

REPORT

**Phase II Comprehensive Site
Assessment/Partial
Response Action Outcome
(RAO-P) Report**
Liberty Street Parcel
New Bedford, Massachusetts
RTN 4-15685

City of New Bedford
New Bedford, Massachusetts

June 2013



Table of Contents

Section 1 Introduction.....	1-1
1.1 Person Undertaking the Phase II CSA/RAO-P	1-1
1.2 Site Background	1-1
1.3 Regulatory Status.....	1-1
Section 2 Physical and Chemical Site Characteristics	2-1
2.1 Geology and Hydrogeology.....	2-1
2.1.1 Geology	2-1
2.1.2 Hydrogeology.....	2-1
2.2 Data Summary.....	2-1
2.2.1 Data Collected by Others.....	2-1
2.2.2 Test Pit Program (November 2011)	2-2
2.2.3 Test Pit Program (May 2012)	2-3
2.3 Nature and Extent of Contamination.....	2-3
2.4 Fate and Transport of Site Contaminants	2-4
Section 3 Data Representativeness Evaluation and Usability Assessment.....	3-1
3.1 Representativeness Evaluation	3-1
3.1.1 Conceptual Site Model.....	3-1
3.1.2 Sample Rationale.....	3-3
3.1.3 Handling of Samples and the Number and Spatial Distribution	3-4
3.1.4 Temporal Distribution of Samples.....	3-4
3.1.5 Critical Samples	3-4
3.1.6 Completeness.....	3-4
3.1.7 Inconsistency and Uncertainty.....	3-4
3.1.8 Information Considered Unrepresentative.....	3-5
3.2 Data Usability Assessment.....	3-5
3.2.1 Analytical Data Usability	3-5
3.2.2 Field Quality Control Data Usability Assessment.....	3-5
3.2.3 Rejection of Analytical Data.....	3-5
3.3 Conclusions	3-6
Section 4 Method 1 Risk Characterization.....	4-1
4.1 Method 1 Applicability	4-1
4.2 Current and Foreseeable Land Use	4-2
4.3 Soil and Groundwater Classification	4-2
4.4 Site Characterization.....	4-3
4.5 Selection of Compounds of Concern and Identification of Exposure Point Concentrations	4-4
4.6 Comparison to Method 1 Standards	4-5
4.7 Risk of Harm to Safety	4-5
4.8 Conclusion.....	4-5
4.9 Uncertainty Analysis	4-5

4.10 References 4-6

Section 5 Phase II Completion Statement.....5-1

5.1 Phase II CSA Summary and Completion Statement..... 5-1

5.2 LSP Opinion 5-2

Section 6 Justification for Class B-2 Partial Response Action Outcome6-1

Appendices

- Appendix A – Letters
- Appendix B – Existing Data
- Appendix C – Coal Ash Data
- Appendix D – Laboratory Reports
- Appendix E – Toxicity Profiles
- Appendix F – AUL

Tables

Table 2-1 Nov. 2011 Test Pit Data..... 2-7

Table 2-2 May 2012 Test Pit Data 2-11

Table 4-1 Summary of PCB Analytical Results Included in the Surface Soil Data Set..... 4-8

Table 4-2 Summary of the Metals Analytical Results Included in the Surface Soil Data Set..... 4-11

Table 4-3 Summary of EPH, PAH, SVOC Analytical Results Included in the Surface Soil Data Set..... 4-13

Table 4-4 Summary of PCB Analytical Results Included in the Sitewide Soil Data Set..... 4-20

Table 4-5 Summary of the Metals Analytical Data Included in the Sitewide Soil Data Set. 4-27

Table 4-6 Summary of EPH, PAH, SVOV Analytical Results Included in the Sitewide Soil Data Set..... 4-32

Table 4-7 Summary of VOC Analytical Results Included in the Surface and Sitewide Soil Data Set..... 4-42

Table 4-8 Summary of Detected Chemicals and Selection of Chemicals of Concern for Surface Soil..... 4-44

Table 4-9 Summary of Detected Chemicals of Concern for Sitewide Soil 4-45

Table 4-10 Averaging Criteria Check for Surface Soil Using Risk-Based Concentrations... 4-46

Table 4-11 Averaging Criteria Check for Sitewide Soil Using Risk-Based Concentrations 4-47

Figures

Figure 1-1 Locus Plan 1-3

Figure 2-1 Test Pit Locations..... 2-6

Figure 4-1 Sensitive Receptors..... 4-7

Figure 4-1 Insert Title Here 4-1

Figure 5-1 Insert Title Here 5-1

Section 1

Introduction

This combined Phase II Comprehensive Site Assessment (CSA) and Partial Response Action Outcome (RAO-P) has been prepared for the City of New Bedford (the City) for the Liberty Street Parcel (also referred to as the Slim Parcel or “the Parcel”). **Figure 1-1** shows the location of the Liberty Street Parcel. This Phase II CSA/RAO-P documents the presence of coal/coal ash across the site where impacted historic fill soils were observed to contain coal, coal ash, and clinkers. Microscopic analysis confirmed the presence of coal ash, signifying fill typical of urbanized locations where historical use of coal was the primary fuel source for heat and power.

This Phase II CSA/RAO-P Report has been prepared in accordance with the provisions set forth in 310 CMR 40.0830 and 310 CMR 40.1056, which present the requirements for conducting a Phase II CSA and content of an RAO, respectively. A Class B-2 RAO-P has been achieved for the Liberty Street Parcel portion of RTN 4-15685. In accordance with 40.1403, the Chief Municipal Officer and Board of Health Commission were notified of the submission of the Phase II/RAO-P Report. Copies of the letters sent to these officials are provided in **Appendix A**.

1.1 Person Undertaking the Phase II CSA/RAO-P

Responsible Party	City of New Bedford – Department of Environmental Stewardship 133 William Street New Bedford, Massachusetts 02740 Attn: Michele S.W. Paul, LSP Director Telephone: (508) 991-6188
Licensed Site Professional (LSP)	Ms. Kathleen G. Murphy, P.E., LSP LSP Registration No. 8744 CDM Smith 50 Hampshire Street Cambridge, Massachusetts 02139 Telephone: (617) 452-6203

1.2 Site Background

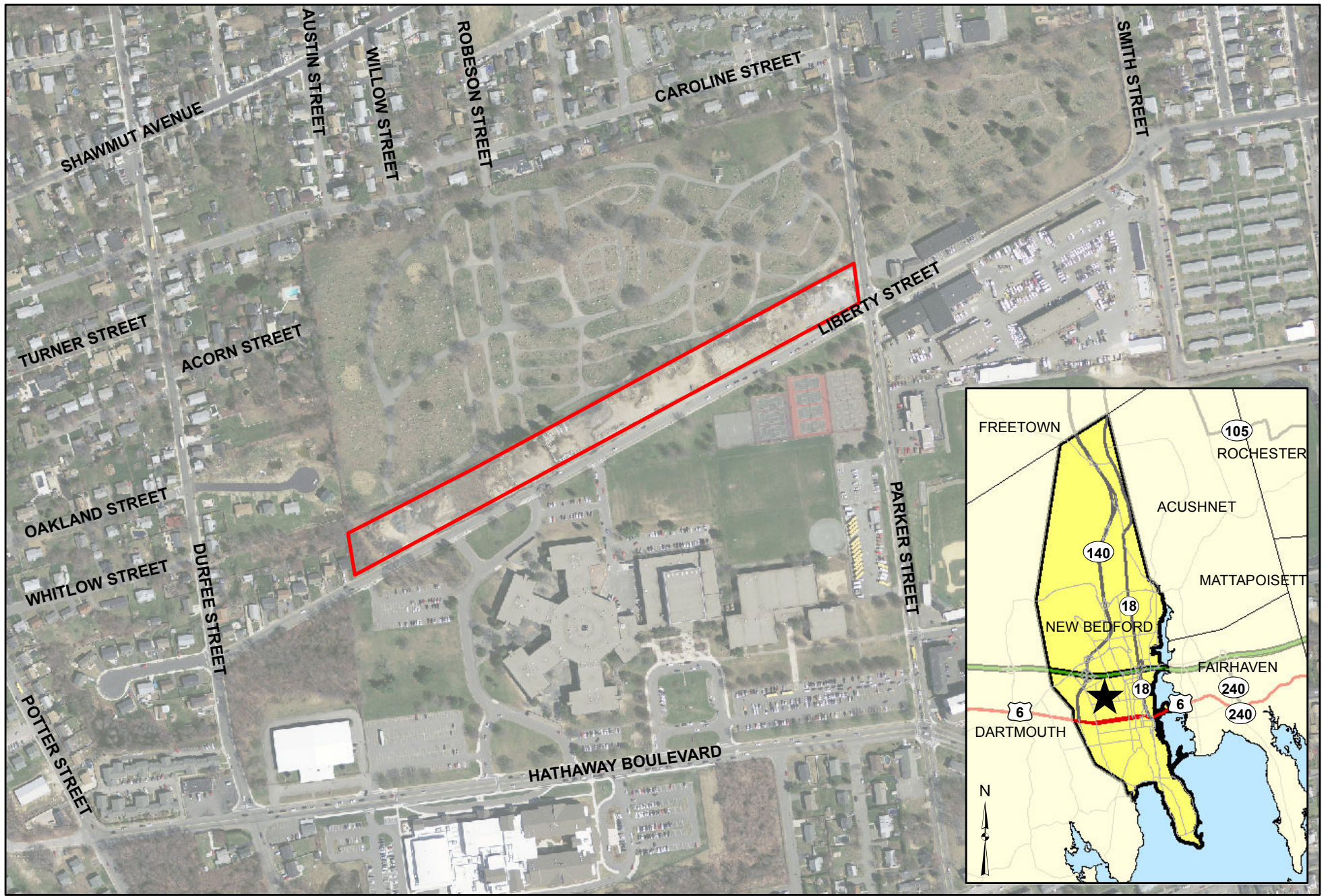
The Liberty Street Parcel is located in New Bedford, Massachusetts and currently operated by the City as a maintenance and storage yard for the Departments of Public Infrastructure (DPI) and Public Facilities (DPF). The parcel is being considered for installation of solar panels, which will be maintained by others. When the solar panels are installed, the parcel will be fenced, thereby restricting access to authorized personnel for solar panel maintenance. This approach is also consistent with Massachusetts Department of Environmental Protection’s (MassDEP’s) encouragement of the use of Brownfields parcels for alternative energy sites. Site data collected throughout investigations supports that historic fill is the sole source of compounds of concern on the Liberty Street parcel.

1.3 Regulatory Status

The Liberty Street Parcel is managed under a larger site of release by MassDEP under Release Tracking Number (RTN) 4-15685. The RTN 4-15685 Parker Street Waste site consists of multiple properties owned by the City. The RTN has a Special Project Designation by the MassDEP. The compounds of concern for RTN 4-15685 are polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) and metals related to impacted fill material.

Field investigations have been conducted on the Liberty Street Parcel by TRC Environmental Corporation (TRC) and CDM Smith. This data is summarized in Section 2 of this report. The data collected to date indicates the historic fill compounds at the Liberty Street Parcel are mainly related to coal/coal ash and clinkers. A review of the data as well as historical records signifies that the ash and urban fill identified at the Liberty Street Parcel is unrelated to the Parker Street Waste Site, although response actions described herein were required to be undertaken in relation to RTN 4-15685. This is further discussed in the Section 3 Conceptual Site Model. This conclusion is consistent with earlier investigations supporting the Parker Street Waste Site boundaries to be Liberty Street to the east and Parker Street to the south. Furthermore, under Massachusetts General Law, fly ash, bottom ash, clinkers, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels are exempt from regulation as hazardous waste. Additionally, ash produced from combustion of coal is exempt from regulation as solid waste if beneficially reused for select applications.

A separate RTN (4-22269) was also assigned to a portion of the site due to three 55-gallon drums which were deposited on the City's property by an unknown party. One of the drums was leaking a material that appeared to be asphalt emulsifier. An Immediate Response Action (IRA) was conducted by TRC for the City and this RTN was closed-out with a Class A-1 RAO in March 2010.



Legend

 Liberty Street Parcel

Basemap source: MassGIS

**Locus Plan
Liberty Street Parcel
New Bedford, MA**

1 inch = 400 feet

0 200 400
Feet

Figure 1-1



Section 2

Physical and Chemical Site Characteristics

This section summarizes the subsurface conditions and soil sampling and analysis and related data collected on the Liberty Street Parcel. Data was collected by others in 2008, 2009 and 2010. CDM Smith then conducted 2 test pit programs in 2011 and 2012.

2.1 Geology and Hydrogeology

2.1.1 Geology

CDM Smith oversaw two test pit exploration programs in November 2011 and May 2012, respectively. Eleven test pits were excavated in November 2011 (TP-1 through TP-11) and six test pits (TP-A through TP-F) were excavated in May 2012. During both test pit programs fill material consisting of brown well-graded sand and gravel with brick, glass, wood, clay pipes and ash was observed from approximately one to six feet below ground surface. The top 12 inches above the fill material were generally a brown topsoil material consisting of well-graded sand and silt. Groundwater was observed in TP-E at approximately five feet below ground surface. Test pits were excavated to a maximum depth of six feet below ground surface during the test pit programs. Given that the test pit exploration programs were limited to the top six feet in order to observe the fill conditions at the site, subsurface geology below this depth was not encountered or observed.

The surficial geology of the Liberty Street area of New Bedford, Massachusetts is described by Stone et al. as thin glacial till or moraine deposits. These deposits consist of a non-sorted, non-stratified matrix of sand, some silt, and little clay with gravel and trace boulders. The material is loose to moderately compact and is generally less than ten to 15 feet thick (Stone et al., 2011). It is expected that glacial till material lies below the fill material at the site; however, the depth to the top of till is unknown since exploration activities did not extend to that depth.

2.1.2 Hydrogeology

As noted above, groundwater was observed at the parcel at a depth of five feet below ground surface in TP-E. Groundwater flowed into the bottom of TP-E at a slow to moderate rate of approximately 1-2 gallons per minute. A 2011 Comprehensive Site Assessment completed by TRC for the New Bedford High School campus documented groundwater flow in a southeasterly direction. The New Bedford High school is located directly to the west of the parcel across Liberty Street. The Liberty Street Parcel is located approximately 1.2 miles from the Acushnet River, which is connected directly to Buzzards Bay. According to the United States Geological Survey (USGS) topographic map, the topography of the area is relatively flat and then descends steeply to the east near the river (USGS, 2012). Given the proximity to the river and bay it is likely that groundwater generally flows from the parcel to the east towards the Acushnet River.

2.2 Data Summary

2.2.1 Data Collected by Others

Three available data sets were identified for the Slim Parcel: 1) soil boring data collected along the edge of the property along Liberty Street and identified as "Transect B" data; 2) soil data associated

with a URAM on the parcel; and 3) soil data collected following remediation of soil after three 55-gallon drums were deposited by “person or persons unknown” on the parcel. In total, 43 soil samples were collected and analyzed as part of the three data sets evaluated below. **Appendix B** contains the Figures and Tables showing the sampling locations and the results.

Based on site characteristics and receptors, applicable Method 1 standards for the site are S-1/GW-3 for the top 3 feet and S-2/GW-3 for material below 3 feet.

Data Set 1: Transect B Data

TRC Environmental Corporation (TRC) installed 11 soil borings for the City of New Bedford in June 2008. The TRC data set consists of analytical results for a total of 23 soil samples. Samples were analyzed for polycyclic aromatic hydrocarbons (PAHs), PCBs and metals. All samples were collected at depths below 3 feet.

Lead was detected at concentrations ranging from 2.5 ppm to 5580 ppm.

Data Set 2: URAM Data

A Utility-Related Abatement Measure (URAM) was conducted on the property under RTN 4-15685 by TRC for the City of New Bedford. This data set consists of 15 soil samples from 5 site locations (SB-LSD-4 through SB-LSD-8) analyzed for PCB Aroclors. The sampling depths were consistently 0-1, 1-3 and 3.5-4.5 feet below ground surface proximate to the trench. Total PCBs calculated by summing the Aroclor results in one sample (SB-LSD-5; 1-3 feet) was 3.9 mg/kg, while the results from the remaining samples ranged from non-detect to less than 1 mg/kg.

The bill of lading (BOL) identifies the excess trench material as historic fill. The stockpile characterization data identifies individual PAHs present at concentrations of 1 mg/kg or less, PCBs (Aroclor 1254) at 0.13 mg/kg, and lead at 510 mg/kg. The data indicate consistency with the related historic fill soil concentrations.

Data Set 3: The Drums deposited on the City Property by Others (Spill Data)

Three 55-gallon drums were deposited on the City’s property by an unknown party. One of the drums was leaking a material that appeared to be asphalt emulsifier. An Immediate Response Action (IRA) was conducted by TRC for the City of New Bedford under RTN 4-22269. Five soil samples were collected from this area and submitted for laboratory analysis of volatile organic compounds (VOCs), extractable petroleum hydrocarbons (EPH) and PAHs. VOCs were not present above detection limits. EPH and PAHs were detected at concentrations that supported a Class A-1 RAO for the release, signifying that response actions achieved conditions consistent with background.

