050	1.25	0.209	108	75-125		
Cadmium	1.22		mg/l	0.0025	1.25	BRL	97	75-125		
Lead	1.26		mg/l	0.0075	1.25	0.0050	100	75-125		
Selenium	1.26		mg/l	0.0150	1.25	BRL	100	75-125		
Silver	1.35		mg/l	0.0050	1.25	BRL	108	75-125		
Matrix Spike Dup (1404372-MSD1)					<u>Source: SB84874-02</u> <u>Prepared: 27-Feb-14 Analyzed: 01-Mar-14</u>					
Cadmium	1.25		mg/l	0.0025	1.25	BRL	100	75-125	3	20
Selenium	1.30		mg/l	0.0150	1.25	BRL	104	75-125	3	20
Chromium	1.39		mg/l	0.0050	1.25	BRL	111	75-125	3	20
Barium	1.62		mg/l	0.0050	1.25	0.209	113	75-125	4	20
Arsenic	1.36		mg/l	0.0040	1.25	0.0448	106	75-125	3	20
Silver	1.40		mg/l	0.0050	1.25	BRL	112	75-125	4	20
Lead	1.30		mg/l	0.0075	1.25	0.0050	103	75-125	3	20
Post Spike (1404372-PS1)					<u>Source: SB84874-02</u> <u>Prepared: 27-Feb-14 Analyzed: 01-Mar-14</u>					
Barium	1.60		mg/l	0.0050	1.25	0.209	111	80-120		
Selenium	1.29		mg/l	0.0150	1.25	BRL	103	80-120		
Lead	1.28		mg/l	0.0075	1.25	0.0050	102	80-120		

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Soluble Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404373 - EPA200/SW7000 Series										
<u>Blank (1404373-BLK1)</u>										
Mercury	< 0.00020		mg/l	0.00020						
<u>LCS (1404373-BS1)</u>										
Mercury	0.00521		mg/l	0.00020	0.00500		104	85-115		
<u>Duplicate (1404373-DUP1)</u>										
Mercury	< 0.00020		mg/l	0.00020		BRL				20
<u>Matrix Spike (1404373-MS1)</u>										
Mercury	0.00526		mg/l	0.00020	0.00500	BRL	105	80-120		
<u>Matrix Spike Dup (1404373-MSD1)</u>										
Mercury	0.00517		mg/l	0.00020	0.00500	BRL	103	80-120	2	20

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Extractable Petroleum Hydrocarbons - Discrimination Check Report

Analyte(s)	Response	% Discrimination
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Batch S401991

Calibration Check (S401991-CCV1)

n-Nonadecane	29197710	1.6
n-Nonane	27047380	-5.89
n-Decane	27848720	-3.1
n-Dodecane	28018710	-2.51
n-Tetradecane	28594920	-0.5
n-Hexadecane	28924240	0.64
n-Octadecane	29270440	1.85
n-Eicosane	29249680	1.78
n-Docosane	29251800	1.78
n-Tetracosane	29311530	1.99
n-Hexacosane	29309880	1.99
n-Octacosane	29120500	1.33
n-Triacontane	28782190	0.15
n-Hexatriacontane	28418320	-1.12
Average Area	28739001	

% Discrimination must be $\leq 20\%$. However, one peak can be $\leq 50\%$.

Calibration Check (S401991-CCV2)

n-Nonadecane	30997580	2.64
n-Nonane	28473060	-5.72
n-Decane	29388450	-2.68
n-Dodecane	29633870	-1.87
n-Tetradecane	30329240	0.43
n-Hexadecane	30740580	1.79
n-Octadecane	31099630	2.98
n-Eicosane	31009220	2.68
n-Docosane	30864050	2.2
n-Tetracosane	30735280	1.77
n-Hexacosane	30515800	1.05
n-Octacosane	30141510	-0.19
n-Triacontane	29674660	-1.74
n-Hexatriacontane	29186650	-3.35
Average Area	30199256	

% Discrimination must be $\leq 20\%$. However, one peak can be $\leq 50\%$.

Batch S402052

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Extractable Petroleum Hydrocarbons - Discrimination Check Report

Analyte(s)	Response	% Discrimination
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Batch S402052

Calibration Check (S402052-CCV1)

n-Nonadecane	27509120	2.06
n-Nonane	25463660	-5.53
n-Decane	26274520	-2.52
n-Dodecane	26428400	-1.95
n-Tetradecane	26968460	0.06
n-Hexadecane	27285190	1.23
n-Octadecane	27598500	2.39
n-Eicosane	27528370	2.13
n-Docosane	27440590	1.81
n-Tetracosane	27470600	1.92
n-Hexacosane	27370850	1.55
n-Octacosane	27096570	0.53
n-Triacontane	26661840	-1.08
n-Hexatriacontane	26254210	-2.59
Average Area	26953634	

% Discrimination must be $\leq 20\%$. However, one peak can be $\leq 50\%$.

Calibration Check (S402052-CCV2)

n-Nonadecane	28749270	2.12
n-Nonane	26502430	-5.86
n-Decane	27375290	-2.76
n-Dodecane	27530640	-2.21
n-Tetradecane	28129520	-0.08
n-Hexadecane	28488100	1.19
n-Octadecane	28833650	2.42
n-Eicosane	28781080	2.23
n-Docosane	28733950	2.07
n-Tetracosane	28771040	2.2
n-Hexacosane	28680250	1.87
n-Octacosane	28376740	0.8
n-Triacontane	27870150	-1.
n-Hexatriacontane	27312920	-2.98
Average Area	28152502	

% Discrimination must be $\leq 20\%$. However, one peak can be $\leq 50\%$.

Batch S402148

Extractable Petroleum Hydrocarbons - Discrimination Check Report

Analyte(s)	Response	% Discrimination
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Batch S402148

Calibration Check (S402148-CCV1)

n-Nonadecane	30000600	1.8
n-Nonane	27716390	-5.95
n-Decane	28675660	-2.7
n-Dodecane	28830380	-2.17
n-Tetradecane	29385940	-0.29
n-Hexadecane	29730920	0.88
n-Octadecane	30083330	2.08
n-Eicosane	30042380	1.94
n-Docosane	29998450	1.79
n-Tetracosane	30080780	2.07
n-Hexacosane	30050260	1.97
n-Octacosane	29813640	1.16
n-Triacontane	29356770	-0.39
n-Hexatriacontane	28821910	-2.2
Average Area	29470529	

% Discrimination must be $\leq 20\%$. However, one peak can be $\leq 50\%$.

Calibration Check (S402148-CCV2)

n-Nonadecane	32027280	2.13
n-Nonane	29704080	-5.28
n-Decane	30802890	-1.78
n-Dodecane	30932390	-1.36
n-Tetradecane	31527740	0.53
n-Hexadecane	31851220	1.57
n-Octadecane	32161170	2.55
n-Eicosane	32025120	2.12
n-Docosane	31854550	1.58
n-Tetracosane	31974260	1.96
n-Hexacosane	31813080	1.44
n-Octacosane	31452340	0.29
n-Triacontane	30840360	-1.66
n-Hexatriacontane	30073420	-4.1
Average Area	31359993	

% Discrimination must be $\leq 20\%$. However, one peak can be $\leq 50\%$.

Notes and Definitions

dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Interpretation of Total Petroleum Hydrocarbon Report

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from analyses of various petroleum products. Possible match categories are as follows:

- Gasoline - includes regular, unleaded, premium, etc.
- Fuel Oil #2 - includes home heating oil, #2 fuel oil, and diesel
- Fuel Oil #4 - includes #4 fuel oil
- Fuel Oil #6 - includes #6 fuel oil and bunker "C" oil
- Motor Oil - includes virgin and waste automobile oil
- Ligroin - includes mineral spirits, petroleum naphtha, vm&p naphtha
- Aviation Fuel - includes kerosene, Jet A and JP-4
- Other Oil - includes lubricating and cutting oil, and silicon oil

At times, the unidentified petroleum product is quantified using a calibration that most closely approximates the distribution of compounds in the sample. When this occurs, the result is qualified as Calculated as.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

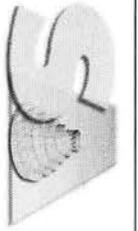
Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
Kimberly Wisk
Rebecca Merz



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

S584874

By

Page 1 of 1

Special Handling:

- Standard TAT - 7 to 10 business days
- Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval
- Min. 24-hr notification needed for rushes
- Samples disposed after 60 days unless otherwise instructed

Report To: AECOM
 500 Enterprise Dr.
 Rocky Hill, CT 06067
 Telephone #: 860-263-5800
 Project Mgr: Julie Williams

Invoice To: _____
 SAME
 P.O. No.: _____
 RON

Project No: 60316060
 Site Name: 177 State Street
 Location: Meriden State CT
 Sampler(s): Scott Gish

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
 8=NAHSO₄ 9=Deionized Water 10=H₂PO₄ 11=ice 12=

DW=Drinking Water GW=Groundwater WW=Waste Water
 O=Oil SW=surface Water SO=Soil SL=Sludge A=Air
 X1= X2= X3=

G=Grab C=Compsite

Lab ID	Sample ID	Date	Time	Type
8487421	MMW-SB-100	2/19/2014	10:30 AM	G
↓ 02	MMW-SB-102	2/19/2014	2:30 PM	G

Matrix	Containers			
	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic
GW	2	2	2	2
GW	2	2	2	2

Analysis	List Preservative Code below:				
	4	11	11	11	11
RCRA 8 Metals	X	X	X	X	X
PAH	X	X	X	X	X
ETPH	X	X	X	X	X
RCRA 8 Metals (lab to filter)	X	X	X	X	X

QA/QC Reporting Notes:

*Additional charges may apply

MA DEP MCP CAM Report yes no
 CT DPH RCP Report yes no
 Standard No QC
 DQA* ASP B*
 ASP A* NJ Reduc'd*
 NJ Reduc'd* NJ Full
 Tier II* Tier IV*
 Other: _____
 State-specific reporting standards: _____

Relinquished by: Scott Gish

Received by: JUNE

Date: 2-28-14

Time: 1:00 PM

Temp °C

EDD format: EQUIS

E-mail to: Julie.Williams@aecom.com

Condition upon receipt: Ambient Iced Refrigerated

Custody Seals: Present Intact Broken

DI VOA Frozen Soil Jar Frozen

0710/071R01
 JUNE 02-20-14

ETPH Sequence Summary

S401991

Extractable Petroleum Hydrocarbons

1404116-BLK1

1404116-BS1

1404116-BSD1

S401991-CCV1

S401991-CCV2

S402052

Extractable Petroleum Hydrocarbons

S402052-CCV1

S402052-CCV2

SB84874-01 (MW-SB-100)

SB84874-02 (MW-SB-102)

S402148

Extractable Petroleum Hydrocarbons

S402148-CCV1

S402148-CCV2

Report Date:
04-Mar-14 14:37



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

AECOM Environment
500 Enterprise Drive, Suite 1A
Rocky Hill, CT 06067
Attn: Julie Williams

Project: 177 State St - Meriden, CT
Project #: 60316060

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB84992-01	SB-100 (6-8)	Soil	19-Feb-14 13:30	20-Feb-14 14:50
SB84992-02	SB-100 (10-12)	Soil	19-Feb-14 13:45	20-Feb-14 14:50
SB84992-03	SB-104 (4-6)	Soil	19-Feb-14 12:00	20-Feb-14 14:50
SB84992-04	SB-104 (6-8)	Soil	19-Feb-14 12:10	20-Feb-14 14:50
SB84992-05	SB-101 (4-6)	Soil	19-Feb-14 10:25	20-Feb-14 14:50
SB84992-06	SB-101 (8-10)	Soil	19-Feb-14 10:30	20-Feb-14 14:50
SB84992-07	SB-102 (4-6)	Soil	19-Feb-14 09:30	20-Feb-14 14:50
SB84992-08	SB-102 (10-12)	Soil	19-Feb-14 09:45	20-Feb-14 14:50
SB84992-09	SB-103 (2-4)	Soil	19-Feb-14 09:50	20-Feb-14 14:50
SB84992-10	SB-103 (10-12)	Soil	19-Feb-14 10:10	20-Feb-14 14:50
SB84992-11	Trip Blank	Methanol/DI	19-Feb-14 00:00	20-Feb-14 14:50

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435



Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 32 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, NJ-MA012, PA-68-04426 and FL-E87936).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

**Reasonable Confidence Protocols
Laboratory Analysis
QA/QC Certification Form**

Laboratory Name: Spectrum Analytical, Inc.

Client: AECOM Environment - Rocky Hill, CT

Project Location: 177 State St - Meriden, CT

Project Number: 60316060

Sampling Date(s):

Laboratory Sample ID(s):

2/19/2014

SB84992-01 through SB84992-11

RCP Methods Used:

CT ETPH
SW846 6010C
SW846 8260C
SW846 8270D

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	✓ Yes	No
1A	Were the method specified preservation and holding time requirements met?	✓ Yes	No
1B	<i>VPH and EPH methods only:</i> Was the VPH or EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	Yes	No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	✓ Yes	No
3	Were samples received at an appropriate temperature?	✓ Yes	No
4	Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved?	Yes	✓ No
5	a) Were reporting limits specified or referenced on the chain-of-custody? b) Were these reporting limits met?	Yes Yes	✓ No No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes	✓ No
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	✓ Yes	No

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for obtaining the information contained in this analytical report, such information is accurate and complete.


 Nicole Leja
 Laboratory Director
 Date: 3/4/2014

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

The samples were received 0.7 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

Low level VOC soil samples submitted in DI water or in an encore sampler were frozen on 2/20/2014 at 14:50.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

Required site-specific Matrix Spike/Matrix Spike Duplicate (MS/MSD) must be requested by the client and sufficient sample must be submitted for the additional analyses. Samples submitted with insufficient volume/weight will not be analyzed for site specific MS/MSD, however a batch MS/MSD may be analyzed from a non-site specific sample.