2.2.2 Test Pit Program (November 2011)

On November 9, 2011, CDM Smith collected samples from 11 test pits which were advanced approximately every 100 feet along the center of the parcel. **Figure 2-1** shows the locations of the test pits.

Test pits were generally advanced to approximately 4 to 6 feet below ground surface. Samples were collected as composite samples from 0-3 feet from each test pit and analyzed for semi-volatile organic compounds (SVOCs) and RCRA metals. Two samples were collected from the coal ash material found in TP-02, which is located approximately 100 feet north of Parker Street.

On-Site Monitoring and Observations

During test pit operations, CDM Smith used a photo ionization detector (PID) to detect volatile compounds (VOCs), and a dust meter. No VOCs were recorded above detection limits and dust measurements ranged from 0 mg/m³ to 0.055 mg/m³, below the respirable dust criteria of 3 mg/m³. The dust readings were collected directly over the test pit locations; no sustained readings of dust were observed over 0 mg/m³.

Material in the top 5 feet was sand and gravel. For most of the test pits, no debris was observed. Some debris (brick, clay pipe) was observed in TP-02. This was the only location where coal ash was observed at approximately 4 feet below ground surface. Small amounts of debris (brick) were observed in TP-03 and TP-08. No odors were noted in any of the test pits.

Analytical Data

Table 2-1 provides a summary of the analytical data. Metals including arsenic, chromium, lead and mercury and some SVOCs were detected. With the exception of lead, metal concentrations were consistent with DEP's established natural soil concentrations.

Appendix C contains the results of the two samples which were analyzed for coal ash at TP-2. The analysis confirms the presence of coal and coal ash in these samples.

2.2.3 Test Pit Program (May 2012)

On May 24, 2012, CDM Smith conducted additional test pitting to further characterize the lead concentration previously identified at location SB-212, which was installed by TRC in July 2008. The sample collected at 4' from this location contained 2420 ppm and 5580 ppm in the duplicate sample (a large relative percent difference between the results).

One test pit (TP-A 4') was completed near the original location SB-212 and five test pits were installed approximately 10' from the original location. Figure 2-1 shows the locations of these test pits along with the original SB-212 location. Lead concentrations ranged from 67 ppm at location TP-A 4' to 550 ppm at location TP-E 5'. **Table 2-2** provides the lead results for these test pits.

2.3 Nature and Extent of Contamination

The parcel is a relatively narrow parcel of land located between Liberty Street and Oak Grove Cemetery in New Bedford, Massachusetts. Based on the data collected at the parcel and a review of the historical records, the source of impacted soil at the parcel is historic urban fill material that contains coal ash, as confirmed by two samples collected during the November 2011 test pit program that were analyzed using microscopy techniques. The historical record suggests that historic fill was present at the base of Liberty Street and additional relatively clean fill was subsequently added. The parcel eventually used by the City as a storage area. The most recent test pit logs from May 2012 indicate that fill soil is located to a depth of at least four to five feet below ground surface. Historic fill material was also observed in the subsurface material by CDM Smith and TRC during previous site investigations. The material was described as soil with debris, including brick, cinders, glass, and clinkers along with a layer of ash material containing combusted and uncombusted coal and wood fragments. Thus, the site investigations indicate that the fill material is widely distributed across the site, both horizontally within the boundary of the parcel and vertically to depths of approximately five feet.

The compounds identified in the soil support the conclusion that impacts are associated with fill material. Compounds detected in the site surface soil (zero to 3 feet) and site-wide data set (zero to

15 feet) include metals, EPH ranges, PAH target analytes, and PCBs. The concentrations of metals and PAHs were below typical background concentrations associated with coal or wood ash. The data and historical record indicate that soil impact is likely associated with wide distribution of fill material across the site. However, due to the chemical properties and nature of metals, PAHs, and PCBs identified in soil within the parcel, they are likely to remain in the soil matrix. Due to their low solubility in water, metals, PAHs, and PCBs found in soil are not likely to impact groundwater. Thus, groundwater, which is located approximately five to seven feet below ground surface, is not a medium of concern for the Liberty Street Parcel.

2.4 Fate and Transport of Site Contaminants

Fate and transport information describes how chemicals degrade and where they travel in the environment, whether naturally occurring or released. Chemicals in the environment are analyzed in terms of a modeling system that indicates not only how the chemicals move through air, water, and soil (transport), but also how the chemicals change in the presence of other chemicals and particles (fate). The primary constituents identified in soil within the parcel include metals, PAHs, and PCBs.

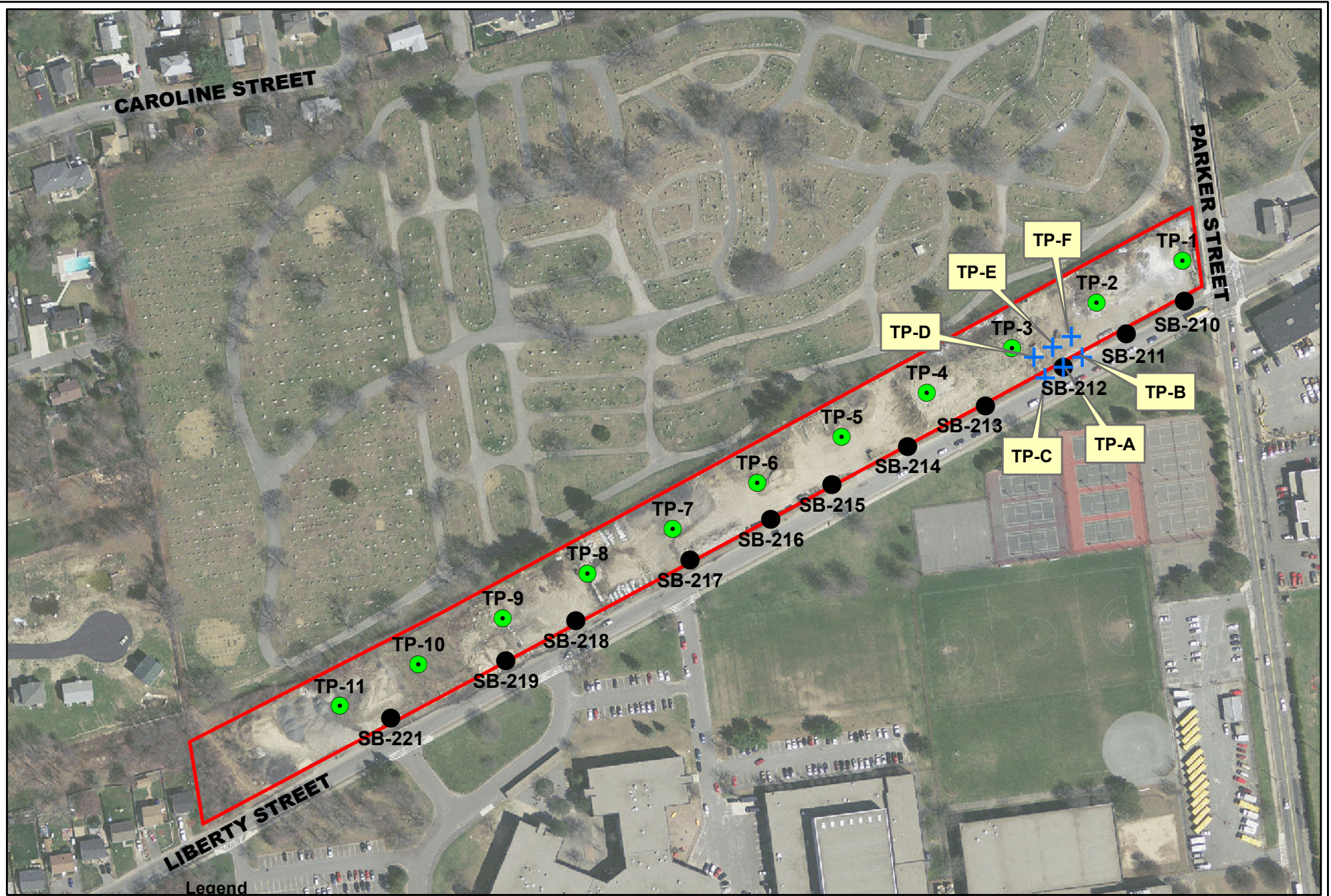
Metals vary widely in chemical form and properties; however, none degrade in the environment, many exist naturally in soil, and a few (e.g., copper and zinc) are essential nutrients. The fate of metals in the environment is primarily dependent on sorption, chemical speciation, complexation, biotransformation, and bioaccumulation. Metals occurring in soil may be sorbed to particles (silt- and clay-size), bound in a complex molecule, bound in a precipitate (e.g., sulfides), or may exist in a free ionic state. They tend to be stable, persistent, and not volatile. Some metals, like mercury, are bioaccumulative. Metals at concentrations present within the parcel are expected to remain limited to soil, since they tend to bind to particulate matter.

PAHs include a wide variety of chemicals that are ubiquitous in the environment. Included in this category are low and high molecular weight PAHs. Similar to metals, they tend to bind to particulate matter and are not likely to leach to groundwater at concentrations present within the parcel. They are also generally stable, persistent, and not volatile. In spite of the high lipid solubility of some PAHs, they have low bioaccumulation potential because these compounds are rapidly metabolized.

PCBs are a group of synthetic organic chemicals that contain many individual congeners with varying potential harmful effects. They are persistent in the environment and degradation by biological and other means is minimal. Most of these compounds are lipophilic, with a tendency to accumulate in the liver and other fatty tissues and bioaccumulate within the food chain. There are no known natural sources of PCBs in the environment. Before 1977, PCBs entered the air, water, and soil during their manufacture and use. PCBs also entered the environment from accidental spills and leaks during the transport of the chemicals, or from leaks or fires in transformers, capacitors, or other products containing PCBs. In water, a small amount of PCBs may remain dissolved but most tend to adhere to particles and sediments. PCBs bind strongly to soil and may remain there for several years. PCBs partially evaporate from soil surfaces to air. In general, the breakdown of PCBs in the water and soil occurs over several years, or even decades. PCBs are likely tightly bound to soil particles and will not migrate significantly. Thus, at the parcel they are expected to remain in soil and not leach to groundwater.

The parcel is currently undeveloped and unpaved, with exposed soil; however; the proposed future use of the property is to house solar panels and is to be surrounded by a fence, limiting access. As described above, it is unlikely that the constituents will migrate, as they are stable in nature and are

unlikely to leach to groundwater. The nearest water body is the Acushnet River, which is located approximately 1.2 miles to the east of the parcel. Since the river is more than a mile from the parcel and impact is limited to soil given the chemical and physical properties of chemicals of concern soil impact is not expected to migrate to surface water or sediment in the river.



**Test Pit Locations
Liberty Street Parcel
New Bedford, MA**

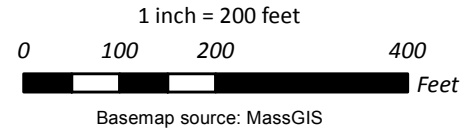


Figure 2-1



**Table 2-1
Nov. 2011 Test Pit Data
Liberty Street Parcel**

LOCATION			TP-01			TP-02			TP-03			TP-04			TP-05			TP-06
SAMPLING DATE			09-NOV-11			09-NOV-11			09-NOV-11			09-NOV-11			09-NOV-11			09-NOV-11
LAB SAMPLE ID			L1118751-01			L1118751-02			L1118751-03			L1118751-04			L1118751-05			L1118751-06
Depth			0-3'			0-3'			0-3'			0-3'			0-3'			0-3'
	S-1/GW-3	Units		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual
MCP Total Metals - Westborough Lab																		
Arsenic, Total	20	mg/kg	4.4		4.6		2.1		2		1.6		1.2					
Cadmium, Total	2	mg/kg	0.42	U	0.42	U	0.42	U	0.4	U	0.41	U	0.4					
Chromium, Total	30	mg/kg	9.7		10		14		10		15		12					
Lead, Total	300	mg/kg	190		43		180		47		260		38					
Mercury, Total	20	mg/kg	0.18		0.08		0.13		0.12		0.09		0.1					
MCP Semivolatile Organics - Westborough Lab																		
1,2,4-Trichlorobenzene	500	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
1,2-Dichlorobenzene	300	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
1,3-Dichlorobenzene	100	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
1,4-Dichlorobenzene	50	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
2,4,5-Trichlorophenol	600	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
2,4,6-Trichlorophenol	20	mg/kg	1.1	U	0.21	U	1.1	U	0.2	U	2	U	0.98					
2,4-Dichlorophenol	40	mg/kg	1.6	U	0.32	U	1.6	U	0.31	U	3	U	1.5					
2,4-Dimethylphenol	500	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
2,4-Dinitrophenol	50	mg/kg	8.6	U	1.7	U	8.5	U	1.6	U	16	U	7.8					
2,4-Dinitrotoluene	2	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
2,6-Dinitrotoluene	-	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
2-Chloronaphthalene	-	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
2-Chlorophenol	100	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
2-Methylnaphthalene	300	mg/kg	2.2	U	0.43	U	2.1	U	0.41	U	4	U	2					
2-Methylphenol	-	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
2-Nitrophenol	-	mg/kg	3.9	U	0.77	U	3.8	U	0.74	U	7.2	U	3.5					
3,3'-Dichlorobenzidine	1	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
3-Methylphenol/4-Methylphenol	-	mg/kg	2.6	U	0.51	U	2.6	U	0.49	U	4.8	U	2.4					
4-Bromophenyl phenyl ether	-	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
4-Chloroaniline	3	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
4-Nitrophenol	-	mg/kg	2.5	U	0.5	U	2.5	U	0.48	U	4.7	U	2.3					
Acenaphthene	1000	mg/kg	1.4	U	0.28	U	1.4	U	0.27	U	2.7	U	1.3					
Acenaphthylene	10	mg/kg	1.4	U	0.32		1.4	U	0.27	U	2.7	U	1.3					
Acetophenone	-	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
Aniline	-	mg/kg	2.2	U	0.43	U	2.1	U	0.41	U	4	U	2					
Anthracene	1000	mg/kg	1.1	U	0.48		1.1	U	0.37		2	U	0.98					
Azobenzene	-	mg/kg	1.8	U	0.36	U	1.8	U	0.34	U	3.3	U	1.6					
Benzo(a)anthracene	7	mg/kg	1.1	U	0.91		1.6		1.4		2	U	0.98					

**Table 2-1
Nov. 2011 Test Pit Data
Liberty Street Parcel**

LOCATION				TP-07		TP-08		TP-09		TP-10		TP-11	
SAMPLING DATE				09-NOV-11		09-NOV-11		09-NOV-11		09-NOV-11		09-NOV-11	
LAB SAMPLE ID				L1118751-07		L1118751-08		L1118751-09		L1118751-10		L1118751-11	
Depth				0-3'		0-3'		0-3'		0-3'		0-3'	
	S-1/GW-3	Units	Qual		Qual		Qual		Qual		Qual		Qual
MCP Total Metals - Westborough Lab													
Arsenic, Total	20	mg/kg		1.6		1.6		7.3		1.5		0.72	
Cadmium, Total	2	mg/kg	U	0.4	U	0.41	U	0.47	U	0.45	U	0.44	U
Chromium, Total	30	mg/kg		12		16		10		11		9.5	
Lead, Total	300	mg/kg		47		57		240		26		6.3	
Mercury, Total	20	mg/kg	U	0.07		0.12	U	0.15		0.09	U	0.09	U
MCP Semivolatile Organics - Westborough Lab													
1,2,4-Trichlorobenzene	500	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
1,2-Dichlorobenzene	300	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
1,3-Dichlorobenzene	100	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
1,4-Dichlorobenzene	50	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
2,4,5-Trichlorophenol	600	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
2,4,6-Trichlorophenol	20	mg/kg	U	2	U	4.2	U	1.2	U	0.23	U	0.22	U
2,4-Dichlorophenol	40	mg/kg	U	3	U	6.3	U	1.7	U	0.34	U	0.33	U
2,4-Dimethylphenol	500	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
2,4-Dinitrophenol	50	mg/kg	U	16	U	33	U	9.2	U	1.8	U	1.8	U
2,4-Dinitrotoluene	2	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
2,6-Dinitrotoluene	-	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
2-Chloronaphthalene	-	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
2-Chlorophenol	100	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
2-Methylnaphthalene	300	mg/kg	U	4	U	8.4	U	2.3	U	0.46	U	0.44	U
2-Methylphenol	-	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
2-Nitrophenol	-	mg/kg	U	7.2	U	15	U	4.2	U	0.82	U	0.79	U
3,3'-Dichlorobenzidine	1	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
3-Methylphenol/4-Methylphenol	-	mg/kg	U	4.8	U	10	U	2.8	U	0.55	U	0.53	U
4-Bromophenyl phenyl ether	-	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
4-Chloroaniline	3	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
4-Nitrophenol	-	mg/kg	U	4.7	U	9.7	U	2.7	U	0.53	U	0.51	U
Acenaphthene	1000	mg/kg	U	2.7	U	5.6	U	1.5	U	0.3	U	0.29	U
Acenaphthylene	10	mg/kg	U	2.7	U	5.6	U	1.5	U	0.3	U	0.29	U
Acetophenone	-	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
Aniline	-	mg/kg	U	4	U	8.4	U	2.3	U	0.46	U	0.44	U
Anthracene	1000	mg/kg	U	2	U	4.2	U	1.2	U	0.23	U	0.22	U
Azobenzene	-	mg/kg	U	3.4	U	7	U	1.9	U	0.38	U	0.36	U
Benzo(a)anthracene	7	mg/kg	U	2.4		4.2	U	1.2	U	0.23	U	0.22	U