CTDEP has published a list of analytical methods which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of decisions being made utilizing the Reasonable Confidence Protocol (RCP). "Reasonable Confidence" can be established only for those methods published by the CTDEP in the RCP guidelines. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

The CTDEP RCP requests that "all non-detects and all results below the reporting limit are reported as ND (Not Detected at the Specified Reporting Limit)". All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

If no reporting limits were specified or referenced on the chain-of-custody the laboratory's practical quantitation limits were applied.

According to CTDEP RCP Quality Assurance and Quality Control Requirements for VOCs by method 8260, SW-846 version 1, 7/28/05 Table 1A, recovery for some VOC analytes have been deemed potentially difficult.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Soils are run on a manual load instrument. 100ug of sample (MEOH) is spiked into 5ml DI water along with the surrogate and added directly onto the instrument. Additional dilution factors may be required to keep analyte concentration within instrument calibration range.

Method SW846 5035A is designed to use on samples containing low levels of VOCs, ranging from 0.5 to 200 ug/Kg. Target analytes that are less responsive to purge and trap may be present at concentrations over 200ug/Kg but may not be reportable in the methanol preserved vial (SW846 5030). This is the result of the inherent dilution factor required for the methanol preservation.

For this work order, the reporting limits have not been referenced or specified.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

CT ETPH

Spikes:

1404243-MS1 *Source: SB84992-09*

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

C9-C36 Aliphatic Hydrocarbons

1404243-MSD1 *Source: SB84992-09*

RPD out of acceptance range.

C9-C36 Aliphatic Hydrocarbons

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CT ETPH

Samples:

S402141-CCV6

Analyte percent difference is outside individual acceptance criteria (30), but within overall method allowances.

n-Nonane (-33.1%)

This affected the following samples:

1404243-BLK1

SW846 6010C

Spikes:

1404365-MS1 *Source: SB84992-09*

The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.

Antimony

1404365-MSD1 *Source: SB84992-09*

The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.

Antimony

SW846 8260C

Calibration:

1401031

Analyte quantified by quadratic equation type calibration.

1,4-Dioxane

2-Butanone (MEK)

Naphthalene

This affected the following samples:

1404262-BLK1

1404262-BS1

1404262-BSD1

S400832-ICV1

S402001-CCV1

SB-103 (2-4)

Trip Blank

Laboratory Control Samples:

1404262 BS/BSD

2-Hexanone (MBK) percent recoveries (74/69) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

SB-103 (2-4)

Trip Blank

Naphthalene percent recoveries (74/67) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

SB-103 (2-4)

Trip Blank

1404262 BSD

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SW846 8260C

Laboratory Control Samples:

1404262 BSD

2-Butanone (MEK) RPD 33% (30%) is outside individual acceptance criteria.

Samples:

S402001-CCV1

Analyte percent drift is outside individual acceptance criteria (20), but within overall method allowances.

Naphthalene (-20.8%)

Tetrahydrofuran (-23.3%)

This affected the following samples:

1404262-BLK1

1404262-BS1

1404262-BSD1

SB-103 (2-4)

Trip Blank

Sample Acceptance Check Form

Client: AECOM Environment - Rocky Hill, CT
 Project: 177 State St - Meriden, CT / 60316060
 Work Order: SB84992
 Sample(s) received on: 2/20/2014
 Received by: Allison Edens

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
1. Were custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Were custody seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were samples cooled on ice upon transfer to laboratory representative?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Were samples refrigerated upon transfer to laboratory representative?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Were sample containers received intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were samples accompanied by a Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Did sample container labels agree with Chain of Custody document?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Were samples received within method-specific holding times?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sample Identification

SB-100 (6-8)

SB84992-01

Client Project #

60316060

Matrix

Soil

Collection Date/Time

19-Feb-14 13:30

Received

20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270

Prepared by method SW846 3545A

83-32-9	Acenaphthene	< 229		µg/kg dry	229	58.2	1	SW846 8270D	27-Feb-14	27-Feb-14	MSL	1404336	X
208-96-8	Acenaphthylene	< 229		µg/kg dry	229	63.5	1	"	"	"	"	"	X
120-12-7	Anthracene	< 229		µg/kg dry	229	58.4	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	< 229		µg/kg dry	229	61.3	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	< 229		µg/kg dry	229	62.4	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	< 229		µg/kg dry	229	49.8	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 229		µg/kg dry	229	63.7	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	< 229		µg/kg dry	229	81.1	1	"	"	"	"	"	X
218-01-9	Chrysene	< 229		µg/kg dry	229	64.7	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 229		µg/kg dry	229	59.2	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 229		µg/kg dry	229	64.0	1	"	"	"	"	"	X
86-73-7	Fluorene	< 229		µg/kg dry	229	63.7	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 229		µg/kg dry	229	63.5	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 229		µg/kg dry	229	67.6	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 229		µg/kg dry	229	65.4	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 229		µg/kg dry	229	64.0	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 229		µg/kg dry	229	61.2	1	"	"	"	"	"	X
129-00-0	Pyrene	< 229		µg/kg dry	229	55.4	1	"	"	"	"	"	X

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	52			30-130 %			"	"	"	"	"	
1718-51-0	Terphenyl-dl4	54			30-130 %			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Extractable Total Petroleum Hydrocarbons

Prepared by method SW846 3546

8006-61-9	Gasoline	< 36.3		mg/kg dry	36.3	1.8	1	CT ETPH	26-Feb-14	28-Feb-14	SEP	1404243	
68476-30-2	Fuel Oil #2	< 36.3		mg/kg dry	36.3	3.6	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 36.3		mg/kg dry	36.3	3.6	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 36.3		mg/kg dry	36.3	9.1	1	"	"	"	"	"	
M09800000	Motor Oil	< 36.3		mg/kg dry	36.3	3.6	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 36.3		mg/kg dry	36.3	9.1	1	"	"	"	"	"	
	Unidentified	152		mg/kg dry	36.3	9.1	1	"	"	"	"	"	
	Other Oil	Calculated as		mg/kg dry	36.3	3.6	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	152		mg/kg dry	36.3	3.4	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	152		mg/kg dry	36.3	3.4	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	68			50-150 %			"	"	"	"	"	
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Total Metals by EPA 6000/7000 Series Methods

7440-36-0	Antimony	78.1		mg/kg dry	5.89	1.09	1	SW846 6010C	27-Feb-14	03-Mar-14	EDT	1404365	X
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General Chemistry Parameters

	% Solids	72.3		%			1	SM2540 G Mod.	24-Feb-14	24-Feb-14	DT	1404075	
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Sample Identification

SB-100 (10-12)

SB84992-02

Client Project #

60316060

Matrix

Soil

Collection Date/Time

19-Feb-14 13:45

Received

20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270

Prepared by method SW846 3545A

83-32-9	Acenaphthene	< 181		µg/kg dry	181	46.1	1	SW846 8270D	27-Feb-14	27-Feb-14	MSL	1404336	X
208-96-8	Acenaphthylene	< 181		µg/kg dry	181	50.3	1	"	"	"	"	"	X
120-12-7	Anthracene	< 181		µg/kg dry	181	46.2	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	< 181		µg/kg dry	181	48.5	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	< 181		µg/kg dry	181	49.4	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	< 181		µg/kg dry	181	39.4	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 181		µg/kg dry	181	50.5	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	< 181		µg/kg dry	181	64.2	1	"	"	"	"	"	X
218-01-9	Chrysene	< 181		µg/kg dry	181	51.2	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 181		µg/kg dry	181	46.8	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 181		µg/kg dry	181	50.7	1	"	"	"	"	"	X
86-73-7	Fluorene	< 181		µg/kg dry	181	50.4	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 181		µg/kg dry	181	50.3	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 181		µg/kg dry	181	53.5	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 181		µg/kg dry	181	51.8	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 181		µg/kg dry	181	50.6	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 181		µg/kg dry	181	48.4	1	"	"	"	"	"	X
129-00-0	Pyrene	< 181		µg/kg dry	181	43.8	1	"	"	"	"	"	X

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	44			30-130 %			"	"	"	"	"	
1718-51-0	Terphenyl-dl4	32			30-130 %			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Extractable Total Petroleum Hydrocarbons

Prepared by method SW846 3546

8006-61-9	Gasoline	< 27.7		mg/kg dry	27.7	1.4	1	CT ETPH	26-Feb-14	28-Feb-14	SEP	1404243	
68476-30-2	Fuel Oil #2	< 27.7		mg/kg dry	27.7	2.8	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 27.7		mg/kg dry	27.7	2.8	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 27.7		mg/kg dry	27.7	6.9	1	"	"	"	"	"	
M09800000	Motor Oil	< 27.7		mg/kg dry	27.7	2.8	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 27.7		mg/kg dry	27.7	6.9	1	"	"	"	"	"	
	Unidentified	539		mg/kg dry	27.7	6.9	1	"	"	"	"	"	
	Other Oil	Calculated as		mg/kg dry	27.7	2.8	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	539		mg/kg dry	27.7	2.6	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	539		mg/kg dry	27.7	2.6	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	79			50-150 %			"	"	"	"	"	
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Total Metals by EPA 6000/7000 Series Methods

7440-36-0	Antimony	< 5.22		mg/kg dry	5.22	0.963	1	SW846 6010C	27-Feb-14	03-Mar-14	EDT	1404365	X
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General Chemistry Parameters

	% Solids	91.4		%			1	SM2540 G Mod.	24-Feb-14	24-Feb-14	DT	1404075	
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Sample Identification

SB-104 (4-6)

SB84992-03

Client Project #

60316060

Matrix

Soil

Collection Date/Time

19-Feb-14 12:00

Received

20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270

Prepared by method SW846 3545A

83-32-9	Acenaphthene	< 186		µg/kg dry	186	47.3	1	SW846 8270D	27-Feb-14	27-Feb-14	MSL	1404336	X
208-96-8	Acenaphthylene	< 186		µg/kg dry	186	51.5	1	"	"	"	"	"	X
120-12-7	Anthracene	205		µg/kg dry	186	47.4	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	1,520		µg/kg dry	186	49.8	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	1,540		µg/kg dry	186	50.6	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	1,540		µg/kg dry	186	40.4	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	753		µg/kg dry	186	51.7	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	807		µg/kg dry	186	65.9	1	"	"	"	"	"	X
218-01-9	Chrysene	1,490		µg/kg dry	186	52.5	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	248		µg/kg dry	186	48.0	1	"	"	"	"	"	X
206-44-0	Fluoranthene	2,270		µg/kg dry	186	52.0	1	"	"	"	"	"	X
86-73-7	Fluorene	< 186		µg/kg dry	186	51.7	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	849		µg/kg dry	186	51.6	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 186		µg/kg dry	186	54.9	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 186		µg/kg dry	186	53.1	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 186		µg/kg dry	186	51.9	1	"	"	"	"	"	X
85-01-8	Phenanthrene	522		µg/kg dry	186	49.6	1	"	"	"	"	"	X
129-00-0	Pyrene	1,870		µg/kg dry	186	44.9	1	"	"	"	"	"	X

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	75			30-130 %			"	"	"	"	"	
1718-51-0	Terphenyl-dl4	67			30-130 %			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Extractable Total Petroleum Hydrocarbons

Prepared by method SW846 3546

8006-61-9	Gasoline	< 28.6		mg/kg dry	28.6	1.4	1	CT ETPH	26-Feb-14	28-Feb-14	SEP	1404243	
68476-30-2	Fuel Oil #2	< 28.6		mg/kg dry	28.6	2.9	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 28.6		mg/kg dry	28.6	2.9	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 28.6		mg/kg dry	28.6	7.1	1	"	"	"	"	"	
M09800000	Motor Oil	< 28.6		mg/kg dry	28.6	2.9	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 28.6		mg/kg dry	28.6	7.1	1	"	"	"	"	"	
	Unidentified	285		mg/kg dry	28.6	7.1	1	"	"	"	"	"	
	Other Oil	Calculated as		mg/kg dry	28.6	2.9	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	285		mg/kg dry	28.6	2.6	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	285		mg/kg dry	28.6	2.6	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	64			50-150 %			"	"	"	"	"	
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Total Metals by EPA 6000/7000 Series Methods

7440-38-2	Arsenic	5.39		mg/kg dry	1.60	0.697	1	SW846 6010C	27-Feb-14	03-Mar-14	EDT	1404365	X
7439-92-1	Lead	335		mg/kg dry	1.60	0.589	1	"	"	"	"	"	X
7440-36-0	Antimony	6.42		mg/kg dry	5.33	0.982	1	"	"	"	"	"	X

General Chemistry Parameters

	% Solids	88.7		%			1	SM2540 G Mod.	24-Feb-14	24-Feb-14	DT	1404075	
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Sample Identification

SB-104 (6-8)

SB84992-04

Client Project #

60316060

Matrix

Soil

Collection Date/Time

19-Feb-14 12:10

Received

20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270

Prepared by method SW846 3545A

83-32-9	Acenaphthene	< 223		µg/kg dry	223	56.6	1	SW846 8270D	27-Feb-14	27-Feb-14	MSL	1404336	X
208-96-8	Acenaphthylene	< 223		µg/kg dry	223	61.7	1	"	"	"	"	"	X
120-12-7	Anthracene	< 223		µg/kg dry	223	56.8	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	900		µg/kg dry	223	59.6	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	946		µg/kg dry	223	60.7	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	852		µg/kg dry	223	48.4	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	488		µg/kg dry	223	62.0	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	679		µg/kg dry	223	78.9	1	"	"	"	"	"	X
218-01-9	Chrysene	860		µg/kg dry	223	62.9	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 223		µg/kg dry	223	57.5	1	"	"	"	"	"	X
206-44-0	Fluoranthene	1,450		µg/kg dry	223	62.3	1	"	"	"	"	"	X
86-73-7	Fluorene	< 223		µg/kg dry	223	61.9	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	610		µg/kg dry	223	61.8	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 223		µg/kg dry	223	65.7	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 223		µg/kg dry	223	63.6	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 223		µg/kg dry	223	62.2	1	"	"	"	"	"	X
85-01-8	Phenanthrene	585		µg/kg dry	223	59.5	1	"	"	"	"	"	X
129-00-0	Pyrene	1,090		µg/kg dry	223	53.8	1	"	"	"	"	"	X

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	49			30-130 %			"	"	"	"	"	
1718-51-0	Terphenyl-dl4	43			30-130 %			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Extractable Total Petroleum Hydrocarbons

Prepared by method SW846 3546

8006-61-9	Gasoline	< 34.9		mg/kg dry	34.9	1.7	1	CT ETPH	26-Feb-14	28-Feb-14	SEP	1404243	
68476-30-2	Fuel Oil #2	< 34.9		mg/kg dry	34.9	3.5	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 34.9		mg/kg dry	34.9	3.5	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 34.9		mg/kg dry	34.9	8.7	1	"	"	"	"	"	
M09800000	Motor Oil	< 34.9		mg/kg dry	34.9	3.5	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 34.9		mg/kg dry	34.9	8.7	1	"	"	"	"	"	
	Unidentified	238		mg/kg dry	34.9	8.7	1	"	"	"	"	"	
	Other Oil	Calculated as		mg/kg dry	34.9	3.5	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	238		mg/kg dry	34.9	3.2	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	238		mg/kg dry	34.9	3.2	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	65			50-150 %			"	"	"	"	"	
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Total Metals by EPA 6000/7000 Series Methods

7440-38-2	Arsenic	9.24		mg/kg dry	1.98	0.865	1	SW846 6010C	27-Feb-14	03-Mar-14	EDT	1404365	X
7439-92-1	Lead	235		mg/kg dry	1.98	0.731	1	"	"	"	"	"	X
7440-36-0	Antimony	9.73		mg/kg dry	6.61	1.22	1	"	"	"	"	"	X

General Chemistry Parameters

	% Solids	74.9		%			1	SM2540 G Mod.	24-Feb-14	24-Feb-14	DT	1404075	
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Sample Identification

SB-101 (4-6)

SB84992-05

Client Project #

60316060

Matrix

Soil

Collection Date/Time

19-Feb-14 10:25

Received

20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270

Prepared by method SW846 3545A

83-32-9	Acenaphthene	< 182		µg/kg dry	182	46.3	1	SW846 8270D	27-Feb-14	27-Feb-14	MSL	1404336	X
208-96-8	Acenaphthylene	< 182		µg/kg dry	182	50.5	1	"	"	"	"	"	X
120-12-7	Anthracene	< 182		µg/kg dry	182	46.5	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	504		µg/kg dry	182	48.8	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	658		µg/kg dry	182	49.6	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	585		µg/kg dry	182	39.6	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	334		µg/kg dry	182	50.7	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	595		µg/kg dry	182	64.6	1	"	"	"	"	"	X
218-01-9	Chrysene	511		µg/kg dry	182	51.4	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 182		µg/kg dry	182	47.1	1	"	"	"	"	"	X
206-44-0	Fluoranthene	768		µg/kg dry	182	51.0	1	"	"	"	"	"	X
86-73-7	Fluorene	< 182		µg/kg dry	182	50.7	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	359		µg/kg dry	182	50.5	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 182		µg/kg dry	182	53.8	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 182		µg/kg dry	182	52.1	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 182		µg/kg dry	182	50.9	1	"	"	"	"	"	X
85-01-8	Phenanthrene	277		µg/kg dry	182	48.7	1	"	"	"	"	"	X
129-00-0	Pyrene	805		µg/kg dry	182	44.1	1	"	"	"	"	"	X

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	68			30-130 %			"	"	"	"	"	
1718-51-0	Terphenyl-dl4	80			30-130 %			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Extractable Total Petroleum Hydrocarbons

Prepared by method SW846 3546

8006-61-9	Gasoline	< 29.0		mg/kg dry	29.0	1.4	1	CT ETPH	26-Feb-14	28-Feb-14	SEP	1404243	
68476-30-2	Fuel Oil #2	< 29.0		mg/kg dry	29.0	2.9	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 29.0		mg/kg dry	29.0	2.9	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 29.0		mg/kg dry	29.0	7.2	1	"	"	"	"	"	
M09800000	Motor Oil	< 29.0		mg/kg dry	29.0	2.9	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 29.0		mg/kg dry	29.0	7.2	1	"	"	"	"	"	
	Unidentified	149		mg/kg dry	29.0	7.2	1	"	"	"	"	"	
	Other Oil	Calculated as		mg/kg dry	29.0	2.9	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	149		mg/kg dry	29.0	2.7	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	149		mg/kg dry	29.0	2.7	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	80			50-150 %			"	"	"	"	"	
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Total Metals by EPA 6000/7000 Series Methods

7440-38-2	Arsenic	3.43		mg/kg dry	1.44	0.628	1	SW846 6010C	27-Feb-14	03-Mar-14	EDT	1404365	X
7439-92-1	Lead	164		mg/kg dry	1.44	0.531	1	"	"	"	"	"	X
7440-36-0	Antimony	< 4.80		mg/kg dry	4.80	0.885	1	"	"	"	"	"	X

General Chemistry Parameters

	% Solids	91.2		%			1	SM2540 G Mod.	24-Feb-14	24-Feb-14	DT	1404075	
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Sample Identification

SB-101 (8-10)

SB84992-06

Client Project #

60316060

Matrix

Soil

Collection Date/Time

19-Feb-14 10:30

Received

20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270

Prepared by method SW846 3545A

83-32-9	Acenaphthene	< 221		µg/kg dry	221	56.2	1	SW846 8270D	27-Feb-14	03-Mar-14	MSL	1404336	X
208-96-8	Acenaphthylene	< 221		µg/kg dry	221	61.3	1	"	"	"	"	"	X
120-12-7	Anthracene	< 221		µg/kg dry	221	56.4	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	< 221		µg/kg dry	221	59.2	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	< 221		µg/kg dry	221	60.3	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	< 221		µg/kg dry	221	48.1	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 221		µg/kg dry	221	61.6	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	< 221		µg/kg dry	221	78.4	1	"	"	"	"	"	X
218-01-9	Chrysene	< 221		µg/kg dry	221	62.5	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 221		µg/kg dry	221	57.2	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 221		µg/kg dry	221	61.9	1	"	"	"	"	"	X
86-73-7	Fluorene	< 221		µg/kg dry	221	61.5	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 221		µg/kg dry	221	61.4	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 221		µg/kg dry	221	65.3	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 221		µg/kg dry	221	63.2	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 221		µg/kg dry	221	61.8	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 221		µg/kg dry	221	59.1	1	"	"	"	"	"	X
129-00-0	Pyrene	< 221		µg/kg dry	221	53.5	1	"	"	"	"	"	X

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	48			30-130 %			"	"	"	"	"	
1718-51-0	Terphenyl-dl4	53			30-130 %			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Extractable Total Petroleum Hydrocarbons

Prepared by method SW846 3546

8006-61-9	Gasoline	< 34.9		mg/kg dry	34.9	1.7	1	CT ETPH	26-Feb-14	28-Feb-14	SEP	1404243	
68476-30-2	Fuel Oil #2	< 34.9		mg/kg dry	34.9	3.5	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 34.9		mg/kg dry	34.9	3.5	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 34.9		mg/kg dry	34.9	8.7	1	"	"	"	"	"	
M09800000	Motor Oil	< 34.9		mg/kg dry	34.9	3.5	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 34.9		mg/kg dry	34.9	8.7	1	"	"	"	"	"	
	Unidentified	58.7		mg/kg dry	34.9	8.7	1	"	"	"	"	"	
	Other Oil	Calculated as		mg/kg dry	34.9	3.5	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	58.7		mg/kg dry	34.9	3.2	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	58.7		mg/kg dry	34.9	3.2	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	87			50-150 %			"	"	"	"	"	
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Total Metals by EPA 6000/7000 Series Methods

7440-38-2	Arsenic	2.75		mg/kg dry	1.87	0.816	1	SW846 6010C	27-Feb-14	03-Mar-14	EDT	1404365	X
7439-92-1	Lead	27.5		mg/kg dry	1.87	0.690	1	"	"	"	"	"	X
7440-36-0	Antimony	< 6.24		mg/kg dry	6.24	1.15	1	"	"	"	"	"	X

General Chemistry Parameters

	% Solids	74.3		%			1	SM2540 G Mod.	24-Feb-14	24-Feb-14	DT	1404075	
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Sample Identification

SB-102 (4-6)
SB84992-07

Client Project #
60316060

Matrix
Soil

Collection Date/Time
19-Feb-14 09:30

Received
20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270

Prepared by method SW846 3545A

83-32-9	Acenaphthene	< 188		µg/kg dry	188	47.6	1	SW846 8270D	27-Feb-14	03-Mar-14	MSL	1404336	X
208-96-8	Acenaphthylene	< 188		µg/kg dry	188	51.9	1	"	"	"	"	"	X
120-12-7	Anthracene	307		µg/kg dry	188	47.8	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	1,160		µg/kg dry	188	50.2	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	1,230		µg/kg dry	188	51.0	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	1,170		µg/kg dry	188	40.7	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	556		µg/kg dry	188	52.1	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	892		µg/kg dry	188	66.4	1	"	"	"	"	"	X
218-01-9	Chrysene	1,180		µg/kg dry	188	52.9	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 188		µg/kg dry	188	48.4	1	"	"	"	"	"	X
206-44-0	Fluoranthene	2,210		µg/kg dry	188	52.4	1	"	"	"	"	"	X
86-73-7	Fluorene	< 188		µg/kg dry	188	52.1	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	536		µg/kg dry	188	52.0	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 188		µg/kg dry	188	55.3	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 188		µg/kg dry	188	53.5	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 188		µg/kg dry	188	52.3	1	"	"	"	"	"	X
85-01-8	Phenanthrene	1,460		µg/kg dry	188	50.0	1	"	"	"	"	"	X
129-00-0	Pyrene	1,740		µg/kg dry	188	45.3	1	"	"	"	"	"	X

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	56			30-130 %			"	"	"	"	"	
1718-51-0	Terphenyl-dl4	57			30-130 %			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Extractable Total Petroleum Hydrocarbons

Prepared by method SW846 3546

8006-61-9	Gasoline	< 28.9		mg/kg dry	28.9	1.4	1	CT ETPH	26-Feb-14	28-Feb-14	SEP	1404243	
68476-30-2	Fuel Oil #2	< 28.9		mg/kg dry	28.9	2.9	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 28.9		mg/kg dry	28.9	2.9	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 28.9		mg/kg dry	28.9	7.2	1	"	"	"	"	"	
M09800000	Motor Oil	< 28.9		mg/kg dry	28.9	2.9	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 28.9		mg/kg dry	28.9	7.2	1	"	"	"	"	"	
	Unidentified	616		mg/kg dry	28.9	7.2	1	"	"	"	"	"	
	Other Oil	Calculated as		mg/kg dry	28.9	2.9	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	616		mg/kg dry	28.9	2.7	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	616		mg/kg dry	28.9	2.7	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	58			50-150 %			"	"	"	"	"	
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Total Metals by EPA 6000/7000 Series Methods

7439-92-1	Lead	408		mg/kg dry	1.68	0.620	1	SW846 6010C	27-Feb-14	03-Mar-14	EDT	1404365	X
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General Chemistry Parameters

	% Solids	87.8		%			1	SM2540 G Mod.	24-Feb-14	24-Feb-14	DT	1404075	
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Sample Identification

SB-102 (10-12)

SB84992-08

Client Project #

60316060

Matrix

Soil

Collection Date/Time

19-Feb-14 09:45

Received

20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270

Prepared by method SW846 3545A

83-32-9	Acenaphthene	< 220		µg/kg dry	220	55.8	1	SW846 8270D	27-Feb-14	03-Mar-14	MSL	1404336	X
208-96-8	Acenaphthylene	287		µg/kg dry	220	60.9	1	"	"	"	"	"	X
120-12-7	Anthracene	506		µg/kg dry	220	56.0	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	1,980		µg/kg dry	220	58.8	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	1,780		µg/kg dry	220	59.8	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	2,200		µg/kg dry	220	47.7	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	767		µg/kg dry	220	61.1	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	899		µg/kg dry	220	77.8	1	"	"	"	"	"	X
218-01-9	Chrysene	1,810		µg/kg dry	220	62.0	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	269		µg/kg dry	220	56.7	1	"	"	"	"	"	X
206-44-0	Fluoranthene	4,130		µg/kg dry	220	61.4	1	"	"	"	"	"	X
86-73-7	Fluorene	< 220		µg/kg dry	220	61.1	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	906		µg/kg dry	220	60.9	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 220		µg/kg dry	220	64.8	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 220		µg/kg dry	220	62.7	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 220		µg/kg dry	220	61.3	1	"	"	"	"	"	X
85-01-8	Phenanthrene	1,360		µg/kg dry	220	58.6	1	"	"	"	"	"	X
129-00-0	Pyrene	2,730		µg/kg dry	220	53.1	1	"	"	"	"	"	X

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	44			30-130 %			"	"	"	"	"	
1718-51-0	Terphenyl-dl4	36			30-130 %			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Extractable Total Petroleum Hydrocarbons

Prepared by method SW846 3546

8006-61-9	Gasoline	< 33.7		mg/kg dry	33.7	1.7	1	CT ETPH	26-Feb-14	28-Feb-14	SEP	1404243	
68476-30-2	Fuel Oil #2	< 33.7		mg/kg dry	33.7	3.4	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 33.7		mg/kg dry	33.7	3.4	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 33.7		mg/kg dry	33.7	8.4	1	"	"	"	"	"	
M09800000	Motor Oil	< 33.7		mg/kg dry	33.7	3.4	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 33.7		mg/kg dry	33.7	8.4	1	"	"	"	"	"	
	Unidentified	261		mg/kg dry	33.7	8.4	1	"	"	"	"	"	
	Other Oil	Calculated as		mg/kg dry	33.7	3.4	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	261		mg/kg dry	33.7	3.1	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	261		mg/kg dry	33.7	3.1	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	62			50-150 %			"	"	"	"	"	
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Total Metals by EPA 6000/7000 Series Methods