**Table 2-2
May 2012 Test Pit Data
Liberty Street Parcel**

LOCATION				TP-A 4'	TP-B 4'	TP-C 4'	TP-D 4'	TP-E 5'	TP-F 4.5'
SAMPLING DATE				24-MAY-12	24-MAY-12	24-MAY-12	24-MAY-12	24-MAY-12	24-MAY-12
LAB SAMPLE ID				L1209261-01	L1209261-02	L1209261-03	L1209261-04	L1209261-05	L1209261-06
Depth				4'	4'	4'	4'	5'	5'
	S-3/GW-3	UCL	Units						
MCP Total Metals - Westborough Lab									
Lead, Total	300	3000	mg/kg	67	210	400	240	550	380

Section 3

Data Representativeness Evaluation and Usability Assessment

Pursuant to 310 CMR 40.1056(2)(k) and in accordance with the MassDEP Policy #WSC-07-350 Massachusetts Contingency Plan (MCP) Representativeness Evaluations and Data Usability Assessments Guidance (MassDEP, September 2007), an evaluation of representativeness and an assessment of the data quality have been conducted for the data collected at this site. The Representativeness Evaluation is an evaluation and demonstration of the adequacy of the data sets used to support the conclusions of this Phase II CSA/Class B-2 Partial Response Action Outcome (RAO-P). In evaluating the adequacy of such data, information such as the site's historical use, hydrogeological and physical characteristics, and field observations are considered in addition to the analytical data. The Representativeness Evaluation determines whether the data set in total sufficiently characterizes conditions at the disposal site and supports a coherent Conceptual Site Model (CSM). An Analytical Data Usability Assessment is used to evaluate whether analytical data points are scientifically valid and defensible and of a sufficient level of precision, accuracy and sensitivity to support the RAO. A Data Usability Assessment has both a laboratory analytical component and a field sampling component.

Data were used from previously generated reports prepared by TRC as discussed in Section 2. Data representativeness and usability discussions from previous reports were incorporated into this discussion where appropriate.

3.1 Representativeness Evaluation

The Representativeness Evaluation includes analysis of the CSM; field screening data; data collection approach; number and spatial distribution of sampling locations; handling of samples; temporal distribution of data points; critical samples; completeness; and the inconsistencies and uncertainties. A discussion of the adequacy of these aspects is included in the following subsections.

3.1.1 Conceptual Site Model

The parcel is a relatively narrow strip of land located along and between Liberty Street and a cemetery in New Bedford, Massachusetts. The parcel is currently owned by the City of New Bedford and operated by the Department of Public Infrastructure (DPI) as a storage area. The proposed future use of the parcel is for solar panels.

The parcel is managed under the Site Release Tracking Number (RTN) 4-15685 which consists of multiple properties owned by the City. The RTN has a Special Project Designation by the Massachusetts Department of Environmental Protection (MassDEP).

The compounds of concern for the overall Site, RTN 4-15685, are polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) and metals related to impacted fill material. The data collected within the Liberty Street Parcel indicate that PCBs are not a compound of concern for this portion of the site. The highest concentration of PCBs detected on-site was 3.9 ppm (collected from 1-

3' as part of the URAM data set). All other PCB data were below the S-1/GW-3 standard of 2 ppm. The average PCB concentration at the 1-3' depth using the URAM data set was 1.1 ppm.

The presence of coal/coal ash has been observed in both the TRC borings and the CDM Smith test pits. During the November 2011 test pit program, 2 samples were collected for analysis of coal/coal ash. The data from the suspect coal ash material collected at a depth of approximately 4 feet confirmed the presence of coal ash using microscopy techniques. PAHs were detected below the applicable Method 1 standards.

In the surficial samples collected by CDM Smith, metals were detected below the S-1/GW-3 standards and with the exception of lead, below DEP accepted background concentrations for natural soil. In the Transect B data set (sub-surface samples), lead was detected at concentrations in excess of the S-2/GW-3 standard (300 ppm). All other metals were below the S-2/GW-3 standard. Lead concentrations ranged from 2.5 ppm to 5580 ppm. One sample collected by TRC at location SB-212 contained a concentration of lead of 5580 ppm. The hot spot analysis of this location included averaging the original sample and the duplicate along with the new data collected by CDM Smith in May 2012. Only data above 300 ppm were considered to be part of the hot spot and used in the average. The resulting average concentration of the hot spot was 1333 ppm which is below the lead UCL (3000 ppm).

Groundwater is not a media of concern for the Liberty Street Parcel. The proposed use of this parcel is for solar panels whose installation will not encounter groundwater which is located at approximately 5-7 feet below ground surface.

Historic Fill Material

Based on the data collected at the parcel and a review of the historic records, the source of impacted soil at the Liberty Street Parcel is historic urban fill material and no point sources are known to exist at the Liberty Street Parcel. In addition, based on a review of historic records and photographs as described below, it was concluded that filling at the Parker Street Waste Site occurred after placement of the historic urban fill at the Liberty Street Parcel.

A review of the historical records and aerial photographs suggests the following:

- Liberty Street was laid out in a manner to potentially compensate the cemetery for loss of space. An approximately 130 foot wide strip was present between Oak Grove Cemetery and Liberty Street. The layout of Liberty Street was shown on a 1911 historic map.
- The Liberty Street Parcel appears as an area of open land adjacent to a low lying wetland area when New Bedford was surveyed in 1936 to produce the USGS topographic map.
- The Liberty Street Parcel was established as City property and Liberty Street was then constructed. Historic fill soil was present at the base of Liberty Street. Then more and relatively clean fill was added and the space to the east, i.e., the Liberty Street Parcel, eventually was used by the City public works as a storage area. Potentially, as public property, it could also be viewed as part of the public way of Liberty Street. Filling that took place was likely considered suitable for road base.
- Filling of the Parker Street Waste Site occurred post Liberty Street construction and did not likely impact the Liberty Street Parcel.

According to the MassDEP's Technical Update – *Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil*, PAHs are ubiquitous and consistently present in the environment and are typically formed during the incomplete burning of organic material including wood, coal, oil, gasoline and garbage. PAHs are also found in crude oil, coal tar, creosote and asphalt. Historically, PAHs have been associated with human activities such as cooking, heating homes and industries and fuel for operating automobiles, although low levels of PAHs are also present in the environment from natural sources, such as forest fires. Their presence in the environment at higher concentrations is an artifact of habitation and is due to the widespread practice of emptying fireplaces, stoves, boilers, garbage, etc. in rural and urban areas over the past several hundred years. As a result, it is very common to detect “background” levels of PAHs in soils. Metals are both naturally occurring and found in man-made materials (such as paint, fuel, fertilizers and pesticides) widely distributed in the environment. Naturally occurring metals present in wood and coal are often found concentrated in ash residue. The MassDEP has established values for background concentrations for PAHs and metals in soil for “natural” soil and soil containing coal ash or wood ash associated with fill material.

The historic fill material was observed in the subsurface material by CDM Smith and TRC, during previous site investigations, and described as soil with debris including brick, cinders, glass and clinkers along with a layer of ash material with combusted and uncombusted coal and wood fragments. Two samples were analyzed for the presence of coal/coal ash and confirmed the presence of coal ash using microscopy techniques. Therefore, as part of the risk characterization for comparison to background concentrations, the MassDEP published values for historic fill material containing ash were used.

A relatively low percentage (11%) of soil samples collected for metals analysis at the Liberty Street Parcel exceeded the published urban fill background levels. In addition, the maximum values in the Liberty Street Parcel data set when considered as a whole were not significantly higher than those for historic urban fill. All PAH data was below the published values for historic fill material containing ash.

A review of the data collected to date indicates that the compounds of concern found at the Liberty Street Parcel are likely related to historic fill material, which has been found to contain coal/coal ash and clinkers. A review of the data as well as historical records signifies that the ash and urban fill identified at the Liberty Street Parcel is unrelated to the Parker Street Waste Site. This conclusion is consistent with earlier investigations supporting the Parker Street Waste Site boundaries to be Liberty Street to the east and Parker Street to the south.

3.1.2 Sample Rationale

The purpose of the sample program was to characterize the nature and extent of the concentrations in fill material within the Liberty Street parcel. Thus, sampling locations and depths were selected appropriately to meet this objective.

The following summarizes the three previous sampling rounds conducted by TRC.

- The Transect B data set consisted of 21 samples (plus 2 duplicate samples) from 11 boring locations collected at depths ranging from 4 feet to 11 feet. All samples were analyzed for PCBs. Seven samples were also analyzed for PAHs and metals.
- The URAM data set consisted of 15 samples from 5 locations collected from 0-1', 1-3', 3.5-4.5'. Samples were analyzed for PCBs.

- The Spill data set consisted of 5 samples from 5 locations collected from the top 1 foot. Samples were analyzed for VOCs, EPH carbon ranges and PAHs.

These three additional data sets were considered generally sufficient to characterize the subsurface material. CDM Smith identified the following data gaps: the surficial soil across the site and the extent of the material exceeding the UCL for lead at location SB-212.

CDM Smith collected 11 soil samples within the top 3 feet of material in order to evaluate the exposure to surficial soil. Samples were analyzed for SVOCs and metals. In order to define the extent of material associated with UCL exceedance for lead (SB-212), 5 additional samples were collected and analyzed for lead.

3.1.3 Handling of Samples and the Number and Spatial Distribution

Proper sample collection, handling, and preservation techniques were executed in the field by TRC and CDM Smith. Samples collected by TRC were submitted for laboratory analysis and transported under chain-of-custody to Con-Test Analytical Laboratory (Contest) of East Longmeadow, MA and Groundwater Analytical of Framingham, MA. Samples collected by CDM Smith were submitted for laboratory analysis and transported under chain-of-custody to Alpha Analytical of Westborough, MA.

As discussed above, 43 samples were collected by TRC and 17 additional samples were collected by CDM Smith for a total of 60 samples. The number and spatial distribution of sampling locations is appropriate to define the nature and extent of the compounds of concern, i.e., metals, PAHs and PCBs in fill material.

3.1.4 Temporal Distribution of Samples

Temporal distribution of soil sample collection is not critical for soil due to the stable nature and chemical properties of the primary compound of concern in this medium at this parcel, i.e., metals, PAHs and PCBs in soil.

3.1.5 Critical Samples

Critical samples are those necessary to support site closure. At this site, the critical samples are those that are used in the Method 1 Risk Characterization presented in Section 4 of this report.

3.1.6 Completeness

Soil samples were collected to determine the nature and extent of compounds of concern related to the historic fill at the parcel, i.e., PCB, PAHs and metals. As discussed above, 60 samples were collected. There are no data gaps at the parcel.

3.1.7 Inconsistency and Uncertainty

None of the data was inconsistent with the conceptual site model of historically impacted fill material. One data point (collected by TRC in 2008) exceeded the UCL for lead and the duplicate of this sample was below the UCL. The relative percent difference (RPD) of these two data points (5580 ppm and 2420 ppm) is 79% which exceeds the generally acceptable RPD of 50% in soil. In addition, during the May 2012 test pitting program CDM Smith attempted to re-sample this location and obtained a lead result of 67 ppm with the highest nearby concentration of 550 ppm. Therefore it appears that the lead result of 5580 ppm is an anomaly due to inconsistencies with urban fill material and is not representative of the overall site conditions. Data greater than 300 ppm was considered to be within the lead “hot spot” and used to determine an average concentration representative of this area. The

average concentration for this area was calculated to be 1333 ppm. The uncertainty associated with these data, which is considered to be biased high, does not impact the outcome of this RAO.

3.1.8 Information Considered Unrepresentative

None of the data collected on the Liberty Street Parcel was considered unrepresentative or inconsistent with the conceptual site model. As discussed above one data point (SB-212) was high for lead and could not be replicated with subsequent sampling however, in order to be conservative in the representation of the fill material, this data was included in the risk evaluation.

3.2 Data Usability Assessment

3.2.1 Analytical Data Usability Assessment

Soil data analyzed after August 1, 2003 should be able to be considered Compendium of Analytical Methods (CAM) data and meet the prescribed usability requirements of MassDEP (MassDEP, 2007). CAM is a MassDEP publication that provides (a) information and guidance to all parties on analytical and data quality issues, and (b) requirements and specifications for those parties who wish to obtain “Presumptive Certainty” for satisfying the data quality requirements of the MCP at 310 CMR 40.0017 and 310 CMR 40.0191(2)(c).

Data included to support the RAO were collected by TRC and CDM Smith between June 2008 and May 2012. Samples were collected and analyzed in accordance with the current MassDEP CAM. All samples were submitted for laboratory analysis and transported under chain-of-custody to Con-Test Analytical Laboratory (Contest) of East Longmeadow, MA; Groundwater Analytical of Framingham, MA; or Alpha Analytical of Westborough, MA. Samples were analyzed using CAM Methods. **Appendix D** contains the available lab packages which include the applicable laboratory narratives. The data used to support this RAO is considered to have met the Presumptive Certainty requirements.

TRC conducted data usability on their 3 data sets, i.e., Transect B data, URAM data and drum spill data. Their assessments conclude that the analytical data are usable for MCP decisions based on the CAM requirements for acceptable accuracy, precision and sensitivity. In general, the data are valid as reported and may be used for decision-making purposes.

As reported in the laboratory narrative (Appendix D), data collected by CDM Smith and analyzed by Alpha Analytical had some elevated detection limits due to dilutions required by the sample matrix. In addition, some surrogate recoveries were outside of the individual acceptance criteria for certain SVOCs however they were generally within the overall method allowances. The data is considered usable for MCP decisions.

3.2.2 Field Quality Control Data Usability Assessment

The purpose of the field quality control program is to document that the data are of a quality suitable for the intended uses. Proper sampling techniques and procedures, sampling containers, holding times, and handling procedures were employed by TRC and CDM Smith when sampling, as indicated on each available data package’s laboratory data report narrative. All samples were noted to be analyzed within the proper holding time.

3.2.3 Rejection of Analytical Data

No data was rejected based on the Data Usability Assessment.

3.3 Conclusions

Data quality objectives established for this project were to provide data of adequate quality and quantity to characterize the site as part of a Phase II CSA and to achieve site closure with a Class B-2 RAO-P. Data were collected as part of the site investigation to define the horizontal and vertical extent of compounds present in urban fill. This objective was met with the sampling that was conducted at the parcel.

Section 4

Method 1 Risk Characterization

On behalf of the City of New Bedford (the City), CDM Smith has prepared this Method 1 Risk Characterization for a parcel along Liberty Street in New Bedford, Massachusetts. The parcel is a relatively narrow strip of land located along Liberty Street. The source of soil impacts is documented herein to be associated with historical fill consisting of coal, coal ash, and slag typical of urbanized locations where historic use of coal was the primary fuel source for heat and power. Although the impacts are demonstrably unrelated to those at the nearby Parker Street Waste Site it has been managed under RTN 4-15685. This Method 1 Risk Characterization was completed to support the submittal of a Phase II CSA/Class B-2 Partial RAO Statement.

This risk characterization is based on current risk assessment guidance provided by MassDEP in *Guidance for Disposal Site Risk Characterization – In Support of the Massachusetts Contingency Plan (MCP)* (MassDEP, 1995). The risk characterization evaluates:

- soil boring data identified as “Transect B” data collected in June 2008 by TRC along the edge of the property bordering Liberty Street;
- soil data collected in May 2010 that were associated with a URAM completed at the parcel;
- soil data collected in November and December 2009 following remediation of soil after three 55-gallon drums, one of which was leaking a material that appeared to be asphalt emulsifier, were deposited on the City’s property by an unknown party; and
- soil data collected by CDM Smith in November 2011 and May 2012 from test pit field programs, the latter of which was conducted to further evaluate an anomalous concentration of lead identified at boring location SB-212.