7439-92-1	Lead	458		mg/kg dry	1.96	0.723	1	SW846 6010C	27-Feb-14	03-Mar-14	EDT	1404365	X
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General Chemistry Parameters

	% Solids	75.9		%			1	SM2540 G Mod.	24-Feb-14	24-Feb-14	DT	1404075	
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This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

SB-103 (2-4)

SB84992-09

Client Project #

60316060

Matrix

Soil

Collection Date/Time

19-Feb-14 09:50

Received

20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
	VOC Extraction	Field extracted		N/A			1	VOC Soil Extraction			DJB	1404095	
<u>Volatile Organic Compounds by SW846 8260</u>													
<u>Prepared by method SW846 5035A Soil (low level)</u>													
Initial weight: 7.36 g													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 4.3		µg/kg dry	4.3	2.6	1	SW846 8260C	26-Feb-14	26-Feb-14	JEG	1404262	X
67-64-1	Acetone	< 42.9		µg/kg dry	42.9	40.8	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 4.3		µg/kg dry	4.3	4.2	1	"	"	"	"	"	X
71-43-2	Benzene	< 4.3		µg/kg dry	4.3	1.5	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 4.3		µg/kg dry	4.3	1.2	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 4.3		µg/kg dry	4.3	3.7	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 4.3		µg/kg dry	4.3	3.2	1	"	"	"	"	"	X
75-25-2	Bromoform	< 4.3		µg/kg dry	4.3	2.3	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 8.6		µg/kg dry	8.6	7.6	1	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 42.9		µg/kg dry	42.9	13.2	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 4.3		µg/kg dry	4.3	3.0	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 4.3		µg/kg dry	4.3	1.9	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 4.3		µg/kg dry	4.3	1.1	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 8.6		µg/kg dry	8.6	6.1	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 4.3		µg/kg dry	4.3	3.2	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 4.3		µg/kg dry	4.3	2.3	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 8.6		µg/kg dry	8.6	2.8	1	"	"	"	"	"	X
67-66-3	Chloroform	< 4.3		µg/kg dry	4.3	3.2	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 8.6		µg/kg dry	8.6	4.4	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 4.3		µg/kg dry	4.3	1.3	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 4.3		µg/kg dry	4.3	2.0	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 8.6		µg/kg dry	8.6	8.3	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 4.3		µg/kg dry	4.3	3.1	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 4.3		µg/kg dry	4.3	3.3	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 4.3		µg/kg dry	4.3	2.9	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 4.3		µg/kg dry	4.3	1.4	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 4.3		µg/kg dry	4.3	1.9	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 4.3		µg/kg dry	4.3	1.6	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 8.6		µg/kg dry	8.6	2.1	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 4.3		µg/kg dry	4.3	4.2	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 4.3		µg/kg dry	4.3	2.8	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 4.3		µg/kg dry	4.3	2.3	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 4.3		µg/kg dry	4.3	1.9	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 4.3		µg/kg dry	4.3	3.6	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 4.3		µg/kg dry	4.3	2.3	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 4.3		µg/kg dry	4.3	3.1	1	"	"	"	"	"	X
594-20-7	2,2-Dichloropropane	< 4.3		µg/kg dry	4.3	1.7	1	"	"	"	"	"	X
563-58-6	1,1-Dichloropropene	< 4.3		µg/kg dry	4.3	1.6	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 4.3		µg/kg dry	4.3	1.5	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 4.3		µg/kg dry	4.3	2.6	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 4.3		µg/kg dry	4.3	2.6	1	"	"	"	"	"	X

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Sample Identification

SB-103 (2-4)

SB84992-09

Client Project #

60316060

Matrix

Soil

Collection Date/Time

19-Feb-14 09:50

Received

20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (low level)

Initial weight: 7.36 g

87-68-3	Hexachlorobutadiene	< 4.3		µg/kg dry	4.3	4.3	1	SW846 8260C	26-Feb-14	26-Feb-14	JEG	1404262	X
591-78-6	2-Hexanone (MBK)	< 42.9		µg/kg dry	42.9	10.0	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 4.3		µg/kg dry	4.3	0.9	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 4.3		µg/kg dry	4.3	2.0	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 4.3		µg/kg dry	4.3	2.7	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 42.9		µg/kg dry	42.9	17.6	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 8.6		µg/kg dry	8.6	3.5	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 4.3		µg/kg dry	4.3	1.9	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 4.3		µg/kg dry	4.3	1.7	1	"	"	"	"	"	X
100-42-5	Styrene	< 4.3		µg/kg dry	4.3	1.3	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 4.3		µg/kg dry	4.3	2.1	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 4.3		µg/kg dry	4.3	4.0	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 4.3		µg/kg dry	4.3	2.7	1	"	"	"	"	"	X
108-88-3	Toluene	< 4.3		µg/kg dry	4.3	2.9	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 4.3		µg/kg dry	4.3	3.0	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 4.3		µg/kg dry	4.3	3.3	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 4.3		µg/kg dry	4.3	3.0	1	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 4.3		µg/kg dry	4.3	3.3	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 4.3		µg/kg dry	4.3	3.1	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 4.3		µg/kg dry	4.3	2.7	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 4.3		µg/kg dry	4.3	1.8	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 4.3		µg/kg dry	4.3	3.6	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 4.3		µg/kg dry	4.3	1.5	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 4.3		µg/kg dry	4.3	1.7	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 4.3		µg/kg dry	4.3	2.6	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 8.6		µg/kg dry	8.6	5.8	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 4.3		µg/kg dry	4.3	1.1	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 8.6		µg/kg dry	8.6	4.2	1	"	"	"	"	"	X
60-29-7	Ethyl ether	< 4.3		µg/kg dry	4.3	3.1	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 4.3		µg/kg dry	4.3	1.1	1	"	"	"	"	"	X
637-92-3	Ethyl tert-butyl ether	< 4.3		µg/kg dry	4.3	1.7	1	"	"	"	"	"	X
108-20-3	Di-isopropyl ether	< 4.3		µg/kg dry	4.3	2.2	1	"	"	"	"	"	X
75-65-0	Tert-Butanol / butyl alcohol	< 42.9		µg/kg dry	42.9	42.2	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 85.9		µg/kg dry	85.9	76.3	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 21.5		µg/kg dry	21.5	7.3	1	"	"	"	"	"	X
64-17-5	Ethanol	< 1720		µg/kg dry	1720	281	1	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	96			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	102			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	119			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	106			70-130 %			"	"	"	"	"	

Semivolatile Organic Compounds by GCMS

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Sample Identification

SB-103 (2-4)
SB84992-09

Client Project #
60316060

Matrix
Soil

Collection Date/Time
19-Feb-14 09:50

Received
20-Feb-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270

Prepared by method SW846 3545A

83-32-9	Acenaphthene	< 183		µg/kg dry	183	46.5	1	SW846 8270D	27-Feb-14	03-Mar-14	MSL	1404336	X
208-96-8	Acenaphthylene	< 183		µg/kg dry	183	50.7	1	"	"	"	"	"	X
120-12-7	Anthracene	248		µg/kg dry	183	46.7	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	977		µg/kg dry	183	49.0	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	948		µg/kg dry	183	49.8	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	931		µg/kg dry	183	39.8	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	568		µg/kg dry	183	50.9	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	763		µg/kg dry	183	64.8	1	"	"	"	"	"	X
218-01-9	Chrysene	1,040		µg/kg dry	183	51.7	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	189		µg/kg dry	183	47.3	1	"	"	"	"	"	X
206-44-0	Fluoranthene	2,620		µg/kg dry	183	51.2	1	"	"	"	"	"	X
86-73-7	Fluorene	< 183		µg/kg dry	183	50.9	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	645		µg/kg dry	183	50.7	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 183		µg/kg dry	183	54.0	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 183		µg/kg dry	183	52.3	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 183		µg/kg dry	183	51.1	1	"	"	"	"	"	X
85-01-8	Phenanthrene	1,660		µg/kg dry	183	48.9	1	"	"	"	"	"	X
129-00-0	Pyrene	1,760		µg/kg dry	183	44.2	1	"	"	"	"	"	X

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	70			30-130 %			"	"	"	"	"	
1718-51-0	Terphenyl-dl4	68			30-130 %			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Extractable Total Petroleum Hydrocarbons

Prepared by method SW846 3546

8006-61-9	Gasoline	< 29.0		mg/kg dry	29.0	1.4	1	CT ETPH	26-Feb-14	28-Feb-14	SEP	1404243	
68476-30-2	Fuel Oil #2	< 29.0		mg/kg dry	29.0	2.9	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 29.0		mg/kg dry	29.0	2.9	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 29.0		mg/kg dry	29.0	7.2	1	"	"	"	"	"	
M09800000	Motor Oil	< 29.0		mg/kg dry	29.0	2.9	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 29.0		mg/kg dry	29.0	7.2	1	"	"	"	"	"	
	Unidentified	107		mg/kg dry	29.0	7.2	1	"	"	"	"	"	
	Other Oil	Calculated as		mg/kg dry	29.0	2.9	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	107		mg/kg dry	29.0	2.7	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	107		mg/kg dry	29.0	2.7	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	73			50-150 %			"	"	"	"	"	
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Total Metals by EPA 6000/7000 Series Methods

7440-38-2	Arsenic	3.15		mg/kg dry	1.56	0.682	1	SW846 6010C	27-Feb-14	03-Mar-14	EDT	1404365	X
7439-92-1	Lead	65.5		mg/kg dry	1.56	0.576	1	"	"	"	"	"	X
7440-36-0	Antimony	< 5.21		mg/kg dry	5.21	0.961	1	"	"	"	"	"	X

General Chemistry Parameters

	% Solids	90.4		%			1	SM2540 G Mod.	24-Feb-14	24-Feb-14	DT	1404075	
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Sample Identification

SB-103 (10-12)

SB84992-10

Client Project #

60316060

Matrix

Soil

Collection Date/Time

19-Feb-14 10:10

Received

20-Feb-14

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270

Prepared by method SW846 3545A

83-32-9	Acenaphthene	< 199		µg/kg dry	199	50.6	1	SW846 8270D	27-Feb-14	03-Mar-14	MSL	1404336	X
208-96-8	Acenaphthylene	< 199		µg/kg dry	199	55.2	1	"	"	"	"	"	X
120-12-7	Anthracene	< 199		µg/kg dry	199	50.7	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	< 199		µg/kg dry	199	53.3	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	< 199		µg/kg dry	199	54.2	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	< 199		µg/kg dry	199	43.2	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 199		µg/kg dry	199	55.4	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	< 199		µg/kg dry	199	70.5	1	"	"	"	"	"	X
218-01-9	Chrysene	< 199		µg/kg dry	199	56.2	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 199		µg/kg dry	199	51.4	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 199		µg/kg dry	199	55.6	1	"	"	"	"	"	X
86-73-7	Fluorene	< 199		µg/kg dry	199	55.3	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 199		µg/kg dry	199	55.2	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 199		µg/kg dry	199	58.7	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 199		µg/kg dry	199	56.8	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 199		µg/kg dry	199	55.5	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 199		µg/kg dry	199	53.1	1	"	"	"	"	"	X
129-00-0	Pyrene	< 199		µg/kg dry	199	48.1	1	"	"	"	"	"	X

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	58			30-130 %			"	"	"	"	"	
1718-51-0	Terphenyl-dl4	86			30-130 %			"	"	"	"	"	

Extractable Petroleum Hydrocarbons

Extractable Total Petroleum Hydrocarbons

Prepared by method SW846 3546

8006-61-9	Gasoline	< 31.0		mg/kg dry	31.0	1.5	1	CT ETPH	26-Feb-14	28-Feb-14	SEP	1404243	
68476-30-2	Fuel Oil #2	< 31.0		mg/kg dry	31.0	3.1	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 31.0		mg/kg dry	31.0	3.1	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 31.0		mg/kg dry	31.0	7.7	1	"	"	"	"	"	
M09800000	Motor Oil	< 31.0		mg/kg dry	31.0	3.1	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 31.0		mg/kg dry	31.0	7.7	1	"	"	"	"	"	
	Unidentified	< 31.0		mg/kg dry	31.0	7.7	1	"	"	"	"	"	
	Other Oil	< 31.0		mg/kg dry	31.0	3.1	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	< 31.0		mg/kg dry	31.0	2.9	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	< 31.0		mg/kg dry	31.0	2.9	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	83			50-150 %			"	"	"	"	"	
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Total Metals by EPA 6000/7000 Series Methods

7440-38-2	Arsenic	2.61		mg/kg dry	1.67	0.726	1	SW846 6010C	27-Feb-14	03-Mar-14	EDT	1404365	X
7439-92-1	Lead	9.85		mg/kg dry	1.67	0.614	1	"	"	"	"	"	X
7440-36-0	Antimony	< 5.55		mg/kg dry	5.55	1.02	1	"	"	"	"	"	X

General Chemistry Parameters

	% Solids	83.3		%			1	SM2540 G Mod.	24-Feb-14	24-Feb-14	DT	1404075	
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Sample Identification

Trip Blank
SB84992-11

Client Project #
60316060

Matrix
Methanol/DI

Collection Date/Time
19-Feb-14 00:00

Received
20-Feb-14

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (low level)													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.0		µg/kg wet	5.0	3.0	1	SW846 8260C	26-Feb-14	26-Feb-14	JEG	1404262	X
67-64-1	Acetone	< 50.0		µg/kg wet	50.0	47.5	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 5.0		µg/kg wet	5.0	4.9	1	"	"	"	"	"	X
71-43-2	Benzene	< 5.0		µg/kg wet	5.0	1.7	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 5.0		µg/kg wet	5.0	1.4	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 5.0		µg/kg wet	5.0	4.4	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 5.0		µg/kg wet	5.0	3.7	1	"	"	"	"	"	X
75-25-2	Bromoform	< 5.0		µg/kg wet	5.0	2.7	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 10.0		µg/kg wet	10.0	8.9	1	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 50.0		µg/kg wet	50.0	15.3	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 5.0		µg/kg wet	5.0	3.5	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 5.0		µg/kg wet	5.0	2.2	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 5.0		µg/kg wet	5.0	1.3	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 10.0		µg/kg wet	10.0	7.2	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 5.0		µg/kg wet	5.0	3.7	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 5.0		µg/kg wet	5.0	2.7	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 10.0		µg/kg wet	10.0	3.3	1	"	"	"	"	"	X
67-66-3	Chloroform	< 5.0		µg/kg wet	5.0	3.7	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 10.0		µg/kg wet	10.0	5.1	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 5.0		µg/kg wet	5.0	1.5	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 5.0		µg/kg wet	5.0	2.3	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 10.0		µg/kg wet	10.0	9.6	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 5.0		µg/kg wet	5.0	3.6	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 5.0		µg/kg wet	5.0	3.8	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 5.0		µg/kg wet	5.0	3.4	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 5.0		µg/kg wet	5.0	1.7	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 5.0		µg/kg wet	5.0	2.2	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 5.0		µg/kg wet	5.0	1.9	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 10.0		µg/kg wet	10.0	2.5	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 5.0		µg/kg wet	5.0	4.9	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 5.0		µg/kg wet	5.0	3.3	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 5.0		µg/kg wet	5.0	2.7	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 5.0		µg/kg wet	5.0	2.2	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 5.0		µg/kg wet	5.0	4.2	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 5.0		µg/kg wet	5.0	2.6	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 5.0		µg/kg wet	5.0	3.7	1	"	"	"	"	"	X
594-20-7	2,2-Dichloropropane	< 5.0		µg/kg wet	5.0	2.0	1	"	"	"	"	"	X
563-58-6	1,1-Dichloropropene	< 5.0		µg/kg wet	5.0	1.9	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 5.0		µg/kg wet	5.0	1.8	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 5.0		µg/kg wet	5.0	3.0	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 5.0		µg/kg wet	5.0	3.0	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 5.0		µg/kg wet	5.0	5.0	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 50.0		µg/kg wet	50.0	11.6	1	"	"	"	"	"	X

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Sample Identification

Trip Blank
SB84992-11

Client Project #
60316060

Matrix
Methanol/DI

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19-Feb-14 00:00

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<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5035A Soil (low level)

98-82-8	Isopropylbenzene	< 5.0		µg/kg wet	5.0	1.1	1	SW846 8260C	26-Feb-14	26-Feb-14	JEG	1404262	X
99-87-6	4-Isopropyltoluene	< 5.0		µg/kg wet	5.0	2.4	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 5.0		µg/kg wet	5.0	3.1	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 50.0		µg/kg wet	50.0	20.6	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 10.0		µg/kg wet	10.0	4.1	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 5.0		µg/kg wet	5.0	2.2	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 5.0		µg/kg wet	5.0	2.0	1	"	"	"	"	"	X
100-42-5	Styrene	< 5.0		µg/kg wet	5.0	1.5	1	"	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 5.0		µg/kg wet	5.0	2.5	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 5.0		µg/kg wet	5.0	4.6	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 5.0		µg/kg wet	5.0	3.1	1	"	"	"	"	"	X
108-88-3	Toluene	< 5.0		µg/kg wet	5.0	3.4	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 5.0		µg/kg wet	5.0	3.5	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 5.0		µg/kg wet	5.0	3.9	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 5.0		µg/kg wet	5.0	3.5	1	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 5.0		µg/kg wet	5.0	3.8	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 5.0		µg/kg wet	5.0	3.6	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 5.0		µg/kg wet	5.0	3.1	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 5.0		µg/kg wet	5.0	2.1	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 5.0		µg/kg wet	5.0	4.2	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 5.0		µg/kg wet	5.0	1.7	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 5.0		µg/kg wet	5.0	2.0	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 5.0		µg/kg wet	5.0	3.0	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 10.0		µg/kg wet	10.0	6.7	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 5.0		µg/kg wet	5.0	1.3	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 10.0		µg/kg wet	10.0	4.9	1	"	"	"	"	"	X
60-29-7	Ethyl ether	< 5.0		µg/kg wet	5.0	3.6	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 5.0		µg/kg wet	5.0	1.2	1	"	"	"	"	"	X
637-92-3	Ethyl tert-butyl ether	< 5.0		µg/kg wet	5.0	2.0	1	"	"	"	"	"	X
108-20-3	Di-isopropyl ether	< 5.0		µg/kg wet	5.0	2.6	1	"	"	"	"	"	X
75-65-0	Tert-Butanol / butyl alcohol	< 50.0		µg/kg wet	50.0	49.2	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 100		µg/kg wet	100	88.8	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-butene	< 25.0		µg/kg wet	25.0	8.5	1	"	"	"	"	"	X
64-17-5	Ethanol	< 2000		µg/kg wet	2000	327	1	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	96			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	102			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	113			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	105			70-130 %			"	"	"	"	"	

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404262 - SW846 5035A Soil (low level)										
Blank (1404262-BLK1)	<u>Prepared & Analyzed: 26-Feb-14</u>									
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.0		µg/kg wet	5.0						
Acetone	< 50.0		µg/kg wet	50.0						
Acrylonitrile	< 5.0		µg/kg wet	5.0						
Benzene	< 5.0		µg/kg wet	5.0						
Bromobenzene	< 5.0		µg/kg wet	5.0						
Bromochloromethane	< 5.0		µg/kg wet	5.0						
Bromodichloromethane	< 5.0		µg/kg wet	5.0						
Bromoform	< 5.0		µg/kg wet	5.0						
Bromomethane	< 10.0		µg/kg wet	10.0						
2-Butanone (MEK)	< 50.0		µg/kg wet	50.0						
n-Butylbenzene	< 5.0		µg/kg wet	5.0						
sec-Butylbenzene	< 5.0		µg/kg wet	5.0						
tert-Butylbenzene	< 5.0		µg/kg wet	5.0						
Carbon disulfide	< 10.0		µg/kg wet	10.0						
Carbon tetrachloride	< 5.0		µg/kg wet	5.0						
Chlorobenzene	< 5.0		µg/kg wet	5.0						
Chloroethane	< 10.0		µg/kg wet	10.0						
Chloroform	< 5.0		µg/kg wet	5.0						
Chloromethane	< 10.0		µg/kg wet	10.0						
2-Chlorotoluene	< 5.0		µg/kg wet	5.0						
4-Chlorotoluene	< 5.0		µg/kg wet	5.0						
1,2-Dibromo-3-chloropropane	< 10.0		µg/kg wet	10.0						
Dibromochloromethane	< 5.0		µg/kg wet	5.0						
1,2-Dibromoethane (EDB)	< 5.0		µg/kg wet	5.0						
Dibromomethane	< 5.0		µg/kg wet	5.0						
1,2-Dichlorobenzene	< 5.0		µg/kg wet	5.0						
1,3-Dichlorobenzene	< 5.0		µg/kg wet	5.0						
1,4-Dichlorobenzene	< 5.0		µg/kg wet	5.0						
Dichlorodifluoromethane (Freon12)	< 10.0		µg/kg wet	10.0						
1,1-Dichloroethane	< 5.0		µg/kg wet	5.0						
1,2-Dichloroethane	< 5.0		µg/kg wet	5.0						
1,1-Dichloroethene	< 5.0		µg/kg wet	5.0						
cis-1,2-Dichloroethene	< 5.0		µg/kg wet	5.0						
trans-1,2-Dichloroethene	< 5.0		µg/kg wet	5.0						
1,2-Dichloropropane	< 5.0		µg/kg wet	5.0						
1,3-Dichloropropane	< 5.0		µg/kg wet	5.0						
2,2-Dichloropropane	< 5.0		µg/kg wet	5.0						
1,1-Dichloropropene	< 5.0		µg/kg wet	5.0						
cis-1,3-Dichloropropene	< 5.0		µg/kg wet	5.0						
trans-1,3-Dichloropropene	< 5.0		µg/kg wet	5.0						
Ethylbenzene	< 5.0		µg/kg wet	5.0						
Hexachlorobutadiene	< 5.0		µg/kg wet	5.0						
2-Hexanone (MBK)	< 50.0		µg/kg wet	50.0						
Isopropylbenzene	< 5.0		µg/kg wet	5.0						
4-Isopropyltoluene	< 5.0		µg/kg wet	5.0						
Methyl tert-butyl ether	< 5.0		µg/kg wet	5.0						
4-Methyl-2-pentanone (MIBK)	< 50.0		µg/kg wet	50.0						
Methylene chloride	< 10.0		µg/kg wet	10.0						
Naphthalene	< 5.0		µg/kg wet	5.0						
n-Propylbenzene	< 5.0		µg/kg wet	5.0						
Styrene	< 5.0		µg/kg wet	5.0						
1,1,1,2-Tetrachloroethane	< 5.0		µg/kg wet	5.0						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404262 - SW846 5035A Soil (low level)										
Blank (1404262-BLK1)					<u>Prepared & Analyzed: 26-Feb-14</u>					
1,1,2,2-Tetrachloroethane	< 5.0		µg/kg wet	5.0						
Tetrachloroethene	< 5.0		µg/kg wet	5.0						
Toluene	< 5.0		µg/kg wet	5.0						
1,2,3-Trichlorobenzene	< 5.0		µg/kg wet	5.0						
1,2,4-Trichlorobenzene	< 5.0		µg/kg wet	5.0						
1,3,5-Trichlorobenzene	< 5.0		µg/kg wet	5.0						
1,1,1-Trichloroethane	< 5.0		µg/kg wet	5.0						
1,1,2-Trichloroethane	< 5.0		µg/kg wet	5.0						
Trichloroethene	< 5.0		µg/kg wet	5.0						
Trichlorofluoromethane (Freon 11)	< 5.0		µg/kg wet	5.0						
1,2,3-Trichloropropane	< 5.0		µg/kg wet	5.0						
1,2,4-Trimethylbenzene	< 5.0		µg/kg wet	5.0						
1,3,5-Trimethylbenzene	< 5.0		µg/kg wet	5.0						
Vinyl chloride	< 5.0		µg/kg wet	5.0						
m,p-Xylene	< 10.0		µg/kg wet	10.0						
o-Xylene	< 5.0		µg/kg wet	5.0						
Tetrahydrofuran	< 10.0		µg/kg wet	10.0						
Ethyl ether	< 5.0		µg/kg wet	5.0						
Tert-amyl methyl ether	< 5.0		µg/kg wet	5.0						
Ethyl tert-butyl ether	< 5.0		µg/kg wet	5.0						
Di-isopropyl ether	< 5.0		µg/kg wet	5.0						
Tert-Butanol / butyl alcohol	< 50.0		µg/kg wet	50.0						
1,4-Dioxane	< 100		µg/kg wet	100						
trans-1,4-Dichloro-2-butene	< 25.0		µg/kg wet	25.0						
Ethanol	< 2000		µg/kg wet	2000						
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Surrogate: 4-Bromofluorobenzene	48.7		µg/kg wet		50.0		97	70-130		
Surrogate: Toluene-d8	51.0		µg/kg wet		50.0		102	70-130		
Surrogate: 1,2-Dichloroethane-d4	58.9		µg/kg wet		50.0		118	70-130		
Surrogate: Dibromofluoromethane	52.7		µg/kg wet		50.0		105	70-130		
LCS (1404262-BS1)					<u>Prepared & Analyzed: 26-Feb-14</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	17.9		µg/kg wet		20.0		90	70-130		
Acetone	21.0		µg/kg wet		20.0		105	70-130		
Acrylonitrile	17.6		µg/kg wet		20.0		88	70-130		
Benzene	19.0		µg/kg wet		20.0		95	70-130		
Bromobenzene	20.4		µg/kg wet		20.0		102	70-130		
Bromochloromethane	18.9		µg/kg wet		20.0		94	70-130		
Bromodichloromethane	18.4		µg/kg wet		20.0		92	70-130		
Bromoform	20.3		µg/kg wet		20.0		102	70-130		
Bromomethane	19.6		µg/kg wet		20.0		98	70-130		
2-Butanone (MEK)	21.0		µg/kg wet		20.0		105	70-130		
n-Butylbenzene	16.8		µg/kg wet		20.0		84	70-130		
sec-Butylbenzene	21.0		µg/kg wet		20.0		105	70-130		
tert-Butylbenzene	21.0		µg/kg wet		20.0		105	70-130		
Carbon disulfide	18.8		µg/kg wet		20.0		94	70-130		
Carbon tetrachloride	18.4		µg/kg wet		20.0		92	70-130		
Chlorobenzene	19.3		µg/kg wet		20.0		97	70-130		
Chloroethane	18.4		µg/kg wet		20.0		92	70-130		
Chloroform	18.3		µg/kg wet		20.0		92	70-130		
Chloromethane	16.4		µg/kg wet		20.0		82	70-130		
2-Chlorotoluene	20.7		µg/kg wet		20.0		104	70-130		
4-Chlorotoluene	20.3		µg/kg wet		20.0		102	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404262 - SW846 5035A Soil (low level)										
<u>LCS (1404262-BS1)</u>										
								<u>Prepared & Analyzed: 26-Feb-14</u>		
1,2-Dibromo-3-chloropropane	18.1		µg/kg wet		20.0		91	70-130		
Dibromochloromethane	18.9		µg/kg wet		20.0		95	70-130		
1,2-Dibromoethane (EDB)	19.6		µg/kg wet		20.0		98	70-130		
Dibromomethane	18.1		µg/kg wet		20.0		91	70-130		
1,2-Dichlorobenzene	18.6		µg/kg wet		20.0		93	70-130		
1,3-Dichlorobenzene	20.6		µg/kg wet		20.0		103	70-130		
1,4-Dichlorobenzene	18.5		µg/kg wet		20.0		92	70-130		
Dichlorodifluoromethane (Freon12)	19.1		µg/kg wet		20.0		96	70-130		
1,1-Dichloroethane	17.4		µg/kg wet		20.0		87	70-130		
1,2-Dichloroethane	18.0		µg/kg wet		20.0		90	70-130		
1,1-Dichloroethene	18.7		µg/kg wet		20.0		93	70-130		
cis-1,2-Dichloroethene	18.8		µg/kg wet		20.0		94	70-130		
trans-1,2-Dichloroethene	18.3		µg/kg wet		20.0		91	70-130		
1,2-Dichloropropane	18.1		µg/kg wet		20.0		90	70-130		
1,3-Dichloropropane	18.9		µg/kg wet		20.0		95	70-130		
2,2-Dichloropropane	18.3		µg/kg wet		20.0		91	70-130		
1,1-Dichloropropene	18.5		µg/kg wet		20.0		92	70-130		
cis-1,3-Dichloropropene	19.1		µg/kg wet		20.0		95	70-130		
trans-1,3-Dichloropropene	16.6		µg/kg wet		20.0		83	70-130		
Ethylbenzene	20.3		µg/kg wet		20.0		101	70-130		
Hexachlorobutadiene	18.9		µg/kg wet		20.0		94	70-130		
2-Hexanone (MBK)	14.7		µg/kg wet		20.0		74	70-130		
Isopropylbenzene	17.7		µg/kg wet		20.0		89	70-130		
4-Isopropyltoluene	18.6		µg/kg wet		20.0		93	70-130		
Methyl tert-butyl ether	19.1		µg/kg wet		20.0		95	70-130		
4-Methyl-2-pentanone (MIBK)	20.2		µg/kg wet		20.0		101	70-130		
Methylene chloride	16.7		µg/kg wet		20.0		84	70-130		
Naphthalene	14.7		µg/kg wet		20.0		74	70-130		
n-Propylbenzene	20.4		µg/kg wet		20.0		102	70-130		
Styrene	20.6		µg/kg wet		20.0		103	70-130		
1,1,1,2-Tetrachloroethane	19.8		µg/kg wet		20.0		99	70-130		
1,1,2,2-Tetrachloroethane	19.6		µg/kg wet		20.0		98	70-130		
Tetrachloroethene	19.4		µg/kg wet		20.0		97	70-130		
Toluene	19.0		µg/kg wet		20.0		95	70-130		
1,2,3-Trichlorobenzene	16.5		µg/kg wet		20.0		83	70-130		
1,2,4-Trichlorobenzene	16.5		µg/kg wet		20.0		82	70-130		
1,3,5-Trichlorobenzene	18.3		µg/kg wet		20.0		91	70-130		
1,1,1-Trichloroethane	18.4		µg/kg wet		20.0		92	70-130		
1,1,2-Trichloroethane	19.1		µg/kg wet		20.0		95	70-130		
Trichloroethene	19.7		µg/kg wet		20.0		98	70-130		
Trichlorofluoromethane (Freon 11)	19.2		µg/kg wet		20.0		96	70-130		
1,2,3-Trichloropropane	18.6		µg/kg wet		20.0		93	70-130		
1,2,4-Trimethylbenzene	20.0		µg/kg wet		20.0		100	70-130		
1,3,5-Trimethylbenzene	20.2		µg/kg wet		20.0		101	70-130		
Vinyl chloride	18.8		µg/kg wet		20.0		94	70-130		
m,p-Xylene	20.1		µg/kg wet		20.0		101	70-130		
o-Xylene	21.0		µg/kg wet		20.0		105	70-130		
Tetrahydrofuran	16.0		µg/kg wet		20.0		80	70-130		
Ethyl ether	20.7		µg/kg wet		20.0		103	70-130		
Tert-amyl methyl ether	17.8		µg/kg wet		20.0		89	70-130		
Ethyl tert-butyl ether	18.4		µg/kg wet		20.0		92	70-130		
Di-isopropyl ether	17.0		µg/kg wet		20.0		85	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404262 - SW846 5035A Soil (low level)										
LCS (1404262-BS1)					Prepared & Analyzed: 26-Feb-14					
Tert-Butanol / butyl alcohol	168		µg/kg wet		200		84	70-130		
1,4-Dioxane	173		µg/kg wet		200		87	70-130		
trans-1,4-Dichloro-2-butene	19.4		µg/kg wet		20.0		97	70-130		
Ethanol	402		µg/kg wet		400		101	70-130		
Surrogate: 4-Bromofluorobenzene	52.7		µg/kg wet		50.0		105	70-130		
Surrogate: Toluene-d8	50.1		µg/kg wet		50.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	48.8		µg/kg wet		50.0		98	70-130		
Surrogate: Dibromofluoromethane	50.9		µg/kg wet		50.0		102	70-130		
LCS Dup (1404262-BSD1)					Prepared & Analyzed: 26-Feb-14					
1,1,2-Trichlorotrifluoroethane (Freon 113)	17.7		µg/kg wet		20.0		89	70-130	1	30
Acetone	17.8		µg/kg wet		20.0		89	70-130	16	30
Acrylonitrile	15.8		µg/kg wet		20.0		79	70-130	11	30
Benzene	18.8		µg/kg wet		20.0		94	70-130	1	30
Bromobenzene	19.8		µg/kg wet		20.0		99	70-130	3	30
Bromochloromethane	18.2		µg/kg wet		20.0		91	70-130	4	30
Bromodichloromethane	17.8		µg/kg wet		20.0		89	70-130	3	30
Bromoform	18.8		µg/kg wet		20.0		94	70-130	8	30
Bromomethane	20.4		µg/kg wet		20.0		102	70-130	4	30
2-Butanone (MEK)	15.0	QR2	µg/kg wet		20.0		75	70-130	33	30
n-Butylbenzene	16.9		µg/kg wet		20.0		84	70-130	0.4	30
sec-Butylbenzene	21.3		µg/kg wet		20.0		106	70-130	1	30
tert-Butylbenzene	21.3		µg/kg wet		20.0		106	70-130	1	30
Carbon disulfide	18.9		µg/kg wet		20.0		95	70-130	0.5	30
Carbon tetrachloride	18.5		µg/kg wet		20.0		93	70-130	0.7	30
Chlorobenzene	19.4		µg/kg wet		20.0		97	70-130	0.2	30
Chloroethane	18.7		µg/kg wet		20.0		94	70-130	2	30
Chloroform	18.0		µg/kg wet		20.0		90	70-130	2	30
Chloromethane	16.5		µg/kg wet		20.0		83	70-130	0.6	30
2-Chlorotoluene	20.5		µg/kg wet		20.0		102	70-130	1	30
4-Chlorotoluene	20.2		µg/kg wet		20.0		101	70-130	0.7	30
1,2-Dibromo-3-chloropropane	16.4		µg/kg wet		20.0		82	70-130	10	30
Dibromochloromethane	18.2		µg/kg wet		20.0		91	70-130	4	30
1,2-Dibromoethane (EDB)	19.0		µg/kg wet		20.0		95	70-130	3	30
Dibromomethane	17.4		µg/kg wet		20.0		87	70-130	4	30
1,2-Dichlorobenzene	18.5		µg/kg wet		20.0		93	70-130	0.05	30
1,3-Dichlorobenzene	20.5		µg/kg wet		20.0		102	70-130	0.6	30
1,4-Dichlorobenzene	18.4		µg/kg wet		20.0		92	70-130	0.5	30
Dichlorodifluoromethane (Freon12)	19.7		µg/kg wet		20.0		99	70-130	3	30
1,1-Dichloroethane	17.5		µg/kg wet		20.0		87	70-130	0.8	30
1,2-Dichloroethane	17.3		µg/kg wet		20.0		86	70-130	4	30
1,1-Dichloroethene	18.5		µg/kg wet		20.0		92	70-130	1	30
cis-1,2-Dichloroethene	18.7		µg/kg wet		20.0		93	70-130	0.4	30
trans-1,2-Dichloroethene	18.3		µg/kg wet		20.0		91	70-130	0.2	30
1,2-Dichloropropane	17.4		µg/kg wet		20.0		87	70-130	4	30
1,3-Dichloropropane	18.0		µg/kg wet		20.0		90	70-130	5	30
2,2-Dichloropropane	18.1		µg/kg wet		20.0		90	70-130	1	30
1,1-Dichloropropene	18.5		µg/kg wet		20.0		93	70-130	0.3	30
cis-1,3-Dichloropropene	18.8		µg/kg wet		20.0		94	70-130	2	30
trans-1,3-Dichloropropene	16.0		µg/kg wet		20.0		80	70-130	4	30
Ethylbenzene	20.4		µg/kg wet		20.0		102	70-130	0.6	30
Hexachlorobutadiene	19.5		µg/kg wet		20.0		97	70-130	3	30