These data are employed in this risk characterization to characterize risk to health, public welfare, and the environment. Risks to public safety are evaluated separately in Section 4.7.

4.1 Method 1 Applicability

Three methods for risk characterization, as described in 310 CMR 40.0942, have been developed to provide a range of approaches to risk characterization. Method 1 was developed to streamline the risk characterization process by providing a comparison of site conditions to promulgated conservative standards to evaluate the risk of harm to health, public welfare, and the environment. Method 1 may only be used, however, if impacts are limited to soil and groundwater and there are no compounds detected in the top two feet of soil that bioaccumulate. For Method 2, site-specific fate and transport factors and considerations may be used to modify certain Method 1 Standards. When GW-2 Standards have been exceeded, a multi-level screening program may be used to determine if an impact to indoor air is likely. Modification of groundwater exposure point concentrations (EPCs) also is acceptable using a Method 2 approach if GW-3 Standards have been exceeded. Method 3 quantitatively estimates cancer and non-cancer health risks to determine the need for remedial action or to demonstrate that a condition of No Significant Risk exists or has been achieved at a site.

The Method 1 approach is applicable for this site based on the following criteria (MassDEP, 1995):

- 1) Impacts are limited to soil; there is no on-site surface water or sediment, no expected impact to groundwater, and no impacts to indoor air, since there are no permanent structures at the site.
- 2) A Method 1 Soil Standard is available for each compound selected as a compound of concern (COC).
- 3) The third criterion for a Method 1 to be an applicable method for evaluating risk was intended to be protective of ecological receptors, since they are most susceptible to bioaccumulative compounds. PCBs, which are bioaccumulative, are detected in 22 of 45 samples; however, only one result was above the S-1/GW-3 soil standard of 2 mg/kg. The area being evaluated is a narrow parcel of land enclosed by a fence with no suitable habitat for ecological receptors, given its small size and location along a busy road. Thus, although PCBs are present in the top two feet of soil at this site, upper trophic level receptors are not expected to be significantly impacted by the presence of PCBs in the surface soil, since exposure is expected to be very limited in frequency and duration and only one result is above the Method 1 Soil Standard.

Thus, a Method 1 risk characterization has been completed for the site.

4.2 Current and Foreseeable Land Use

The parcel is a relatively narrow strip of land located between Liberty Street, a cemetery, Parker Street, and a residential property. The parcel is currently owned by the City of New Bedford and operated by the DPI and DPF as a storage area. The parcel is currently undeveloped and unpaved, with exposed soil. The proposed future use of the property is to house solar panels and be surrounded by a fence.

4.3 Soil and Groundwater Classification

The MCP establishes categories of soil and groundwater that should be utilized in selecting the appropriate Method 1 standards for characterizing risk (MassDEP, 2008). In accordance with MassDEP regulations, soil and groundwater categories should be determined as described in 310 CMR 40.0933 and 310 CMR 40.0932, respectively. The three soil categories (S-1, S-2, and S-3) were derived based on the potential for exposure. Factors such as the type of receptor, frequency of use, intensity of use, and the accessibility of soil are considered in soil classification. Category S-1 is associated with the highest potential for exposure and Category S-3 is associated with the lowest potential for exposure. Currently at this parcel, the surficial soil is unpaved and accessible to adult workers walking around the parcel at a high frequency but at a low intensity activity or use. Additionally, given the proximity to residential properties, children may be able to access the parcel. Thus, the surficial soil from zero to three feet below ground surface (bgs) is considered to be Category S-1. The soil located between three and 15 feet bgs is potentially accessible and is, therefore, considered to be Category S-2.

The MCP recognizes three categories of groundwater as identified in 310 CMR 40.0932: GW-1, GW-2, and GW-3. The groundwater categories are associated with three distinct types of exposures including: (1) potential use of groundwater as a drinking water source (GW-1), (2) groundwater as a source of indoor air impacts (GW-2), and (3) groundwater as a source of surface water impacts (GW-3). Groundwater at this site is not considered GW-1, since the parcel is not located within a Zone II or

Zone A of a drinking water supply area, an Interim Wellhead Protection Area (IWPA), or a potentially productive aquifer (PPA), as shown on **Figure 4-1**. Additionally, there are no private wells located within 500 feet of the site. Groundwater at this parcel is not considered GW-2 as there are no occupied buildings on the parcel. All groundwater is classified as GW-3 based upon its potential to eventually discharge to surface water. Areas of forested wetlands are located north and northwest of the parcel with the closest being located about 400' northwest of the parcel. There is also an area subject to flooding located immediately north of the parcel. The nearest water body is the Acushnet River, which is located approximately 1.2 miles to the east of the parcel.

4.4 Site Characterization

Soil

The soil analytical data employed in the Method 1 Risk Characterization are described in Section 2. To evaluate soil at the site, the soil data were segregated into two data sets: 1) a surface soil data set that included any soil sample collected from zero to three feet bgs, and 2) a site-wide soil data set, including all soils collected from the surface down to a depth of 15 feet bgs. These data sets were derived to evaluate current exposure to surface soil and potential future exposure to site-wide soil, including deeper soils, if the future use of the parcel as a location for solar panels leads to exposure by utility or construction workers during installation of the solar panels or maintenance of utilities beneath the surface. The data included in the surface soil data set are provided in **Tables 4-1** (PCBs), **4-2** (metals), and **4-3** (PAH/EPH/SVOC). The data included in the site-wide soil data set are provided in **Tables 4-4** (PCBs), **4-5** (metals), and **4-6** (PAH/EPH/SVOC). The VOC results, which are included in both data sets, are summarized in **Table 4-7**.

For both data sets, when a sample was analyzed for individual xylene isomers, the detected results were summed and presented as total xylenes for purposes of completing a comparison to standards. Several laboratory methods were requested to obtain PAH results. For the surface and site-wide soil data sets, the results from the PAH, EPH, and SVOC analytical methods were combined to identify the number of detected PAH results and the total number of samples included in each data set. No sample was analyzed by multiple methods, so selection of the most appropriate laboratory result was not required.

For both data sets, the maximum detected concentration or lowest detection limit for non-detects between a parent and duplicate sample was used for each analysis with the exception of the "hot spot" evaluation at location SB-212, as discussed below.

A parent and duplicate sample were collected from soil boring SB-212 for metals analysis. The lead results were 2,420 mg/kg and 5,580 mg/kg, respectively. To further evaluate the lead concentration, CDM Smith installed test pits TP-A through TP-F in May 2012 to collect samples for lead analysis. For the comparison of standards, an average lead concentration was calculated between the parent and duplicate. As part of the "hot spot" evaluation, the resultant concentration from SB-212 was then averaged with the test pit sample results with concentrations greater than 300 ppm to determine an average lead concentration for the hot spot. Table 4-5 shows these average lead results. A site-wide lead exposure concentration was then calculated.

Five samples (BTM-1, BTM-2, BTM-3, ESW, and "under stockpile surface") were collected following remediation of soil that was impacted by a release from one of three 55-gallon drums deposited at the parcel by an unknown party. These samples were submitted for laboratory analysis of EPH ranges and target analytes in November 2009. For each set of analyses, an average concentration was calculated

to create one EPC for these samples to avoid over-representing that part of the parcel, since the area represented by those data points is a relatively small portion of the parcel.

Groundwater

As described in Section 3.1.1, groundwater is not a media of concern for this parcel. Therefore, groundwater has not been evaluated further in this Method 1 risk characterization.

4.5 Selection of Compounds of Concern and Identification of Exposure Point Concentrations

In order to identify COCs for soil, the following criteria were used to exclude compounds independently from the list of detected compounds for each data set:

- 1) Frequency of detection – a compound was eliminated from the risk characterization if detected at a frequency of less than or equal to 10%.
- 2) Background concentrations – a compound was eliminated from the risk characterization if its maximum detected concentration was below its respective MassDEP background concentration for soil containing coal or wood ash. The background levels for soil are presented in the MassDEP Technical Update *Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil* (MassDEP, 2002).

For the surface soil data set, arsenic, chromium, lead, mercury, and each of the 13 detected PAHs were eliminated as COCs based on the comparison to background. Acenaphthylene was also eliminated based on a low frequency of detection. Thus, the compounds included as COCs for this data set included PCBs, the C₉-C₁₈ aliphatic hydrocarbon range, C₁₉-C₃₆ aliphatic hydrocarbon range, and the C₁₁-C₂₂ aromatic hydrocarbon range, as shown in **Table 4-8**.

For the site-wide soil data set, arsenic, beryllium, cadmium, chromium, and each of the 13 detected PAHs were eliminated as COCs based on a comparison to background. Acenaphthylene also was eliminated based on a low frequency of detection. Therefore, the COCs for the site-wide data set included barium, lead, nickel, silver, vanadium, zinc, mercury, PCBs, the C₉-C₁₈ aliphatic hydrocarbon range, C₁₉-C₃₆ aliphatic hydrocarbon range, and the C₁₁-C₂₂ aromatic hydrocarbon range, as shown in **Table 4-9**.

EPCs are the concentrations of oil or hazardous material in soil that a receptor may contact at a point of exposure. Generally, EPCs are arithmetic mean concentrations, which represent the average concentration that a receptor may contact over a period of exposure. As shown in **Table 4-10**, average concentrations were appropriate for the surface soil data set, as the following criteria were met for each COC in accordance with 310 CMR 40.0926(3)(b)1: (1) the arithmetic average concentration was less than or equal to the applicable standard; (2) seventy-five percent of the data points used in the averaging procedure were equal to or less than the applicable standard; and (3) no data point used in the averaging was ten times greater than the applicable standard. The applicable S-1/GW-3 standard was selected and used in the averaging assessment and one half the reporting limit was used for non-detects in the calculation of average concentrations. It should be noted that only one result was included in the data set for each of the EPH ranges; thus, the detected concentration was used as the EPC for each hydrocarbon range.

As shown in **Table 4-11**, average concentrations were appropriate for the site-wide soil data set, as the following criteria were met for each COC in accordance with 310 CMR 40.0926(3)(b)1: (1) the arithmetic average concentration was less than or equal to the applicable standard; (2) seventy-five percent of the data points used in the averaging procedure were equal to or less than the applicable standard; and (3) no data point used in the averaging was ten times greater than the applicable standard. The applicable S-2/GW-3 standard was selected and used in the averaging assessment and one half the reporting limit was used for non-detects in the calculation of average concentrations. Only one result was included in the data set for each of the EPH ranges; thus, the detected concentration was used as the EPC for each hydrocarbon range.

A toxicity profile was developed for each COC and is presented in **Appendix E**.

4.6 Comparison to Method 1 Standards

The EPCs for compounds selected as COCs for each data set were compared to the applicable Method 1 Soil Standards. As presented in Table 4-10, the surface soil EPCs were below the applicable S-1/GW-3 Standard, indicating that the surface soil data set, collected from grade to a depth of three feet, has achieved a condition of no significant risk of harm to human health, public welfare, and the environment. Since the EPCs are less than the most stringent S-1 soil standards, the surface soil is considered acceptable for unrestricted future use.

As presented in Table 4-11, the site-wide soil EPCs were below the applicable S-2/GW-3 Standard, indicating that the site-wide soil data set has achieved a condition of no significant risk of harm to human health, public welfare and the environment. However, the EPC for nickel is not less than the most stringent S-1 soil standard of 20 mg/kg, so the site-wide soil is not considered acceptable for unrestricted future use.

4.7 Risk of Harm to Safety

The purpose of evaluating the risk of harm to safety is to identify conditions that have resulted in or may result in the release of compounds that may pose a threat of physical harm or bodily injury to people presently or in the foreseeable future. In accordance with 310 CMR 40.0960 of the MCP, there are no conditions currently at the parcel that would constitute a risk of harm to public safety, such as the presence of uncontained materials that exhibit the characteristics of corrosivity, reactivity, flammability, or are considered infectious materials. Therefore, in accordance with 310 CMR 40.0960 of the MCP, a level of no significant risk to safety exists at the parcel.

4.8 Conclusion

The EPCs for COCs in surface soil are below the most stringent Method 1 Soil Standards, indicating a condition of no significant risk of harm to health, public welfare, and the environment exists at the parcel for current exposure to surface soil. A level of no significant risk exists for safety as well. The EPCs for COCs in site-wide soil are below the applicable S-2/GW-3 soil standards; however, the EPC for nickel is above the most stringent S-1/GW-3 soil standard. Thus, the parcel is not acceptable for unrestricted future use and an Activity and Use Limitation (AUL) is required to maintain a condition of no significant risk at the parcel.

4.9 Uncertainty Analysis

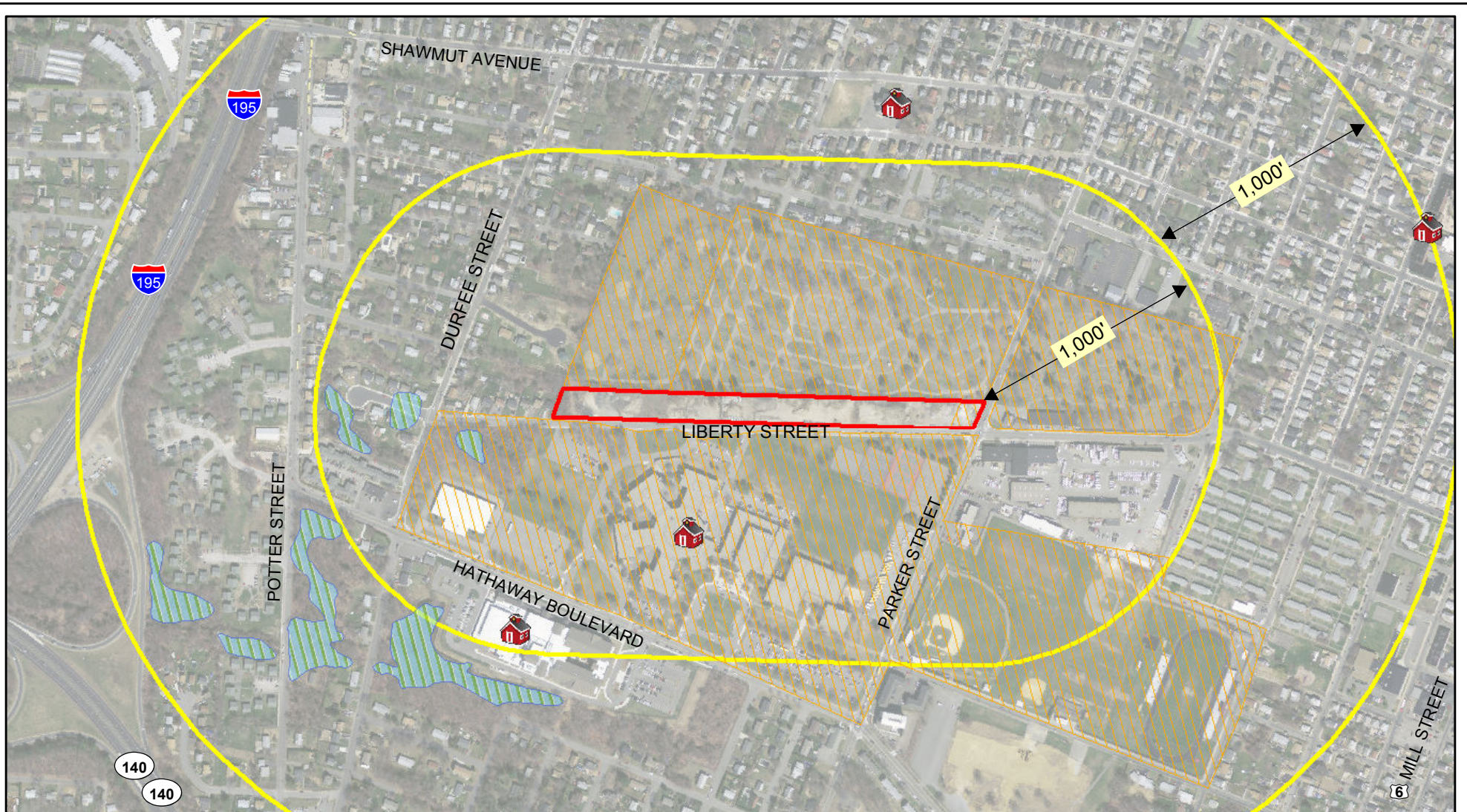
For a Method 1 Risk Characterization, possible sources of uncertainty generally relate to the adequacy of field sampling and characterization of the parcel. When considering impacts to soil, an appropriate number of samples should be collected to be representative of the parcel. Numerous samples were collected during several site investigations conducted between 2008 and 2012 and each sample was submitted for laboratory analyses based on the known source of impacts or to assess initial impacts. Given the small size of the parcel, known or suspected sources of impacts, the number and distribution of samples, and associated laboratory analyses, the parcel was adequately characterized spatially and temporally.

4.10 References

MassDEP, 2008. The Massachusetts Contingency Plan - 310 CMR 40.0000. Bureau of Waste Site Cleanup. February.