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404262 - SW846 5035A Soil (low level)										
LCS Dup (1404262-BSD1)					Prepared & Analyzed: 26-Feb-14					
2-Hexanone (MBK)	13.9		µg/kg wet		20.0		69	70-130	6	30
Isopropylbenzene	17.9		µg/kg wet		20.0		89	70-130	0.9	30
4-Isopropyltoluene	19.0		µg/kg wet		20.0		95	70-130	2	30
Methyl tert-butyl ether	17.9		µg/kg wet		20.0		90	70-130	6	30
4-Methyl-2-pentanone (MIBK)	17.0		µg/kg wet		20.0		85	70-130	17	30
Methylene chloride	16.4		µg/kg wet		20.0		82	70-130	2	30
Naphthalene	13.4	QM9	µg/kg wet		20.0		67	70-130	9	30
n-Propylbenzene	20.6		µg/kg wet		20.0		103	70-130	0.7	30
Styrene	20.3		µg/kg wet		20.0		101	70-130	2	30
1,1,1,2-Tetrachloroethane	19.7		µg/kg wet		20.0		98	70-130	0.7	30
1,1,2,2-Tetrachloroethane	18.4		µg/kg wet		20.0		92	70-130	6	30
Tetrachloroethene	19.3		µg/kg wet		20.0		97	70-130	0.6	30
Toluene	19.1		µg/kg wet		20.0		95	70-130	0.3	30
1,2,3-Trichlorobenzene	15.8		µg/kg wet		20.0		79	70-130	4	30
1,2,4-Trichlorobenzene	16.2		µg/kg wet		20.0		81	70-130	2	30
1,3,5-Trichlorobenzene	18.3		µg/kg wet		20.0		92	70-130	0.2	30
1,1,1-Trichloroethane	18.4		µg/kg wet		20.0		92	70-130	0.1	30
1,1,2-Trichloroethane	18.0		µg/kg wet		20.0		90	70-130	6	30
Trichloroethene	19.6		µg/kg wet		20.0		98	70-130	0.6	30
Trichlorofluoromethane (Freon 11)	19.0		µg/kg wet		20.0		95	70-130	1	30
1,2,3-Trichloropropane	17.4		µg/kg wet		20.0		87	70-130	6	30
1,2,4-Trimethylbenzene	20.1		µg/kg wet		20.0		100	70-130	0.1	30
1,3,5-Trimethylbenzene	20.4		µg/kg wet		20.0		102	70-130	1	30
Vinyl chloride	18.8		µg/kg wet		20.0		94	70-130	0.2	30
m,p-Xylene	20.6		µg/kg wet		20.0		103	70-130	2	30
o-Xylene	20.8		µg/kg wet		20.0		104	70-130	1	30
Tetrahydrofuran	14.3		µg/kg wet		20.0		72	70-130	11	30
Ethyl ether	20.1		µg/kg wet		20.0		100	70-130	3	30
Tert-amyl methyl ether	16.6		µg/kg wet		20.0		83	70-130	7	30
Ethyl tert-butyl ether	17.6		µg/kg wet		20.0		88	70-130	4	30
Di-isopropyl ether	16.3		µg/kg wet		20.0		82	70-130	4	30
Tert-Butanol / butyl alcohol	141		µg/kg wet		200		70	70-130	18	30
1,4-Dioxane	160		µg/kg wet		200		80	70-130	8	30
trans-1,4-Dichloro-2-butene	16.5		µg/kg wet		20.0		83	70-130	16	30
Ethanol	303		µg/kg wet		400		76	70-130	28	30
Surrogate: 4-Bromofluorobenzene	51.8		µg/kg wet		50.0		104	70-130		
Surrogate: Toluene-d8	49.8		µg/kg wet		50.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	46.5		µg/kg wet		50.0		93	70-130		
Surrogate: Dibromofluoromethane	50.0		µg/kg wet		50.0		100	70-130		