MassDEP, 2002. Technical Update: *Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil*. Office of Research and Standards. May.

MassDEP, 1995. Guidance for Disposal Site Risk Characterization - in Support of the Massachusetts Contingency Plan. Bureau of Waste Site Cleanup and Office of Research & Standards. July.



Legend

- | | | | | |
|----------------------------------|---|---|--|-----------------------|
| Dams | Prisons | Sole Source Aquifers | Aquifers | ZONE A |
| Colleges and Universities | NHESP Certified Vernal Pools | Interim Wellhead Protection Area (IWPA) | High Yield | ZONE B |
| Private | NHESP Natural Communities | Open Space: Limited Level of Protection | Medium Yield | ZONE C |
| Public | NHESP Priority Habitats of Rare Species | DEP Approved Zone IIs | MassDEP 2010 Integrated List of Waters (305(b)/303(d)) | 1,000' Buffer |
| Schools (PK - High School) | NHESP Estimated Habitats of Rare Wildlife | Outstanding Resource Waters | DEP Wetlands | Liberty Street Parcel |

**Sensitive Receptors
Liberty Street Parcel
New Bedford, MA**



Basemap source: MassGIS

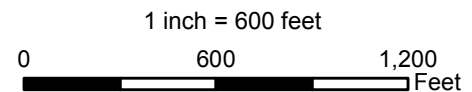


Figure 4-1



Table 4-1
Summary of PCB Analytical Results Included in the Surface Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample Location:		SB-LSD-1				SB-LSD-2				SB-LSD-3					
		Sample Depth (ft.):	Sample Date:	0-1	1-3	0-1	1-3	1-3	0-1	1-3	0-1	1-3					
			S-2/GW-3	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010				
		S-1/GW-3 Method 1 Soil Standards	Method 1 Soil Standards	Field Dup													
PCBs																	
(mg/kg)	Aroclor 1016	NS	NS	0.0544	U	0.0521	U	0.0569	U	0.0570	U	0.0560	U	0.0551	U	0.0555	U
	Aroclor 1221	NS	NS	0.0544	U	0.0521	U	0.0569	U	0.0570	U	0.0560	U	0.0551	U	0.0555	U
	Aroclor 1232	NS	NS	0.0544	U	0.0521	U	0.0569	U	0.0570	U	0.0560	U	0.0551	U	0.0555	U
	Aroclor 1242	NS	NS	0.0544	U	0.0521	U	0.0569	U	0.0570	U	0.0560	U	0.0551	U	0.0555	U
	Aroclor 1248	NS	NS	0.0544	U	0.0521	U	0.0569	U	0.0570	U	0.0560	U	0.0551	U	0.0555	U
	Aroclor 1254	NS	NS	0.0685	J	0.0521	U	0.131	J	0.510	J	0.478	J	0.0615	J	0.0555	U
	Aroclor 1260	NS	NS	0.0544	U	0.0521	U	0.0569	U	0.221	J	0.210	J	0.0551	U	0.0607	J
	Total PCBs	2	3	0.0685	J	0.0521	U	0.131	J	0.731	J	0.688	J	0.0615	J	0.0607	J
PCB Homologs																	
(mg/kg)	Monochlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dichlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Trichlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Tetrachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Pentachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Hexachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Heptachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Octachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nonachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Decachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Total PCBs	2	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

J - Estimated value

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

NS - No Method 1 soil standard

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

PCBs - Polychlorinated Biphenyls

Total PCBs is the sum of the detected concentrations or the highest reporting limit for non-detects

The surface soil data set includes samples collected from 0 to 3 feet below ground surface (bgs)

The maximum detected concentration between a parent and duplicate was used to represent that sample.

Table 4-1
Summary of PCB Analytical Results Included in the Surface Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample Location:		SB-LSD-4				SB-LSD-5				SB-LSD-6			
		Sample Depth (ft.):	Sample Date:	0-1	1-3	0-1	1-3	0-1	1-3	0-1	1-3				
			S-2/GW-3	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010		
		S-1/GW-3 Method 1 Soil Standards	Method 1 Soil Standards												
PCBs															
(mg/kg)	Aroclor 1016	NS	NS	0.0559	U	0.0564	U	0.0588	U	0.0540	U	0.0540	U	0.0623	U
	Aroclor 1221	NS	NS	0.0559	U	0.0564	U	0.0588	U	0.0540	U	0.0540	U	0.0623	U
	Aroclor 1232	NS	NS	0.0559	U	0.0564	U	0.0588	U	0.0540	U	0.0540	U	0.0623	U
	Aroclor 1242	NS	NS	0.0559	U	0.0564	U	0.0588	U	0.0540	U	0.0540	U	0.0623	U
	Aroclor 1248	NS	NS	0.0559	U	0.0564	U	0.0588	U	0.0540	U	0.0540	U	0.0623	U
	Aroclor 1254	NS	NS	0.0759	J	0.163	J	0.458	J	3.01	J	0.117	J	0.277	J
	Aroclor 1260	NS	NS	0.0559	U	0.109	J	0.252	J	0.908	J	0.096	J	0.146	J
	Total PCBs	2	3	0.0759	J	0.272	J	0.710	J	3.918	J	0.213	J	0.423	J
PCB Homologs															
(mg/kg)	Monochlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA	
	Dichlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA	
	Trichlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA	
	Tetrachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA	
	Pentachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA	
	Hexachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA	
	Heptachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA	
	Octachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA	
	Nonachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA	
	Decachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA	
	Total PCBs	2	3	NA		NA		NA		NA		NA		NA	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

J - Estimated value

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

NS - No Method 1 soil standard

Values in **Bold** indicate the compound was detected above one or more of the

Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and

310 CMR 40.0975(6)(b): Table 3

PCBs - Polychlorinated Biphenyls

Total PCBs is the sum of the detected concentrations or the highest reporting

limit for non-detects

The surface soil data set includes samples collected from 0 to 3 feet below ground

surface (bgs)

The maximum detected concentration between a parent and duplicate was used to

represent that sample.

**Table 4-1
Summary of PCB Analytical Results Included in the Surface Soil Data Set**

Liberty Street
New Bedford, Massachusetts

Analysis	Analyte	Sample Location: Sample Depth (ft.): Sample Date:		SB-LSD-7				SB-LSD-8					
		S-1/GW-3 Method 1 Soil Standards	Method 1 Soil Standards	0-1 5/12/2010	1-3 5/12/2010	1-3 5/12/2010	0-1 5/12/2010	1-3 5/12/2010	Field Dup				
PCBs													
(mg/kg)	Aroclor 1016	NS	NS	0.0610	U	0.0585	U	0.0581	U	0.0563	U	0.0569	U
	Aroclor 1221	NS	NS	0.0610	U	0.0585	U	0.0581	U	0.0563	U	0.0569	U
	Aroclor 1232	NS	NS	0.0610	U	0.0585	U	0.0581	U	0.0563	U	0.0569	U
	Aroclor 1242	NS	NS	0.0610	U	0.0585	U	0.0581	U	0.0563	U	0.0569	U
	Aroclor 1248	NS	NS	0.0610	U	0.0585	U	0.0581	U	0.0563	U	0.0569	U
	Aroclor 1254	NS	NS	0.365	J	0.676	J	0.676	J	0.256	J	0.105	J
	Aroclor 1260	NS	NS	0.129	J	0.243	J	0.221	J	0.102	J	0.0569	U
	Total PCBs	2	3	0.494	J	0.919	J	0.897	J	0.358	J	0.105	J
PCB Homologs													
(mg/kg)	Monochlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Dichlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Trichlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Tetrachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Pentachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Hexachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Heptachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Octachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Nonachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Decachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Total PCBs	2	3	NA		NA		NA		NA		NA	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

J - Estimated value

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

NS - No Method 1 soil standard

Values in **Bold** indicate the compound was detected above one or more of the

Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a); Table 2 and

310 CMR 40.0975(6)(b); Table 3

PCBs - Polychlorinated Biphenyls

Total PCBs is the sum of the detected concentrations or the highest reporting limit for non-detects

The surface soil data set includes samples collected from 0 to 3 feet below ground surface (bgs)

The maximum detected concentration between a parent and duplicate was used to represent that sample.

Table 4-2
Summary of the Metals Analytical Results Included in the Surface Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample Location:		TP-01	TP-02	TP-03	TP-04	TP-05	TP-06	TP-07	
		Sample Depth (ft.):	Sample Date:	0-3	0-3	0-3	0-3	0-3	0-3	0-3	
		S-1/GW-3	S-2/GW-3	11/9/2011	11/9/2011	11/9/2011	11/9/2011	11/9/2011	11/9/2011	11/9/2011	
		Method 1 Soil Standards	Method 1 Soil Standards								
Metals (mg/kg)	Antimony	20	30	NA	NA	NA	NA	NA	NA	NA	
	Arsenic	20	20	4.4	4.6	2.1	2	1.6	1.2	1.6	
	Barium	1,000	3,000	NA	NA	NA	NA	NA	NA	NA	
	Beryllium	100	200	NA	NA	NA	NA	NA	NA	NA	
	Cadmium	2	30	0.42	U	0.42	U	0.42	U	0.4	U
	Chromium	30	200	9.7	10	14	10	15	12	12	
	Lead	300	300	190	43	180	47	260	38	47	
	Nickel	20	700	NA	NA	NA	NA	NA	NA	NA	
	Selenium	400	800	NA	NA	NA	NA	NA	NA	NA	
	Silver	100	200	NA	NA	NA	NA	NA	NA	NA	
	Thallium	8	60	NA	NA	NA	NA	NA	NA	NA	
	Vanadium	600	1,000	NA	NA	NA	NA	NA	NA	NA	
	Zinc	2,500	3,000	NA	NA	NA	NA	NA	NA	NA	
	Mercury	20	30	0.18	0.08	0.13	0.12	0.09	0.1	U	0.07

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The surface soil data set includes samples collected from 0 to 3 feet below ground surface (bgs)

Table 4-2
Summary of the Metals Analytical Results Included in the Surface Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample Location:		TP-08	TP-09	TP-10	TP-11
		S-1/GW-3	S-2/GW-3	0-3	0-3	0-3	0-3
		Sample Date:		11/9/2011	11/9/2011	11/9/2011	11/9/2011
		Method 1 Soil Standards	Method 1 Soil Standards				
Metals							
(mg/kg)	Antimony	20	30	NA	NA	NA	NA
	Arsenic	20	20	1.6	7.3	1.5	0.72
	Barium	1,000	3,000	NA	NA	NA	NA
	Beryllium	100	200	NA	NA	NA	NA
	Cadmium	2	30	0.41	U	0.47	U
	Chromium	30	200	16	10	11	9.5
	Lead	300	300	57	240	26	6.3
	Nickel	20	700	NA	NA	NA	NA
	Selenium	400	800	NA	NA	NA	NA
	Silver	100	200	NA	NA	NA	NA
	Thallium	8	60	NA	NA	NA	NA
	Vanadium	600	1,000	NA	NA	NA	NA
	Zinc	2,500	3,000	NA	NA	NA	NA
	Mercury	20	30	0.12	U	0.15	U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a); Table 2 and 310 CMR 40.0975(6)(b); Table 3

The surface soil data set includes samples collected from 0 to 3 feet below ground surface (bgs)

**Table 4-3
Summary of EPH, PAH, SVOC Analytical Results Included in the Surface Soil Data Set**

Liberty Street
New Bedford, Massachusetts

Analysis	Analyte	Sample ID: Sample Depth(ft.): Sample Date:		BTM-1	BTM-2	BTM-3	ESW	Under Stockpile	Average Concentration of BTM, ESW and Under Stockpile Samples	
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	1 11/3/2009	1 11/3/2009	0.5 11/3/2009	0-1 11/3/2009	Surface 11/3/2009		
EPH										
(mg/kg)	C ₉ -C ₁₈ Aliphatic hydrocarbons	1,000	3,000	35 U	36 U	35	35 U	35 U	21	
	C ₁₉ -C ₃₆ Aliphatic hydrocarbons	3,000	5,000	35 U	73	110	69	280	110	
	C ₁₁ -C ₂₂ Aromatic hydrocarbons	1,000	3,000	64	52	150	100	280	129	
	Naphthalene	500	1,000	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U	0.56 U	
	2-Methylnaphthalene	300	500	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U	0.56 U	
	Phenanthrene	500	1,000	0.92	0.83	1.9	2.0	1.5	1.4	
	Acenaphthene	1,000	3,000	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U	0.56 U	
	Acenaphthylene	10	10	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U	0.56 U	
	Fluorene	1,000	3,000	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U	0.56 U	
	Anthracene	1,000	3,000	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U	0.56 U	
	Fluoranthene	1,000	3,000	1.6	1.2	2.7	3.9	2.2	2.3	
	Pyrene	1,000	3,000	1.5	1.1	2.2	3.4	2.0	2.0	
	Benzo(a)anthracene	7	40	0.60	0.60 U	1.1	1.4	0.95	0.87	
	Chrysene	70	400	0.81	0.71	1.4	1.7	1.3	1.2	
	Benzo(b)fluoranthene	7	40	0.70	0.63	1.4	1.7	1.1	1.1	
	Benzo(k)fluoranthene	70	400	0.65	0.60 U	0.91	1.4	0.77	0.81	
	Benzo(a)pyrene	2	4	0.82	0.72	1.3	1.9	1.0	1.1	
	Indeno(1,2,3-cd)pyrene	7	40	0.59 U	0.60 U	0.88	1.3	0.58 U	0.61	
	Dibenzo(a,h)anthracene	0.7	4	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U	0.56 U	
	Benzo(g,h,i)perylene	1,000	3,000	0.65	0.66	0.65	1.6	0.87	0.89	
PAHs										
	Naphthalene	500	1,000	NA	NA	NA	NA	NA	NA	
	2-Methylnaphthalene	300	500	NA	NA	NA	NA	NA	NA	
	Phenanthrene	500	1,000	NA	NA	NA	NA	NA	NA	
	Acenaphthene	1,000	3,000	NA	NA	NA	NA	NA	NA	
	Acenaphthylene	10	10	NA	NA	NA	NA	NA	NA	
	Fluorene	1,000	3,000	NA	NA	NA	NA	NA	NA	
	Anthracene	1,000	3,000	NA	NA	NA	NA	NA	NA	
	Fluoranthene	1,000	3,000	NA	NA	NA	NA	NA	NA	
	Pyrene	1,000	3,000	NA	NA	NA	NA	NA	NA	
	Benzo(a)anthracene	7	40	NA	NA	NA	NA	NA	NA	
	Chrysene	70	400	NA	NA	NA	NA	NA	NA	
	Benzo(b)fluoranthene	7	40	NA	NA	NA	NA	NA	NA	
	Benzo(k)fluoranthene	70	400	NA	NA	NA	NA	NA	NA	
	Benzo(a)pyrene	2	4	NA	NA	NA	NA	NA	NA	
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA	NA	NA	NA	
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA	NA	NA	NA	
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA	NA	NA	NA	
SVOCs										
	Naphthalene	500	1,000	NA	NA	NA	NA	NA	NA	
	2-Methylnaphthalene	300	500	NA	NA	NA	NA	NA	NA	
	Phenanthrene	500	1,000	NA	NA	NA	NA	NA	NA	
	Acenaphthene	1,000	3,000	NA	NA	NA	NA	NA	NA	
	Acenaphthylene	10	10	NA	NA	NA	NA	NA	NA	
	Fluorene	1,000	3,000	NA	NA	NA	NA	NA	NA	
	Anthracene	1,000	3,000	NA	NA	NA	NA	NA	NA	
	Fluoranthene	1,000	3,000	NA	NA	NA	NA	NA	NA	
	Pyrene	1,000	3,000	NA	NA	NA	NA	NA	NA	
	Benzo(a)anthracene	7	40	NA	NA	NA	NA	NA	NA	
	Chrysene	70	400	NA	NA	NA	NA	NA	NA	
	Benzo(b)fluoranthene	7	40	NA	NA	NA	NA	NA	NA	
	Benzo(k)fluoranthene	70	400	NA	NA	NA	NA	NA	NA	
	Benzo(a)pyrene	2	4	NA	NA	NA	NA	NA	NA	
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA	NA	NA	NA	
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA	NA	NA	NA	
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA	NA	NA	NA	
	1,2,4-Trichlorobenzene	500	900	NA	NA	NA	NA	NA	NA	
	1,2-Dichlorobenzene	300	300	NA	NA	NA	NA	NA	NA	
	1,3-Dichlorobenzene	100	500	NA	NA	NA	NA	NA	NA	
	1,4-Dichlorobenzene	50	300	NA	NA	NA	NA	NA	NA	
	2,4,5-Trichlorophenol	600	600	NA	NA	NA	NA	NA	NA	
	2,4,6-Trichlorophenol	20	20	NA	NA	NA	NA	NA	NA	
	2,4-Dichlorophenol	40	40	NA	NA	NA	NA	NA	NA	
	2,4-Dimethylphenol	500	1,000	NA	NA	NA	NA	NA	NA	