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404336 - SW846 3545A										
Blank (1404336-BLK1)					<u>Prepared & Analyzed: 27-Feb-14</u>					
Acenaphthene	< 166		µg/kg wet	166						
Acenaphthylene	< 166		µg/kg wet	166						
Anthracene	< 166		µg/kg wet	166						
Benzo (a) anthracene	< 166		µg/kg wet	166						
Benzo (a) pyrene	< 166		µg/kg wet	166						
Benzo (b) fluoranthene	< 166		µg/kg wet	166						
Benzo (g,h,i) perylene	< 166		µg/kg wet	166						
Benzo (k) fluoranthene	< 166		µg/kg wet	166						
Chrysene	< 166		µg/kg wet	166						
Dibenzo (a,h) anthracene	< 166		µg/kg wet	166						
Fluoranthene	< 166		µg/kg wet	166						
Fluorene	< 166		µg/kg wet	166						
Indeno (1,2,3-cd) pyrene	< 166		µg/kg wet	166						
1-Methylnaphthalene	< 166		µg/kg wet	166						
2-Methylnaphthalene	< 166		µg/kg wet	166						
Naphthalene	< 166		µg/kg wet	166						
Phenanthrene	< 166		µg/kg wet	166						
Pyrene	< 166		µg/kg wet	166						
<i>Surrogate: 2-Fluorobiphenyl</i>	1430		µg/kg wet		1660		86	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1510		µg/kg wet		1660		91	30-130		
LCS (1404336-BS1)					<u>Prepared & Analyzed: 27-Feb-14</u>					
Acenaphthene	1310		µg/kg wet	165	1650		79	40-140		
Acenaphthylene	1430		µg/kg wet	165	1650		87	40-140		
Anthracene	1350		µg/kg wet	165	1650		82	40-140		
Benzo (a) anthracene	1290		µg/kg wet	165	1650		78	40-140		
Benzo (a) pyrene	1350		µg/kg wet	165	1650		82	40-140		
Benzo (b) fluoranthene	1120		µg/kg wet	165	1650		68	40-140		
Benzo (g,h,i) perylene	1200		µg/kg wet	165	1650		73	40-140		
Benzo (k) fluoranthene	1330		µg/kg wet	165	1650		81	40-140		
Chrysene	1320		µg/kg wet	165	1650		80	40-140		
Dibenzo (a,h) anthracene	1230		µg/kg wet	165	1650		75	40-140		
Fluoranthene	1630		µg/kg wet	165	1650		99	40-140		
Fluorene	1390		µg/kg wet	165	1650		84	40-140		
Indeno (1,2,3-cd) pyrene	1250		µg/kg wet	165	1650		76	40-140		
1-Methylnaphthalene	1240		µg/kg wet	165	1650		75	40-140		
2-Methylnaphthalene	1250		µg/kg wet	165	1650		76	40-140		
Naphthalene	1150		µg/kg wet	165	1650		70	40-140		
Phenanthrene	1280		µg/kg wet	165	1650		78	40-140		
Pyrene	1270		µg/kg wet	165	1650		77	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	1390		µg/kg wet		1650		85	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1720		µg/kg wet		1650		104	30-130		

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Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404243 - SW846 3546										
Blank (1404243-BLK1)					<u>Prepared: 26-Feb-14 Analyzed: 27-Feb-14</u>					
Gasoline	< 26.2		mg/kg wet	26.2						
Fuel Oil #2	< 26.2		mg/kg wet	26.2						
Fuel Oil #4	< 26.2		mg/kg wet	26.2						
Fuel Oil #6	< 26.2		mg/kg wet	26.2						
Motor Oil	< 26.2		mg/kg wet	26.2						
Aviation Fuel	< 26.2		mg/kg wet	26.2						
Unidentified	< 26.2		mg/kg wet	26.2						
Other Oil	< 26.2		mg/kg wet	26.2						
Total Petroleum Hydrocarbons	< 26.2		mg/kg wet	26.2						
C9-C36 Aliphatic Hydrocarbons	< 26.2		mg/kg wet	26.2						
n-Nonadecane	< 0.005		mg/kg wet	0.005						
n-Nonane	< 0.005		mg/kg wet	0.005						
n-Decane	< 0.005		mg/kg wet	0.005						
n-Dodecane	< 0.005		mg/kg wet	0.005						
n-Tetradecane	< 0.005		mg/kg wet	0.005						
n-Hexadecane	< 0.005		mg/kg wet	0.005						
n-Octadecane	< 0.005		mg/kg wet	0.005						
n-Eicosane	< 0.005		mg/kg wet	0.005						
n-Docosane	< 0.005		mg/kg wet	0.005						
n-Tetracosane	< 0.005		mg/kg wet	0.005						
n-Hexacosane	< 0.005		mg/kg wet	0.005						
n-Octacosane	< 0.005		mg/kg wet	0.005						
n-Triacontane	< 0.005		mg/kg wet	0.005						
n-Hexatriacontane	< 0.005		mg/kg wet	0.005						
<i>Surrogate: 1-Chlorooctadecane</i>	2.31		mg/kg wet		3.29		70	50-150		
LCS (1404243-BS1)					<u>Prepared: 26-Feb-14 Analyzed: 27-Feb-14</u>					
C9-C36 Aliphatic Hydrocarbons	56.5		mg/kg wet	26.2	91.9		61	60-120		
<i>Surrogate: 1-Chlorooctadecane</i>	2.03		mg/kg wet		3.28		62	50-150		
LCS Dup (1404243-BSD1)					<u>Prepared: 26-Feb-14 Analyzed: 28-Feb-14</u>					
C9-C36 Aliphatic Hydrocarbons	58.2		mg/kg wet	25.7	90.1		65	60-120	5	200
<i>Surrogate: 1-Chlorooctadecane</i>	2.09		mg/kg wet		3.22		65	50-150		
Duplicate (1404243-DUP1)					Source: SB84992-09 <u>Prepared: 26-Feb-14 Analyzed: 28-Feb-14</u>					
Gasoline	< 28.9		mg/kg dry	28.9		BRL				50
Fuel Oil #2	< 28.9		mg/kg dry	28.9		BRL				50
Fuel Oil #4	< 28.9		mg/kg dry	28.9		BRL				50
Fuel Oil #6	< 28.9		mg/kg dry	28.9		BRL				50
Motor Oil	< 28.9		mg/kg dry	28.9		BRL				50
Aviation Fuel	< 28.9		mg/kg dry	28.9		BRL				50
Unidentified	154		mg/kg dry	28.9		107			36	50
Other Oil	Calculated as		mg/kg dry	28.9		Calculated as				50
Total Petroleum Hydrocarbons	154		mg/kg dry	28.9		107			36	50
C9-C36 Aliphatic Hydrocarbons	154		mg/kg dry	28.9		107			36	50
<i>Surrogate: 1-Chlorooctadecane</i>	2.63		mg/kg dry		3.62		73	50-150		
Matrix Spike (1404243-MS1)					Source: SB84992-09 <u>Prepared: 26-Feb-14 Analyzed: 28-Feb-14</u>					
C9-C36 Aliphatic Hydrocarbons	358	QM7	mg/kg dry	29.0	102	107	247	50-150		
<i>Surrogate: 1-Chlorooctadecane</i>	2.29		mg/kg dry		3.63		63	50-150		
Matrix Spike Dup (1404243-MSD1)					Source: SB84992-09 <u>Prepared: 26-Feb-14 Analyzed: 28-Feb-14</u>					
C9-C36 Aliphatic Hydrocarbons	171	QR5	mg/kg dry	29.0	102	107	63	50-150	119	30
<i>Surrogate: 1-Chlorooctadecane</i>	1.99		mg/kg dry		3.63		55	50-150		

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Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1404365 - SW846 3050B										
<u>Blank (1404365-BLK1)</u>					<u>Prepared: 27-Feb-14 Analyzed: 03-Mar-14</u>					
Antimony	< 4.75		mg/kg wet	4.75						
Lead	< 1.43		mg/kg wet	1.43						
Arsenic	< 1.43		mg/kg wet	1.43						
<u>Duplicate (1404365-DUP1)</u>					<u>Prepared: 27-Feb-14 Analyzed: 03-Mar-14</u>					
Arsenic	3.63		mg/kg dry	1.59		3.15			14	20
Lead	70.2		mg/kg dry	1.59		65.5			7	20
Antimony	< 5.28		mg/kg dry	5.28		BRL				20
<u>Matrix Spike (1404365-MS1)</u>					<u>Prepared: 27-Feb-14 Analyzed: 03-Mar-14</u>					
Arsenic	110		mg/kg dry	1.62	135	3.15	79	75-125		
Lead	177		mg/kg dry	1.62	135	65.5	83	75-125		
Antimony	71.4	QM9	mg/kg dry	5.40	135	BRL	53	75-125		
<u>Matrix Spike Dup (1404365-MSD1)</u>					<u>Prepared: 27-Feb-14 Analyzed: 03-Mar-14</u>					
Antimony	59.3	QM9	mg/kg dry	4.92	123	BRL	48	75-125	19	20
Lead	163		mg/kg dry	1.48	123	65.5	79	75-125	9	20
Arsenic	99.7		mg/kg dry	1.48	123	3.15	78	75-125	10	20
<u>Post Spike (1404365-PS1)</u>					<u>Prepared: 27-Feb-14 Analyzed: 03-Mar-14</u>					
Arsenic	109		mg/kg dry	1.56	130	3.15	81	80-120		
<u>Reference (1404365-SRM1)</u>					<u>Prepared: 27-Feb-14 Analyzed: 03-Mar-14</u>					
Antimony	36.0		mg/kg wet	5.00	65.2		55	25-211.62		
Arsenic	41.1		mg/kg wet	1.50	44.7		92	80.88-118.7		
Lead	46.5		mg/kg wet	1.50	49.5		94	81.71-118.4		
<u>Reference (1404365-SRM2)</u>					<u>Prepared: 27-Feb-14 Analyzed: 03-Mar-14</u>					
Lead	48.5		mg/kg wet	1.50	49.0		99	81.71-118.4		
Antimony	39.1		mg/kg wet	5.00	64.5		61	25-211.62		
Arsenic	42.0		mg/kg wet	1.50	44.2		95	80.88-118.7		

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Extractable Petroleum Hydrocarbons - Discrimination Check Report

Analyte(s)	Response	% Discrimination
Batch S402141		
<u>Calibration Check (S402141-CCV2)</u>		
n-Nonadecane	36305360	3.7
n-Nonane	30498080	-12.89
n-Decane	32854260	-6.16
n-Dodecane	34044470	-2.76
n-Tetradecane	35252830	0.7
n-Hexadecane	35944520	2.67
n-Octadecane	36496160	4.25
n-Eicosane	36419880	4.03
n-Docosane	36143200	3.24
n-Tetracosane	35952420	2.69
n-Hexacosane	35865170	2.44
n-Octacosane	35547380	1.54
n-Triacontane	34934900	-0.21
n-Hexatriacontane	33873600	-3.24
Average Area	35009445	

% Discrimination must be $\leq 20\%$. However, one peak can be $\leq 50\%$.

Calibration Check (S402141-CCV4)

n-Nonadecane	37213680	2.71
n-Nonane	31838940	-12.13
n-Decane	34177700	-5.67
n-Dodecane	35187700	-2.89
n-Tetradecane	36162420	-0.2
n-Hexadecane	36769260	1.48
n-Octadecane	37287380	2.91
n-Eicosane	37375900	3.15
n-Docosane	37249680	2.81
n-Tetracosane	37241650	2.78
n-Hexacosane	37300820	2.95
n-Octacosane	37105670	2.41
n-Triacontane	36758830	1.45
n-Hexatriacontane	35596220	-1.76
Average Area	36233275	

% Discrimination must be $\leq 20\%$. However, one peak can be $\leq 50\%$.

Extractable Petroleum Hydrocarbons - Discrimination Check Report

Analyte(s)	Response	% Discrimination
Batch S402141		
<u>Calibration Check (S402141-CCV6)</u>		
n-Nonadecane	26425240	3.16
n-Nonane	22411670	-12.51
n-Decane	24206410	-5.5
n-Dodecane	25151340	-1.81
n-Tetradecane	25891170	1.08
n-Hexadecane	26358320	2.9
n-Octadecane	26567180	3.71
n-Eicosane	26437740	3.21
n-Docosane	26128160	2.
n-Tetracosane	26052250	1.7
n-Hexacosane	26045960	1.68
n-Octacosane	25910740	1.15
n-Triacontane	25697080	0.32
n-Hexatriacontane	25336270	-1.09
Average Area	25615681	

% Discrimination must be $\leq 20\%$. However, one peak can be $\leq 50\%$.

Notes and Definitions

QM7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.
QR2	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QR5	RPD out of acceptance range.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Interpretation of Total Petroleum Hydrocarbon Report

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from analyses of various petroleum products. Possible match categories are as follows:

- Gasoline - includes regular, unleaded, premium, etc.
- Fuel Oil #2 - includes home heating oil, #2 fuel oil, and diesel
- Fuel Oil #4 - includes #4 fuel oil
- Fuel Oil #6 - includes #6 fuel oil and bunker "C" oil
- Motor Oil - includes virgin and waste automobile oil
- Ligroin - includes mineral spirits, petroleum naphtha, vm&p naphtha
- Aviation Fuel - includes kerosene, Jet A and JP-4
- Other Oil - includes lubricating and cutting oil, and silicon oil

At times, the unidentified petroleum product is quantified using a calibration that most closely approximates the distribution of compounds in the sample. When this occurs, the result is qualified as Calculated as.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

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Validated by:
June O'Connor
Kimberly Wisk



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
 Standard TAT - 7 to 10 business days
 Rush TAT - Date Needed: _____
 All TATs subject to laboratory approval
 Min. 24-hr notification needed for rushes
 Samples disposed after 60 days unless otherwise instructed

Report To: AECOM
500 Enterprise Dr.
Rocky Hill, CT 06067

Telephone #: 860-263-5800
 Project Mgr: Julie Williams

Invoice To: SAME

P.O. No.: _____
FON

Project No: 60316060
 Site Name: 177 State Street
 Location: Menden State CT
 Sampler(s): Scott Gish

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
 8=NaHSO₄ 9=Deionized Water 10=H₃PO₄ 11=ice 12=

DW=Drinking Water GW=Groundwater WW=Waste Water
 O=Oil SW=surface Water SO=Soil SL=Sludge A=Air
 X1= X2= X3=

G=Grab C=Compsite

Lab ID	Sample ID	Date	Time	Type	Matrix	Containers				VOCs	Analysis	List Preservative Code below:	QA/QC Reporting Notes: *additional charges may apply
						# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				
<u>SP849193-11</u>	<u>Trip Blank</u>		<u>Lab</u>			<u>2</u>						<u>1</u>	
Relinquished by: <u>Scott Gish</u> Received by: <u>[Signature]</u> <u>2-Date-14</u> <u>2/19/2014</u> <u>Time</u> <u>8:00:00 PM</u> <u>Temp °C</u> <input checked="" type="checkbox"/> EDD format: _____ EQUIS _____ <input checked="" type="checkbox"/> E-mail to: <u>Julie.Williams@aecom.com</u> Condition upon receipt: <input type="checkbox"/> Ambient <input type="checkbox"/> lead <input type="checkbox"/> Refrigerated <input type="checkbox"/> Custody Seals: <input type="checkbox"/> Present <input type="checkbox"/> Intact <input type="checkbox"/> Broken <input type="checkbox"/> DI VOA Frozen <input type="checkbox"/> Soil Jar Frozen													
<u>0.7/0/0.2/R</u> <u>[Signature]</u> <u>03-20-14</u>													



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
Standard TAT - 7 to 10 business days
 Rush TAT - Date Needed: _____
All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed

Project No: 60316060

Site Name: 177 State Street

Location: Meriden State CT

Sampler(s): Scott Gish

Invoice To: SAME

P.O. No.: RON

Report To: AECOM

500 Enterprise Dr.

Rocky Hill, CT 06067

Telephone #: 860-263-5800

Project Mgr: Julie Williams

1=Na₂SO₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
8=NaHSO₄ 9=Deionized Water 10=H₃PO₄ 11= Ice 12= _____

List Preservative Code below:

11 11 11 11 11 11 7/9*

QA/QC Reporting Notes:
*additional charges may apply

MA DEP MCP CAM Report yes no
CT DPH RCP Report yes no
 Standard No QC
 DQA* ASP B*
 ASP A* NJ Full
 NJ Reduced* Tier IV*
 Tier II*
 Other: _____
State-specific reporting standards: _____

DW=Drinking Water GW=Groundwater WW=Waste Water
O=Oil SW=surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab

C=Composite

Containers

of VOA Vials
of Amber Glass
of Clear Glass
of Plastic

Analysis

SVOCs PAH ETPH Arsenic Lead Antimony VOCs

Lab ID	Sample ID	Date	Time	Type	Matrix	SVOCs	PAH	ETPH	Arsenic	Lead	Antimony	VOCs
SB-100 (6-8)	SB-100 (6-8)	2/19/2014	1:30 PM	G	SO	X	X	X	X	X	X	
SB-100 (8-10)	SB-100 (8-10)	2/19/2014	1:45 PM	G	SO	X	X	X	X	X	X	
SB-104 (4-6)	SB-104 (4-6)	2/19/2014	12:00 PM	G	SO	X	X	X	X	X	X	
SB-104 (6-8)	SB-104 (6-8)	2/19/2014	12:10 PM	G	SO	X	X	X	X	X	X	
SB-101 (4-6)	SB-101 (4-6)	2/19/2014	10:25 AM	G	SO	X	X	X	X	X	X	
SB-101 (8-10)	SB-101 (8-10)	2/19/2014	10:30 AM	G	SO	X	X	X	X	X	X	
SB-102 (4-6)	SB-102 (4-6)	2/19/2014	9:30 AM	G	SO	X	X	X	X	X	X	
SB-102 (10-12)	SB-102 (10-12)	2/19/2014	9:45 AM	G	SO	X	X	X	X	X	X	
SB-103 (2-4)	SB-103 (2-4)	2/19/2014	9:50 AM	G	SO	X	X	X	X	X	X	
SB-103 (10-12)	SB-103 (10-12)	2/19/2014	10:10 AM	G	SO	X	X	X	X	X	X	

Relinquished by: Scott Gish

Received by: [Signature]

Date: 2-28-14

Time: 8:00:00 PM

Temp °C

EDD format: _____

EQUALS _____

[Signature]

[Signature]

02-28-14

14:50

Condition upon receipt:
 Ambient Iced Refrigerated

Custody Seals: Present Intact Broken
 DI VOA Frozen Soil Jar Frozen

07/07/07 R 01
changed per client request
for utility
SA 2/24
[Signature]



SPECTRUM ANALYTICAL, INC.
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HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1
*2 changed
Date 2/19/14
Julie Williams*

Special Handling:

- Standard TAT - 7 to 10 business days
- Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval
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Report To: AECOM
500 Enterprise Dr.
Rocky Hill, CT 06067

Telephone #: 860-263-5800
Project Mgr: Julie Williams

Invoice To: SAME
P.O. No.: R0N

Project No: 60316060
Site Name: 177 State Street
Location: Meriden State CT
Sampler(s): Scott Gish

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
 8=NaHSO₄ 9=Deionized Water 10=H₃PO₄ 11=Ice 12=

DW=Drinking Water GW=Groundwater WW=Waste Water
 O=Oil SW=surface Water SO=Soil SL=Sludge A=Air
 X1= X2= X3=

Lab ID	Sample ID	Date	Time	Type	Matrix	Containers				VOCs	Analysis	List Preservative Code below:	QA/QC Reporting Notes: *additional changes may apply
						# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				
SP8849A-11	Trip Blank		Lab			2				X			

Relinquished by: Scott Gish
SG

Received by: *Julie Williams*

2-Date-14 2/19/2014 8:00:00 PM 14:50

Temp °C

EQUS

E-mail to: Julie.Williams@aecom.com

Condition upon receipt: Ambient Iced Refrigerated

Custody Seals: Present Intact Broken

DI VOA Frozen Soil Jar Frozen

0.710/0.71R 04
Julie Williams 2-28-14

ETPH Sequence Summary

S402141

Extractable Petroleum Hydrocarbons

1404243-BLK1

1404243-BS1

1404243-BSD1

1404243-DUP1

1404243-MS1

1404243-MSD1

S402141-CCV2

S402141-CCV4

S402141-CCV6

SB84992-01 (SB-100 (6-8))

SB84992-02 (SB-100 (10-12))

SB84992-03 (SB-104 (4-6))

SB84992-04 (SB-104 (6-8))

SB84992-05 (SB-101 (4-6))

SB84992-06 (SB-101 (8-10))

SB84992-07 (SB-102 (4-6))

SB84992-08 (SB-102 (10-12))

SB84992-09 (SB-103 (2-4))

SB84992-10 (SB-103 (10-12))

Attachment C
Phase II Soil and Groundwater
Tables

Table 1
Soil Summary Table
Parking Lot
177 State Street
Meriden, Connecticut

Parameter	RSR DEC		RSR PMC	SAMPLING LOCATION			
	I/C DEC	RES DEC	GBPMC	SB-1 (6-8')	SB-2 (4-6')	SB-3 (2-4')	SB-4 (10-12')
Sampling Date				11/7/2013 11:00:00 AM	11/7/2013 12:00:00 PM	11/7/2013 1:00:00 PM	11/7/2013 2:00:00 PM
Sample Depth				6-8 Feet	4-6 Feet	2-4 Feet	10-12 Feet
Laboratory Report Number				13K0344	13K0344	13K0344	13K0344
CTDEP ETPH (mg/Kg)							
ETPH	2500	500	2500	500	79	570	44
Percent Solids							
% Solids	~	~	~	79.6	76.3	86.9	80.6
Metals (mg/Kg)							
ANTIMONY	8200	27	~	28	NT	NT	NT
Arsenic	10	10	~	ND (2.9)	14	ND (2.7)	6.2
Barium	140000	4700	~	120	350	130	87
BERYLLIUM	2	2	~	0.46	NT	NT	NT
Cadmium	1000	34	~	2.0	2.1	1.2	ND (0.30)
Chromium	~	~	~	11	16	14	13
COPPER	76000	2500	~	870	NT	NT	NT
LEAD	1000	500	~	340	790	370	690
Nickel	7500	1400	~	23	NT	NT	NT
Silver	10000	340	~	4.1	1.2	120	21
THALLIUM	160	5.4	~	ND (2.9)	NT	NT	NT
Vanadium	14000	470	~	28	NT	NT	NT
Zinc	610000	20000	~	1500	NT	NT	NT
Metals (µg/L)							
Arsenic	~	~	500	7.4	NT	NT	NT
Barium	~	~	10000	120	NT	NT	NT
Cadmium	~	~	5	ND (2.5)	NT	NT	NT
Chromium	~	~	500	ND (5.0)	NT	NT	NT
LEAD	~	~	150	8.5	NT	NT	NT
Selenium	~	~	500	ND (25)	NT	NT	NT
Silver	~	~	360	ND (2.5)	NT	NT	NT
Mercury (mg/L)							
Mercury	~	~	0.002	ND (0.00010)	NT	NT	NT
Mercury (mg/Kg)							
Mercury	610	20	~	3.4	2.9	20	4.4
PCBs (mg/Kg)							
Total PCBs	10	1	~	ND	ND	ND	ND
VOCs (mg/Kg)							
1,2,4-TRIMETHYLBENZENE	1000	500	7	0.0029	ND (0.0020)	ND (0.0019)	ND (0.0016)

Table 1
Soil Summary Table
Parking Lot
177 State Street
Meriden, Connecticut

Parameter	RSR DEC		RSR PMC	SAMPLING LOCATION			
	I/C DEC	RES DEC	GBPMC	SB-1 (6-8')	SB-2 (4-6')	SB-3 (2-4')	SB-4 (10-12')
Sampling Date				11/7/2013 11:00:00 AM	11/7/2013 12:00:00 PM	11/7/2013 1:00:00 PM	11/7/2013 2:00:00 PM
Sample Depth				6-8 Feet	4-6 Feet	2-4 Feet	10-12 Feet
Laboratory Report Number				13K0344	13K0344	13K0344	13K0344
SVOCs (mg/Kg)							
ACENAPHTHENE	~	~	~	1.6	NT	NT	NT
ANTHRACENE	~	~	400	3.4	NT	NT	NT
BENZO(A)ANTHRACENE	7.8	1	1	4.8	NT	NT	NT
BENZO(A)PYRENE	1	1	1	3.6	NT	NT	NT
BENZO(B)FLUORANTHENE	7.8	1	1	4.0	NT	NT	NT
BENZO(G,H,I)PERYLENE	~	~	~	2.0	NT	NT	NT
BENZO(K)FLUORANTHENE	78	8.4	1	1.4	NT	NT	NT
CARBAZOLE	~	~	~	1.5	NT	NT	NT
CHRYSENE	~	~	~	4.5	NT	NT	NT
DIBENZ(A,H)ANTHRACENE	~	~	~	0.72	NT	NT	NT
DIBENZOFURAN	~	~	~	1.5	NT	NT	NT
FLUORANTHENE	2500	1000	56	10	NT	NT	NT
FLUORENE	2500	1000	56	2.0	NT	NT	NT
INDENO(1,2,3-CD)PYRENE	~	~	~	2.3	NT	NT	NT
2-METHYLNAPHTHALENE	~	~	~	0.64	NT	NT	NT
NAPHTHALENE	2500	1000	56	0.83	NT	NT	NT
PHENANTHRENE	2500	1000	40	12	NT	NT	NT
PHENOL	2500	1000	800	ND (0.42)	NT	NT	NT
PYRENE	2500	1000	40	8.6	NT	NT	NT
PYRIDINE	~	~	~	ND (0.42)	NT	NT	NT
PAHs (mg/Kg)							
ACENAPHTHYLENE	2500	1000	84	NT	0.29	0.57	ND (0.21)
ANTHRACENE	2500	1000	400	NT	0.54	0.57	ND (0.21)
BENZO(A)ANTHRACENE	7.8	1	1	NT	1.8	4.0	ND (0.21)
BENZO(A)PYRENE	1	1	1	NT	1.8	4.2	ND (0.21)
BENZO(B)FLUORANTHENE	7.8	1	1	NT	2.2	5.2	ND (0.21)
BENZO(G,H,I)PERYLENE	~	~	~	NT	1.2	4.0	ND (0.21)
BENZO(K)FLUORANTHENE	78	8.4	1	NT	0.79	2.0	ND (0.21)
CHRYSENE	~	~	~	NT	1.9	3.8	ND (0.21)
DIBENZ(A,H)ANTHRACENE	~	~	~	NT	0.35	1.2	ND (0.21)
FLUORANTHENE	2500	1000	56	NT	5.1	6.7	ND (0.21)
FLUORENE	2500	1000	56	NT	0.23	ND (0.39)	ND (0.21)
INDENO(1,2,3-CD)PYRENE	~	~	~	NT	1.4	4.6	ND (0.21)
NAPHTHALENE	2500	1000	56	NT	0.33	ND (0.39)	ND (0.21)
PHENANTHRENE	2500	1000	40	NT	4.1	2.7	ND (0.21)
PYRENE	2500	1000	40	NT	3.4	5.8	ND (0.21)

NOTES:

1. Results compared to 1996 Remediation Standard Regulations (RSR) Criteria
2. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
3. NT = Not tested.
4. ~ = No Standard available
5. For soil samples shaded values exceed the RSR Residential Direct Exposure Criteria (DEC) for the parameter.
6. For soil samples shaded values exceed the RSR I/CDirect Exposure Criteria (DEC) for the parameter.
7. For soil samples bolded values exceed the GM Pollutant Mobility Criteria (PMC) for the parameter.
8. RSR criteria are in the same units as the analyte.
9. Only those analytes which were detected above laboratory reporting limits are shown.

Table 2
Groundwater Summary Table
Parking Lot
177 State Street
Meriden, Connecticut

Parameter	SAMPLING LOCATION			
	SWPC	Trip Blank	TW-1	TW-2
Sampling Date		11/7/2013	11/7/2013 11:30:00 AM	11/7/2013 12:30:00 PM
Laboratory Report Number		13K0344	13K0344	13K0344
CTDEP ETPH (mg/L)				
ETPH	~	NT	0.13	0.11
SW-846 8082A (µg/L)				
Total PCBs	0.5	NT	ND	ND
VOCs (µg/L)				
Total VOCs	Various	ND	ND	ND
PAHs (µg/L)				
PHENANTHRENE	0.077	NT	0.20	ND (0.050)
Metals (µg/L)				
Arsenic	4	NT	9.0	9.4
Barium	~	NT	280	280
Mercury (mg/L)				
Mercury	0.0004	NT	ND (0.00010)	ND (0.00010)

NOTES:

1. Results compared to 1996 Remediation Standard Regulations (RSR) Criteria
2. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
3. NT = Not tested.
4. ~ = No Standard available
5. RSR criteria are in the same units as the analyte.
6. SWPC = surface water protection criteria
7. For groundwater samples shaded values exceed the RSR SWPC for the parameter.
8. Only those analytes which were detected above laboratory reporting limits are shown.