**Table 4-3
Summary of EPH, PAH, SVOC Analytical Results Included in the Surface Soil Data Set**

Liberty Street
New Bedford, Massachusetts

Analysis	Analyte	Sample ID: Sample Depth(ft.): Sample Date:		BTM-1	BTM-2	BTM-3	ESW	Under Stockpile	Average Concentration of BTM, ESW and Under Stockpile Samples
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	1 11/3/2009	1 11/3/2009	0.5 11/3/2009	0-1 11/3/2009	Surface 11/3/2009	
	2,4-Dinitrophenol	50	990	NA	NA	NA	NA	NA	NA
	2,4-Dinitrotoluene	2	10	NA	NA	NA	NA	NA	NA
	2,6-Dinitrotoluene	NS	NS	NA	NA	NA	NA	NA	NA
	2-Chloronaphthalene	NS	NS	NA	NA	NA	NA	NA	NA
	2-Chlorophenol	100	300	NA	NA	NA	NA	NA	NA
	2-Methylphenol	NS	NS	NA	NA	NA	NA	NA	NA
	2-Nitrophenol	NS	NS	NA	NA	NA	NA	NA	NA
	3,3'-Dichlorobenzidine	1	10	NA	NA	NA	NA	NA	NA
	3-Methylphenol/4-Methylphenol	NS	NS	NA	NA	NA	NA	NA	NA
	4-Bromophenyl phenyl ether	NS	NS	NA	NA	NA	NA	NA	NA
	4-Chloroaniline	NS	NS	NA	NA	NA	NA	NA	NA
	4-Nitrophenol	NS	NS	NA	NA	NA	NA	NA	NA
	Acetophenone	NS	NS	NA	NA	NA	NA	NA	NA
	Aniline	NS	NS	NA	NA	NA	NA	NA	NA
	Azobenzene	NS	NS	NA	NA	NA	NA	NA	NA
	Bis(2-chloroethoxy)methane	NS	NS	NA	NA	NA	NA	NA	NA
	Bis(2-chloroethyl)ether	0.7	3	NA	NA	NA	NA	NA	NA
	Bis(2-chloroisopropyl)ether	3	50	NA	NA	NA	NA	NA	NA
	Bis(2-Ethylhexyl)phthalate	200	700	NA	NA	NA	NA	NA	NA
	Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA
	Di-n-butylphthalate	NS	NS	NA	NA	NA	NA	NA	NA
	Di-n-octylphthalate	NS	NS	NA	NA	NA	NA	NA	NA
	Dibenzofuran	NS	NS	NA	NA	NA	NA	NA	NA
	Diethyl phthalate	300	300	NA	NA	NA	NA	NA	NA
	Dimethyl phthalate	600	600	NA	NA	NA	NA	NA	NA
	Hexachlorobenzene	0.7	5	NA	NA	NA	NA	NA	NA
	Hexachlorobutadiene	6	90	NA	NA	NA	NA	NA	NA
	Hexachloroethane	9	100	NA	NA	NA	NA	NA	NA
	Isophorone	NS	NS	NA	NA	NA	NA	NA	NA
	Nitrobenzene	NS	NS	NA	NA	NA	NA	NA	NA
	Pentachlorophenol	10	10	NA	NA	NA	NA	NA	NA
	Phenol	20	20	NA	NA	NA	NA	NA	NA

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

or elevated reporting limits for non-detects

NS - No Method 1 soil standard

EPH - Extractable Petroleum Hydrocarbons

PAH - Polycyclic Aromatic Hydrocarbons

SVOC - Semi-volatile Organic Compounds

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The surface soil data set includes samples collected from 0 to 3 feet below ground surface (bgs)

NA - Not analyzed

The average concentration of the BTM-1, BTM-2, BTM-3, ESW, and Under Stockpile Surface samples or the

lowest reporting limit for non-detects were used in the data set to represent these locations.

Table 4-3
Summary of EPH, PAH, SVOC Analytical Results Included in the Surface Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID:		TP-01	TP-02	TP-03	TP-04
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	0-3 11/9/2011	0-3 11/9/2011	0-3 11/9/2011	0-3 11/9/2011
EPH							
(mg/kg)	C ₉ -C ₁₈ Aliphatic hydrocarbons	1,000	3,000	NA	NA	NA	NA
	C ₁₉ -C ₃₆ Aliphatic hydrocarbons	3,000	5,000	NA	NA	NA	NA
	C ₁₁ -C ₂₂ Aromatic hydrocarbons	1,000	3,000	NA	NA	NA	NA
	Naphthalene	500	1,000	NA	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA	NA
	Chrysene	70	400	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA	NA
PAHs							
	Naphthalene	500	1,000	NA	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA	NA
	Chrysene	70	400	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA	NA
SVOCs							
	Naphthalene	500	1,000	1.8 U	0.36 U	1.8 U	0.34 U
	2-Methylnaphthalene	300	500	2.2 U	0.43 U	2.1 U	0.41 U
	Phenanthrene	500	1,000	1.1 U	1.6	2.1	3.6
	Acenaphthene	1,000	3,000	1.4 U	0.28 U	1.4 U	0.27 U
	Acenaphthylene	10	10	1.4 U	0.32	1.4 U	0.27 U
	Fluorene	1,000	3,000	1.8 U	0.36	1.8 U	0.37
	Anthracene	1,000	3,000	1.1 U	0.48	1.1 U	0.37
	Fluoranthene	1,000	3,000	1.4	1.5	2.8	2.5
	Pyrene	1,000	3,000	1.2	1.7	3	3.1
	Benzo(a)anthracene	7	40	1.1 U	0.91	1.6	1.4
	Chrysene	70	400	1.1 U	0.96	1.6	1.4
	Benzo(b)fluoranthene	7	40	1.1 U	0.58	1.2	1.3
	Benzo(k)fluoranthene	70	400	1.1 U	0.72	1.2	0.48
	Benzo(a)pyrene	2	4	1.4 U	0.77	1.4	1.1
	Indeno(1,2,3-cd)pyrene	7	40	1.4 U	0.4	1.4 U	0.73
	Dibenzo(a,h)anthracene	0.7	4	1.1 U	0.21 U	1.1 U	0.2 U
	Benzo(g,h,i)perylene	1,000	3,000	1.4 U	0.43	1.4 U	0.69
	1,2,4-Trichlorobenzene	500	900	1.8 U	0.36 U	1.8 U	0.34 U
	1,2-Dichlorobenzene	300	300	1.8 U	0.36 U	1.8 U	0.34 U
	1,3-Dichlorobenzene	100	500	1.8 U	0.36 U	1.8 U	0.34 U
	1,4-Dichlorobenzene	50	300	1.8 U	0.36 U	1.8 U	0.34 U
	2,4,5-Trichlorophenol	600	600	1.8 U	0.36 U	1.8 U	0.34 U
	2,4,6-Trichlorophenol	20	20	1.1 U	0.21 U	1.1 U	0.2 U
	2,4-Dichlorophenol	40	40	1.6 U	0.32 U	1.6 U	0.31 U
	2,4-Dimethylpheno	500	1,000	1.8 U	0.36 U	1.8 U	0.34 U

Table 4-3
Summary of EPH, PAH, SVOC Analytical Results Included in the Surface Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID:		TP-01	TP-02	TP-03	TP-04
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	0-3 11/9/2011	0-3 11/9/2011	0-3 11/9/2011	0-3 11/9/2011
	2,4-Dinitrophenol	50	990	8.6 U	1.7 U	8.5 U	1.6 U
	2,4-Dinitrotoluene	2	10	1.8 U	0.36 U	1.8 U	0.34 U
	2,6-Dinitrotoluene	NS	NS	1.8 U	0.36 U	1.8 U	0.34 U
	2-Chloronaphthalene	NS	NS	1.8 U	0.36 U	1.8 U	0.34 U
	2-Chlorophenol	100	300	1.8 U	0.36 U	1.8 U	0.34 U
	2-Methylphenol	NS	NS	1.8 U	0.36 U	1.8 U	0.34 U
	2-Nitrophenol	NS	NS	3.9 U	0.77 U	3.8 U	0.74 U
	3,3'-Dichlorobenzidine	1	10	1.8 U	0.36 U	1.8 U	0.34 U
	3-Methylphenol/4-Methylphenol	NS	NS	2.6 U	0.51 U	2.6 U	0.49 U
	4-Bromophenyl phenyl ether	NS	NS	1.8 U	0.36 U	1.8 U	0.34 U
	4-Chloroaniline	NS	NS	1.8 U	0.36 U	1.8 U	0.34 U
	4-Nitrophenol	NS	NS	2.5 U	0.5 U	2.5 U	0.48 U
	Acetophenone	NS	NS	1.8 U	0.36 U	1.8 U	0.34 U
	Aniline	NS	NS	2.2 U	0.43 U	2.1 U	0.41 U
	Azobenzene	NS	NS	1.8 U	0.36 U	1.8 U	0.34 U
	Bis(2-chloroethoxy)methane	NS	NS	1.9 U	0.38 U	1.9 U	0.37 U
	Bis(2-chloroethyl)ether	0.7	3	1.6 U	0.32 U	1.6 U	0.31 U
	Bis(2-chloroisopropyl)ether	3	50	2.2 U	0.43 U	2.1 U	0.41 U
	Bis(2-Ethylhexyl)phthalate	200	700	1.8 U	0.36 U	1.8 U	0.34 U
	Butyl benzyl phthalate	NS	NS	1.8 U	0.36 U	1.8 U	0.34 U
	Di-n-butylphthalate	NS	NS	1.8 U	0.36 U	1.8 U	0.34 U
	Di-n-octylphthalate	NS	NS	1.8 U	0.36 U	1.8 U	0.34 U
	Dibenzofuran	NS	NS	1.8 U	0.36 U	1.8 U	0.34 U
	Diethyl phthalate	300	300	1.8 U	0.36 U	1.8 U	0.34 U
	Dimethyl phthalate	600	600	1.8 U	0.36 U	1.8 U	0.34 U
	Hexachlorobenzene	0.7	5	1.1 U	0.21 U	1.1 U	0.2 U
	Hexachlorobutadiene	6	90	1.8 U	0.36 U	1.8 U	0.34 U
	Hexachloroethane	9	100	1.4 U	0.28 U	1.4 U	0.27 U
	Isophorone	NS	NS	1.6 U	0.32 U	1.6 U	0.31 U
	Nitrobenzene	NS	NS	1.6 U	0.32 U	1.6 U	0.31 U
	Pentachlorophenol	10	10	3.6 U	0.71 U	3.6 U	0.68 U
	Phenol	20	20	1.8 U	0.36 U	1.8 U	0.34 U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

or elevated reporting limits for non-detects

NS - No Method 1 soil standard

EPH - Extractable Petroleum Hydrocarbons

PAH - Polycyclic Aromatic Hydrocarbons

SVOC - Semi-volatile Organic Compounds

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The surface soil data set includes samples collected from 0 to 3 feet below ground surface (bgs)

NA - Not analyzed

The average concentration of the BTM-1, BTM-2, BTM-3, ESW, and Under Stockpile Surface samples or the

lowest reporting limit for non-detects were used in the data set to represent these locations.

Table 4-3
Summary of EPH, PAH, SVOC Analytical Results Included in the Surface Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID:		TP-05	TP-06	TP-07	TP-08
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	0-3 11/9/2011	0-3 11/9/2011	0-3 11/9/2011	0-3 11/9/2011
EPH							
(mg/kg)	C ₉ -C ₁₈ Aliphatic hydrocarbons	1,000	3,000	NA	NA	NA	NA
	C ₁₉ -C ₃₆ Aliphatic hydrocarbons	3,000	5,000	NA	NA	NA	NA
	C ₁₁ -C ₂₂ Aromatic hydrocarbons	1,000	3,000	NA	NA	NA	NA
	Naphthalene	500	1,000	NA	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA	NA
	Chrysene	70	400	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA	NA
PAHs							
	Naphthalene	500	1,000	NA	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA	NA
	Chrysene	70	400	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA	NA
SVOCs							
	Naphthalene	500	1,000	3.3 U	1.6 U	3.4 U	7 U
	2-Methylnaphthalene	300	500	4 U	2 U	4 U	8.4 U
	Phenanthrene	500	1,000	2 U	0.98 U	2.6 U	4.2 U
	Acenaphthene	1,000	3,000	2.7 U	1.3 U	2.7 U	5.6 U
	Acenaphthylene	10	10	2.7 U	1.3 U	2.7 U	5.6 U
	Fluorene	1,000	3,000	3.3 U	1.6 U	3.4 U	7 U
	Anthracene	1,000	3,000	2 U	0.98 U	2 U	4.2 U
	Fluoranthene	1,000	3,000	2.1 U	0.98 U	3.5 U	5.2 U
	Pyrene	1,000	3,000	2.2 U	1 U	4.4 U	5.6 U
	Benzo(a)anthracene	7	40	2 U	0.98 U	2.4 U	4.2 U
	Chrysene	70	400	2 U	0.98 U	2.6 U	4.2 U
	Benzo(b)fluoranthene	7	40	2 U	0.98 U	2 U	4.2 U
	Benzo(k)fluoranthene	70	400	2 U	0.98 U	2 U	4.2 U
	Benzo(a)pyrene	2	4	2.7 U	1.3 U	2.7 U	5.6 U
	Indeno(1,2,3-cd)pyrene	7	40	2.7 U	1.3 U	2.7 U	5.6 U
	Dibenzo(a,h)anthracene	0.7	4	2 U	0.98 U	2 U	4.2 U
	Benzo(g,h,i)perylene	1,000	3,000	2.7 U	1.3 U	2.7 U	5.6 U
	1,2,4-Trichlorobenzene	500	900	3.3 U	1.6 U	3.4 U	7 U
	1,2-Dichlorobenzene	300	300	3.3 U	1.6 U	3.4 U	7 U
	1,3-Dichlorobenzene	100	500	3.3 U	1.6 U	3.4 U	7 U
	1,4-Dichlorobenzene	50	300	3.3 U	1.6 U	3.4 U	7 U
	2,4,5-Trichlorophenol	600	600	3.3 U	1.6 U	3.4 U	7 U
	2,4,6-Trichlorophenol	20	20	2 U	0.98 U	2 U	4.2 U
	2,4-Dichlorophenol	40	40	3 U	1.5 U	3 U	6.3 U
	2,4-Dimethylpheno	500	1,000	3.3 U	1.6 U	3.4 U	7 U

Table 4-3
Summary of EPH, PAH, SVOC Analytical Results Included in the Surface Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID:		TP-05	TP-06	TP-07	TP-08
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	0-3 11/9/2011	0-3 11/9/2011	0-3 11/9/2011	0-3 11/9/2011
	2,4-Dinitrophenol	50	990	16 U	7.8 U	16 U	33 U
	2,4-Dinitrotoluene	2	10	3.3 U	1.6 U	3.4 U	7 U
	2,6-Dinitrotoluene	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	2-Chloronaphthalene	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	2-Chlorophenol	100	300	3.3 U	1.6 U	3.4 U	7 U
	2-Methylphenol	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	2-Nitrophenol	NS	NS	7.2 U	3.5 U	7.2 U	15 U
	3,3'-Dichlorobenzidine	1	10	3.3 U	1.6 U	3.4 U	7 U
	3-Methylphenol/4-Methylphenol	NS	NS	4.8 U	2.4 U	4.8 U	10 U
	4-Bromophenyl phenyl ether	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	4-Chloroaniline	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	4-Nitrophenol	NS	NS	4.7 U	2.3 U	4.7 U	9.7 U
	Acetophenone	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	Aniline	NS	NS	4 U	2 U	4 U	8.4 U
	Azobenzene	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	Bis(2-chloroethoxy)methane	NS	NS	3.6 U	1.8 U	3.6 U	7.5 U
	Bis(2-chloroethyl)ether	0.7	3	3 U	1.5 U	3 U	6.3 U
	Bis(2-chloroisopropyl)ether	3	50	4 U	2 U	4 U	8.4 U
	Bis(2-Ethylhexyl)phthalate	200	700	3.3 U	1.6 U	3.4 U	7 U
	Butyl benzyl phthalate	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	Di-n-butylphthalate	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	Di-n-octylphthalate	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	Dibenzofuran	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	Diethyl phthalate	300	300	3.3 U	1.6 U	3.4 U	7 U
	Dimethyl phthalate	600	600	3.3 U	1.6 U	3.4 U	7 U
	Hexachlorobenzene	0.7	5	2 U	0.98 U	2 U	4.2 U
	Hexachlorobutadiene	6	90	3.3 U	1.6 U	3.4 U	7 U
	Hexachloroethane	9	100	2.7 U	1.3 U	2.7 U	5.6 U
	Isophorone	NS	NS	3 U	1.5 U	3 U	6.3 U
	Nitrobenzene	NS	NS	3 U	1.5 U	3 U	6.3 U
	Pentachlorophenol	10	10	6.7 U	3.3 U	6.7 U	14 U
	Phenol	20	20	3.3 U	1.6 U	3.4 U	7 U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

or elevated reporting limits for non-detects

NS - No Method 1 soil standard

EPH - Extractable Petroleum Hydrocarbons

PAH - Polycyclic Aromatic Hydrocarbons

SVOC - Semi-volatile Organic Compounds

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The surface soil data set includes samples collected from 0 to 3 feet below ground surface (bgs)

NA - Not analyzed

The average concentration of the BTM-1, BTM-2, BTM-3, ESW, and Under Stockpile Surface samples or the

lowest reporting limit for non-detects were used in the data set to represent these locations.

Table 4-3
Summary of EPH, PAH, SVOC Analytical Results Included in the Surface Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID: Sample Depth(ft.): Sample Date:		TP-09	TP-10	TP-11
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	0-3 11/9/2011	0-3 11/9/2011	0-3 11/9/2011
EPH						
(mg/kg)	C ₉ -C ₁₈ Aliphatic hydrocarbons	1,000	3,000	NA	NA	NA
	C ₁₉ -C ₃₆ Aliphatic hydrocarbons	3,000	5,000	NA	NA	NA
	C ₁₁ -C ₂₂ Aromatic hydrocarbons	1,000	3,000	NA	NA	NA
	Naphthalene	500	1,000	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA
	Chrysene	70	400	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA
PAHs						
	Naphthalene	500	1,000	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA
	Chrysene	70	400	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA
SVOCs						
	Naphthalene	500	1,000	1.9 U	0.38 U	0.36 U
	2-Methylnaphthalene	300	500	2.3 U	0.46 U	0.44 U
	Phenanthrene	500	1,000	1.2 U	0.23 U	0.22 U
	Acenaphthene	1,000	3,000	1.5 U	0.3 U	0.29 U
	Acenaphthylene	10	10	1.5 U	0.3 U	0.29 U
	Fluorene	1,000	3,000	1.9 U	0.38 U	0.36 U
	Anthracene	1,000	3,000	1.2 U	0.23 U	0.22 U
	Fluoranthene	1,000	3,000	1.2	0.23 U	0.22 U
	Pyrene	1,000	3,000	1.2	0.23	0.22 U
	Benzo(a)anthracene	7	40	1.2 U	0.23 U	0.22 U
	Chrysene	70	400	1.2 U	0.23 U	0.22 U
	Benzo(b)fluoranthene	7	40	1.2 U	0.23 U	0.22 U
	Benzo(k)fluoranthene	70	400	1.2 U	0.23 U	0.22 U
	Benzo(a)pyrene	2	4	1.5 U	0.3 U	0.29 U
	Indeno(1,2,3-cd)pyrene	7	40	1.5 U	0.3 U	0.29 U
	Dibenzo(a,h)anthracene	0.7	4	1.2 U	0.23 U	0.22 U
	Benzo(g,h,i)perylene	1,000	3,000	1.5 U	0.3 U	0.29 U
	1,2,4-Trichlorobenzene	500	900	1.9 U	0.38 U	0.36 U
	1,2-Dichlorobenzene	300	300	1.9 U	0.38 U	0.36 U
	1,3-Dichlorobenzene	100	500	1.9 U	0.38 U	0.36 U
	1,4-Dichlorobenzene	50	300	1.9 U	0.38 U	0.36 U
	2,4,5-Trichlorophenol	600	600	1.9 U	0.38 U	0.36 U
	2,4,6-Trichlorophenol	20	20	1.2 U	0.23 U	0.22 U
	2,4-Dichlorophenol	40	40	1.7 U	0.34 U	0.33 U
	2,4-Dimethylphenol	500	1,000	1.9 U	0.38 U	0.36 U

Table 4-3
Summary of EPH, PAH, SVOC Analytical Results Included in the Surface Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID:		TP-09	TP-10	TP-11
		S-1/GW-3 Method 1	S-2/GW-3 Method 1			
		Soil Standards	Soil Standards	0-3	0-3	0-3
				11/9/2011	11/9/2011	11/9/2011
				Sample Depth(ft.):		
				Sample Date:		
	2,4-Dinitrophenol	50	990	9.2 U	1.8 U	1.8 U
	2,4-Dinitrotoluene	2	10	1.9 U	0.38 U	0.36 U
	2,6-Dinitrotoluene	NS	NS	1.9 U	0.38 U	0.36 U
	2-Chloronaphthalene	NS	NS	1.9 U	0.38 U	0.36 U
	2-Chlorophenol	100	300	1.9 U	0.38 U	0.36 U
	2-Methylphenol	NS	NS	1.9 U	0.38 U	0.36 U
	2-Nitrophenol	NS	NS	4.2 U	0.82 U	0.79 U
	3,3'-Dichlorobenzidine	1	10	1.9 U	0.38 U	0.36 U
	3-Methylphenol/4-Methylphenol	NS	NS	2.8 U	0.55 U	0.53 U
	4-Bromophenyl phenyl ether	NS	NS	1.9 U	0.38 U	0.36 U
	4-Chloroaniline	NS	NS	1.9 U	0.38 U	0.36 U
	4-Nitrophenol	NS	NS	2.7 U	0.53 U	0.51 U
	Acetophenone	NS	NS	1.9 U	0.38 U	0.36 U
	Aniline	NS	NS	2.3 U	0.46 U	0.44 U
	Azobenzene	NS	NS	1.9 U	0.38 U	0.36 U
	Bis(2-chloroethoxy)methane	NS	NS	2.1 U	0.41 U	0.39 U
	Bis(2-chloroethyl)ether	0.7	3	1.7 U	0.34 U	0.33 U
	Bis(2-chloroisopropyl)ether	3	50	2.3 U	0.46 U	0.44 U
	Bis(2-Ethylhexyl)phthalate	200	700	1.9 U	0.38 U	0.36 U
	Butyl benzyl phthalate	NS	NS	1.9 U	0.38 U	0.36 U
	Di-n-butylphthalate	NS	NS	1.9 U	0.38 U	0.36 U
	Di-n-octylphthalate	NS	NS	1.9 U	0.38 U	0.36 U
	Dibenzofuran	NS	NS	1.9 U	0.38 U	0.36 U
	Diethyl phthalate	300	300	1.9 U	0.38 U	0.36 U
	Dimethyl phthalate	600	600	1.9 U	0.38 U	0.36 U
	Hexachlorobenzene	0.7	5	1.2 U	0.23 U	0.22 U
	Hexachlorobutadiene	6	90	1.9 U	0.38 U	0.36 U
	Hexachloroethane	9	100	1.5 U	0.3 U	0.29 U
	Isophorone	NS	NS	1.7 U	0.34 U	0.33 U
	Nitrobenzene	NS	NS	1.7 U	0.34 U	0.33 U
	Pentachlorophenol	10	10	3.8 U	0.76 U	0.73 U
	Phenol	20	20	1.9 U	0.38 U	0.36 U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

or elevated reporting limits for non-detects

NS - No Method 1 soil standard

EPH - Extractable Petroleum Hydrocarbons

PAH - Polycyclic Aromatic Hydrocarbons

SVOC - Semi-volatile Organic Compounds

Method 1 Soil Standards from 310 CMR 40.0975(6)(a); Table 2 and 310 CMR 40.0975(6)(b); Table 3

The surface soil data set includes samples collected from 0 to 3 feet below ground surface (bgs)

NA - Not analyzed

The average concentration of the BTM-1, BTM-2, BTM-3, ESW, and Under Stockpile Surface samples or the

lowest reporting limit for non-detects were used in the data set to represent these locations.

**Table 4-4
Summary of the PCB Analytical Results Included in the Sitewide Soil Data Set**

Liberty Street
New Bedford, Massachusetts

Analysis	Analyte	Sample Location: Sample Depth (ft.): Sample Date:		SB-LSD-1				SB-LSD-2									
		0-1 5/12/2010	1-3 5/12/2010	3-4 5/12/2010	0-1 5/12/2010	1-3 5/12/2010	1-3 5/12/2010	3-4 5/12/2010									
		Method 1 S- 1/GW-3 Soil Standards	Method 1 S- 2/GW-3 Soil Standards	Field Dup													
PCBs																	
(mg/kg)	Aroclor 1016	NS	NS	0.0544	U	0.0521	U	0.0567	U	0.0569	U	0.0570	U	0.0560	U	0.0563	U
	Aroclor 1221	NS	NS	0.0544	U	0.0521	U	0.0567	U	0.0569	U	0.0570	U	0.0560	U	0.0563	U
	Aroclor 1232	NS	NS	0.0544	U	0.0521	U	0.0567	U	0.0569	U	0.0570	U	0.0560	U	0.0563	U
	Aroclor 1242	NS	NS	0.0544	U	0.0521	U	0.0567	U	0.0569	U	0.0570	U	0.0560	U	0.0563	U
	Aroclor 1248	NS	NS	0.0544	U	0.0521	U	0.0567	U	0.0569	U	0.0570	U	0.0560	U	0.0563	U
	Aroclor 1254	NS	NS	0.0685	J	0.0521	U	0.611	J	0.131	J	0.510	J	0.478	J	0.523	J
	Aroclor 1260	NS	NS	0.0544	U	0.0521	U	0.227	J	0.0569	U	0.221	J	0.210	J	0.215	J
	Total PCBs	2	3	0.0685	J	0.0521	U	0.838	J	0.131	J	0.731	J	0.688	J	0.738	J
PCB Homologs																	
(mg/kg)	Monochlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Dichlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Trichlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Tetrachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Pentachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Hexachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Heptachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Octachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Nonachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Decachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Total PCBs	2	3	NA		NA		NA		NA		NA		NA		NA	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

J - Estimated value

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

NS - No Method 1 soil standard

Values in **Bold** indicate the compound was detected above one or more of the

Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and

310 CMR 40.0975(6)(b): Table 3

PCBs - Polychlorinated Biphenyls

Total PCBs is the sum of the detected concentrations or the highest reporting

limit for non-detects

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

The maximum detected concentration or highest reporting limit for non-detects between a parent and duplicate was used to represent that sample.

**Table 4-4
Summary of the PCB Analytical Results Included in the Sitewide Soil Data Set**

Liberty Street
New Bedford, Massachusetts

Analysis Analyte	Sample Location: Sample Depth (ft.): Sample Date:		SB-LSD-3			SB-LSD-4		
	Method 1 S- 1/GW-3 Soil Standards	Method 1 S- 2/GW-3 Soil Standards	0-1 5/12/2010	1-3 5/12/2010	4-5 5/12/2010	0-1 5/12/2010	1-3 5/12/2010	3.5-4.5 5/12/2010
PCBs (mg/kg)								
Aroclor 1016	NS	NS	0.0551 U	0.0555 U	0.0599 U	0.0559 U	0.0564 U	0.0608 U
Aroclor 1221	NS	NS	0.0551 U	0.0555 U	0.0599 U	0.0559 U	0.0564 U	0.0608 U
Aroclor 1232	NS	NS	0.0551 U	0.0555 U	0.0599 U	0.0559 U	0.0564 U	0.0608 U
Aroclor 1242	NS	NS	0.0551 U	0.0555 U	0.0599 U	0.0559 U	0.0564 U	0.0608 U
Aroclor 1248	NS	NS	0.0551 U	0.0555 U	0.0599 U	0.0559 U	0.0564 U	0.0608 U
Aroclor 1254	NS	NS	0.0615 J	0.0555 U	0.0599 U	0.0759 J	0.163 J	0.0608 U
Aroclor 1260	NS	NS	0.0551 U	0.0607 J	0.0599 U	0.0559 U	0.109 J	0.0608 U
Total PCBs	2	3	0.0615 J	0.0607 J	0.0599 U	0.0759 J	0.272 J	0.0608 U
PCB Homologs (mg/kg)								
Monochlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Dichlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Trichlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Tetrachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Pentachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Hexachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Heptachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Octachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Nonachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Decachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Total PCBs	2	3	NA	NA	NA	NA	NA	NA

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)
 J - Estimated value
 U - Compound was not detected at specified quantitation limit
 NA - Not analyzed
 NS - No Method 1 soil standard
 Values in **Bold** indicate the compound was detected above one or more of the
 Method 1 Soil Standards
 Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and
 310 CMR 40.0975(6)(b): Table 3
 PCBs - Polychlorinated Biphenyls
 Total PCBs is the sum of the detected concentrations or the highest reporting
 limit for non-detects
 The sitewide soil data set includes samples collected from 0 to 15 feet below ground
 surface (bgs)
 The maximum detected concentration or highest reporting limit for non-detects
 between a parent and duplicate was used to represent that sample.

**Table 4-4
Summary of the PCB Analytical Results Included in the Sitewide Soil Data Set**

Liberty Street
New Bedford, Massachusetts

Analysis Analyte	Sample Location: Sample Depth (ft.): Sample Date:		SB-LSD-5			SB-LSD-6		
	Method 1 S- 1/GW-3 Soil Standards	Method 1 S- 2/GW-3 Soil Standards	0-1 5/12/2010	1-3 5/12/2010	3.5-4.5 5/12/2010	0-1 5/12/2010	1-3 5/12/2010	3.5-5 5/12/2010
PCBs (mg/kg)								
Aroclor 1016	NS	NS	0.0588 U	0.0540 U	0.0517 U	0.0540 U	0.0623 U	0.0582 U
Aroclor 1221	NS	NS	0.0588 U	0.0540 U	0.0517 U	0.0540 U	0.0623 U	0.0582 U
Aroclor 1232	NS	NS	0.0588 U	0.0540 U	0.0517 U	0.0540 U	0.0623 U	0.0582 U
Aroclor 1242	NS	NS	0.0588 U	0.0540 U	0.0517 U	0.0540 U	0.0623 U	0.0582 U
Aroclor 1248	NS	NS	0.0588 U	0.0540 U	0.0517 U	0.0540 U	0.0623 U	0.0582 U
Aroclor 1254	NS	NS	0.458 J	3.01 J	0.0645 J	0.117 J	0.277 J	0.0582 U
Aroclor 1260	NS	NS	0.252 J	0.908 J	0.0517 U	0.096 J	0.146 J	0.0582 U
Total PCBs	2	3	0.710 J	3.918 J	0.0645 J	0.213 J	0.423 J	0.0582 U
PCB Homologs (mg/kg)								
Monochlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Dichlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Trichlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Tetrachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Pentachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Hexachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Heptachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Octachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Nonachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Decachlorobiphenyl	NS	NS	NA	NA	NA	NA	NA	NA
Total PCBs	2	3	NA	NA	NA	NA	NA	NA

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)
 J - Estimated value
 U - Compound was not detected at specified quantitation limit
 NA - Not analyzed
 NS - No Method 1 soil standard
 Values in **Bold** indicate the compound was detected above one or more of the
 Method 1 Soil Standards
 Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and
 310 CMR 40.0975(6)(b): Table 3
 PCBs - Polychlorinated Biphenyls
 Total PCBs is the sum of the detected concentrations or the highest reporting
 limit for non-detects
 The sitewide soil data set includes samples collected from 0 to 15 feet below ground
 surface (bgs)
 The maximum detected concentration or highest reporting limit for non-detects
 between a parent and duplicate was used to represent that sample.

**Table 4-4
Summary of the PCB Analytical Results Included in the Sitewide Soil Data Set**

Liberty Street
New Bedford, Massachusetts

Analysis	Analyte	Sample Location: Sample Depth (ft.): Sample Date:		SB-LSD-7				SB-LSD-8									
		Method 1 S- 1/GW-3 Soil Standards	Method 1 S- 2/GW-3 Soil Standards	0-1 5/12/2010	1-3 5/12/2010	1-3 5/12/2010	3.5-4.5 5/12/2010	0-1 5/12/2010	1-3 5/12/2010	3.5-4.5 5/12/2010							
Field Dup																	
PCBs																	
(mg/kg)	Aroclor 1016	NS	NS	0.0610	U	0.0585	U	0.0581	U	0.0500	U	0.0563	U	0.0569	U	0.0551	U
	Aroclor 1221	NS	NS	0.0610	U	0.0585	U	0.0581	U	0.0500	U	0.0563	U	0.0569	U	0.0551	U
	Aroclor 1232	NS	NS	0.0610	U	0.0585	U	0.0581	U	0.0500	U	0.0563	U	0.0569	U	0.0551	U
	Aroclor 1242	NS	NS	0.0610	U	0.0585	U	0.0581	U	0.0500	U	0.0563	U	0.0569	U	0.0551	U
	Aroclor 1248	NS	NS	0.0610	U	0.0585	U	0.0581	U	0.0500	U	0.0563	U	0.0569	U	0.0551	U
	Aroclor 1254	NS	NS	0.365	J	0.676	J	0.676	J	0.0819	J	0.256	J	0.105	J	0.150	J
	Aroclor 1260	NS	NS	0.129	J	0.243	J	0.221	J	0.0500	U	0.102	J	0.0569	U	0.0944	J
	Total PCBs	2	3	0.494	J	0.919	J	0.897	J	0.0819	J	0.358	J	0.105	J	0.2444	J
PCB Homologs																	
(mg/kg)	Monochlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Dichlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Trichlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Tetrachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Pentachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Hexachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Heptachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Octachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Nonachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Decachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA	
	Total PCBs	2	3	NA		NA		NA		NA		NA		NA		NA	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

J - Estimated value

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

NS - No Method 1 soil standard

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

PCBs - Polychlorinated Biphenyls

Total PCBs is the sum of the detected concentrations or the highest reporting limit for non-detects

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

The maximum detected concentration or highest reporting limit for non-detects between a parent and duplicate was used to represent that sample.

**Table 4-4
Summary of the PCB Analytical Results Included in the Sitewide Soil Data Set**

Liberty Street
New Bedford, Massachusetts

Analysis	Analyte	Sample Location		SB-210		SB-211		SB-212			SB-213											
		Sample Depth (ft.)	Sample Date:	5	11	5	11	4	4	10	5	12										
				6/16/2008	6/16/2008	6/16/2008	6/16/2008	6/16/2008	6/16/2008	6/16/2008	6/17/2008	6/17/2008										
		Method 1 S-1/GW-3 Soil Standards	Method 1 S-2/GW-3 Soil Standards					Field Dup														
PCBs																						
(mg/kg)	Aroclor 1016	NS	NS	0.0591	U	0.0584	U	0.0662	U	0.0545	U	0.0655	U	0.0635	U	0.0541	U	0.0555	U	0.0549	U	
	Aroclor 1221	NS	NS	0.0591	U	0.0584	U	0.0662	U	0.0545	U	0.0655	U	0.0635	U	0.0541	U	0.0555	U	0.0549	U	
	Aroclor 1232	NS	NS	0.0591	U	0.0584	U	0.0662	U	0.0545	U	0.0655	U	0.0635	U	0.0541	U	0.0555	U	0.0549	U	
	Aroclor 1242	NS	NS	0.0591	U	0.0584	U	0.0662	U	0.0545	U	0.0655	U	0.0635	U	0.0541	U	0.0555	U	0.0549	U	
	Aroclor 1248	NS	NS	0.0591	U	0.0584	U	0.0662	U	0.0545	U	0.0655	U	0.0635	U	0.0541	U	0.0555	U	0.0549	U	
	Aroclor 1254	NS	NS	0.0591	U	0.0584	U	0.0662	U	0.0545	U	0.0655	U	0.0635	U	0.0541	U	0.0555	U	0.0549	U	
	Aroclor 1260	NS	NS	0.0591	U	0.0584	U	0.0662	U	0.0545	U	0.0655	U	0.0635	U	0.0541	U	0.0555	U	0.0549	U	
	Total PCBs	2	3	0.0591	U	0.0584	U	0.0662	U	0.0545	U	0.0655	U	0.0635	U	0.0541	U	0.0555	U	0.0549	U	
PCB Homologs																						
(mg/kg)	Monochlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
	Dichlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
	Trichlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
	Tetrachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
	Pentachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
	Hexachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
	Heptachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
	Octachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
	Nonachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
	Decachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
	Total PCBs	2	3	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA

Notes:
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)
J - Estimated value
U - Compound was not detected at specified quantitation limit
NA - Not analyzed
NS - No Method 1 soil standard
Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards
Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3
PCBs - Polychlorinated Biphenyls
Total PCBs is the sum of the detected concentrations or the highest reporting limit for non-detects
The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)
The maximum detected concentration or highest reporting limit for non-detects between a parent and duplicate was used to represent that sample.

**Table 4-4
Summary of the PCB Analytical Results Included in the Sitewide Soil Data Set**

Liberty Street
New Bedford, Massachusetts

Analysis	Analyte	Sample Location		SB-214		SB-215		SB-216	SB-217		SB-218										
		Sample Depth (ft.)	Sample Date:	4	10	7.5	9	4	5	11	4.5	10									
		Method 1 S-1/GW-3 Soil Standards	Method 1 S-2/GW-3 Soil Standards	6/17/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008									
PCBs																					
(mg/kg)	Aroclor 1016	NS	NS	0.0604	U	0.131	UJ	0.0611	U	0.138	UJ	0.0525	U	0.0653	U	0.0530	U	0.0581	U	0.0534	U
	Aroclor 1221	NS	NS	0.0604	U	0.131	UJ	0.0611	U	0.138	UJ	0.0525	U	0.0653	U	0.0530	U	0.0581	U	0.0534	U
	Aroclor 1232	NS	NS	0.0604	U	0.131	UJ	0.0611	U	0.138	UJ	0.0525	U	0.0653	U	0.0530	U	0.0581	U	0.0534	U
	Aroclor 1242	NS	NS	0.0604	U	0.131	UJ	0.0611	U	0.138	UJ	0.0525	U	0.0653	U	0.0530	U	0.0581	U	0.0534	U
	Aroclor 1248	NS	NS	0.0604	U	0.131	UJ	0.0611	U	0.138	UJ	0.0525	U	0.0653	U	0.0530	U	0.0581	U	0.0534	U
	Aroclor 1254	NS	NS	0.225	J	0.131	UJ	0.0611	U	0.138	UJ	0.0525	U	0.0653	U	0.0530	U	0.158	J	0.0534	U
	Aroclor 1260	NS	NS	0.0604	U	0.131	UJ	0.0611	U	0.138	UJ	0.0525	U	0.0653	U	0.0530	U	0.0843	J	0.0534	U
	Total PCBs	2	3	0.225	J	0.131	UJ	0.0611	U	0.138	UJ	0.0525	U	0.0653	U	0.0530	U	0.2423	J	0.0534	U
PCB Homologs																					
(mg/kg)	Monochlorobiphenyl	NS	NS	NA		NA		NA		NA		0.017	U	NA		NA		NA		NA	
	Dichlorobiphenyl	NS	NS	NA		NA		NA		NA		0.017	U	NA		NA		NA		NA	
	Trichlorobiphenyl	NS	NS	NA		NA		NA		NA		0.017	U	NA		NA		NA		NA	
	Tetrachlorobiphenyl	NS	NS	NA		NA		NA		NA		0.033	U	NA		NA		NA		NA	
	Pentachlorobiphenyl	NS	NS	NA		NA		NA		NA		0.033	U	NA		NA		NA		NA	
	Hexachlorobiphenyl	NS	NS	NA		NA		NA		NA		0.033	U	NA		NA		NA		NA	
	Heptachlorobiphenyl	NS	NS	NA		NA		NA		NA		0.050	U	NA		NA		NA		NA	
	Octachlorobiphenyl	NS	NS	NA		NA		NA		NA		0.050	U	NA		NA		NA		NA	
	Nonachlorobiphenyl	NS	NS	NA		NA		NA		NA		0.083	U	NA		NA		NA		NA	
	Decachlorobiphenyl	NS	NS	NA		NA		NA		NA		0.083	U	NA		NA		NA		NA	
	Total PCBs	2	3	NA		NA		NA		NA		0.083	U	NA		NA		NA		NA	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

J - Estimated value

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

NS - No Method 1 soil standard

Values in **Bold** indicate the compound was detected above one or more of the

Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and

310 CMR 40.0975(6)(b): Table 3

PCBs - Polychlorinated Biphenyls

Total PCBs is the sum of the detected concentrations or the highest reporting

limit for non-detects

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

The maximum detected concentration or highest reporting limit for non-detects

between a parent and duplicate was used to represent that sample.

**Table 4-4
Summary of the PCB Analytical Results Included in the Sitewide Soil Data Set**

Liberty Street
New Bedford, Massachusetts

Analysis	Analyte	Sample Location:		SB-219			SB-221						
		Sample Depth (ft.):	Sample Date:	4	4	9	5	8.5					
		Method 1 S-1/GW-3 Soil Standards	Method 1 S-2/GW-3 Soil Standards	6/17/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008					
				Field Dup									
PCBs													
(mg/kg)	Aroclor 1016	NS	NS	0.0657	U	0.0681	U	0.0537	U	0.0531	U	0.0514	U
	Aroclor 1221	NS	NS	0.0657	U	0.0681	U	0.0537	U	0.0531	U	0.0514	U
	Aroclor 1232	NS	NS	0.0657	U	0.0681	U	0.0537	U	0.0531	U	0.0514	U
	Aroclor 1242	NS	NS	0.0657	U	0.0681	U	0.0537	U	0.0531	U	0.0514	U
	Aroclor 1248	NS	NS	0.0657	U	0.0681	U	0.0537	U	0.0531	U	0.0514	U
	Aroclor 1254	NS	NS	0.0657	U	0.0681	U	0.0537	U	0.0531	U	0.0514	U
	Aroclor 1260	NS	NS	0.0657	U	0.0681	U	0.0537	U	0.0531	U	0.0514	U
	Total PCBs	2	3	0.0657	U	0.0681	U	0.0537	U	0.0531	U	0.0514	U
PCB Homologs													
(mg/kg)	Monochlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Dichlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Trichlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Tetrachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Pentachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Hexachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Heptachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Octachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Nonachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Decachlorobiphenyl	NS	NS	NA		NA		NA		NA		NA	
	Total PCBs	2	3	NA		NA		NA		NA		NA	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

J - Estimated value

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

NS - No Method 1 soil standard

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

PCBs - Polychlorinated Biphenyls

Total PCBs is the sum of the detected concentrations or the highest reporting limit for non-detects

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

The maximum detected concentration or highest reporting limit for non-detects between a parent and duplicate was used to represent that sample.

Table 4-5
Summary of the Metals Analytical Data Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Method 1 S-1/GW-3 Soil Standards	Method 1 S-2/GW-3 Soil Standards	SB-210	SB-212		Average between the SB-212 parent and duplicate samples for lead; maximum concentration for other chemicals
				5 6/16/2008	4 6/16/2008	4 6/16/2008	
				Field Dup			
Metals							
(mg/kg)	Antimony	20	30	5.53 U	5.23 U	5.33 U	5.23 U
	Arsenic	20	20	12.3	16.9	18.4	18.4
	Barium	1,000	3,000	260	697	707	707
	Beryllium	100	200	0.64	0.57	0.66	0.66
	Cadmium	2	30	0.49	1.96	1.38	1.96
	Chromium	30	200	16.3	16.0	17.6	17.6
	Lead	300	300	510	2,420	5,580	4000
	Nickel	20	700	15.8	16.1	18.3	18.3
	Selenium	400	800	6.91 U	6.53 U	6.66 U	6.53 U
	Silver	100	200	4.13	5.82	4.30	5.82
	Thallium	8	60	4.15 U	3.92 U	4.00 U	3.92 U
	Vanadium	600	1,000	34.5	27.3	31.4	31.4
	Zinc	2,500	3,000	371	483	428	483
	Mercury	20	30	0.154	0.265	2.47	2.47

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

DUP - duplicate

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

EPC - Exposure Point Concentration

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

The average concentration between the SB-212 parent and duplicate was calculated for lead. That concentration was then averaged with the results of TP-A through TP-F with concentrations greater than 300 ppm to represent the "hot spot" area.

That average concentration was included in the sitewide data set for EPC calculations. The maximum detected concentration between the parent and duplicate or lowest reporting limit for non-detects was used to represent that sample for all other chemicals.

Table 4-5
Summary of the Metals Analytical Data Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte			TP-A 4'	TP-B 4'	TP-C 4'	TP-D 4'	TP-E 5'	TP-F 4.5'	"Hot Spot" Area Average
		Method 1 S-1/GW-3 Soil Standards	Method 1 S-2/GW-3 Soil Standards	4' 5/24/2012	4' 5/24/2012	4' 5/24/2012	4' 5/24/2012	4' 5/24/2012	4' 5/24/2012	
Metals										
(mg/kg)	Antimony	20	30	NA	NA	NA	NA	NA	NA	NA
	Arsenic	20	20	NA	NA	NA	NA	NA	NA	NA
	Barium	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	Beryllium	100	200	NA	NA	NA	NA	NA	NA	NA
	Cadmium	2	30	NA	NA	NA	NA	NA	NA	NA
	Chromium	30	200	NA	NA	NA	NA	NA	NA	NA
	Lead	300	300	67	210	400	240	550	380	1333
	Nickel	20	700	NA	NA	NA	NA	NA	NA	NA
	Selenium	400	800	NA	NA	NA	NA	NA	NA	NA
	Silver	100	200	NA	NA	NA	NA	NA	NA	NA
	Thallium	8	60	NA	NA	NA	NA	NA	NA	NA
	Vanadium	600	1,000	NA	NA	NA	NA	NA	NA	NA
	Zinc	2,500	3,000	NA	NA	NA	NA	NA	NA	NA
	Mercury	20	30	NA	NA	NA	NA	NA	NA	NA

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

DUP - duplicate

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

EPC - Exposure Point Concentration

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

The average concentration between the SB-212 parent and duplicate was calculated for lead. That concentration was then averaged with the results of TP-A through TP-F with concentrations greater than 300 ppm to represent the "hot spot" area.

That average concentration was included in the sitewide data set for EPC calculations. The maximum detected concentration between the parent and duplicate or lowest reporting limit for non-detects was used to represent that sample for all other chemicals.

Table 4-5
Summary of the Metals Analytical Data Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte			SB-214	SB-216	SB-217	SB-219
		Method 1 S-1/GW-3 Soil Standards	Method 1 S-2/GW-3 Soil Standards	4 6/17/2008	4 6/17/2008	5 6/17/2008	4 6/17/2008
Metals							
(mg/kg)	Antimony	20	30	4.89 U	4.45 U	5.50 U	5.45 U
	Arsenic	20	20	7.20	3.51	15.3	17.3
	Barium	1,000	3,000	211	31.9	513	337
	Beryllium	100	200	0.36	0.28 U	0.87	0.35 U
	Cadmium	2	30	1.54	0.28 U	1.14	2.92
	Chromium	30	200	11.7	5.27	13.5	35.9
	Lead	300	300	561	55.3	418	1,500
	Nickel	20	700	73.6	3.72	26.3	28.9
	Selenium	400	800	6.11 U	5.56 U	6.87 U	6.82 U
	Silver	100	200	3.03	1.23	7.72	12.2
	Thallium	8	60	3.67 U	3.34 U	4.13 U	4.09 U
	Vanadium	600	1,000	17.6	9.43	23.3	28.5
	Zinc	2,500	3,000	445	43.6	560	579
	Mercury	20	30	0.272	0.446	0.111	0.281

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

DUP - duplicate

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

EPC - Exposure Point Concentration

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

The average concentration between the SB-212 parent and duplicate was calculated for lead. That concentration was then averaged with the results of TP-A through TP-F with concentrations greater than 300 ppm to represent the "hot spot" area.

That average concentration was included in the sitewide data set for EPC calculations. The maximum detected concentration between the parent and duplicate or lowest reporting limit for non-detects was used to represent that sample for all other chemicals.

Table 4-5
Summary of the Metals Analytical Data Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte			SB-221	TP-01	TP-02	TP-03	TP-04	TP-05	TP-06
		Method 1 S-1/GW-3 Soil Standards	Method 1 S-2/GW-3 Soil Standards	5 6/17/2008	11/9/2011	11/9/2011	11/9/2011	11/9/2011	11/9/2011	11/9/2011
Metals										
(mg/kg)	Antimony	20	30	4.27 U	NA	NA	NA	NA	NA	NA
	Arsenic	20	20	2.67 U	4.4	4.6	2.1	2	1.6	1.2
	Barium	1,000	3,000	27.8	NA	NA	NA	NA	NA	NA
	Beryllium	100	200	0.27 U	NA	NA	NA	NA	NA	NA
	Cadmium	2	30	0.27 U	0.42 U	0.42 U	0.42 U	0.4 U	0.41 U	0.4 U
	Chromium	30	200	8.59	9.7	10	14	10	15	12
	Lead	300	300	2.49	190	43	180	47	260	38
	Nickel	20	700	4.95	NA	NA	NA	NA	NA	NA
	Selenium	400	800	5.34 U	NA	NA	NA	NA	NA	NA
	Silver	100	200	1.11	NA	NA	NA	NA	NA	NA
	Thallium	8	60	3.20 U	NA	NA	NA	NA	NA	NA
	Vanadium	600	1,000	12.0	NA	NA	NA	NA	NA	NA
	Zinc	2,500	3,000	12.3	NA	NA	NA	NA	NA	NA
	Mercury	20	30	0.014 U	0.18	0.08	0.13	0.12	0.09	0.1 U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

DUP - duplicate

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

EPC - Exposure Point Concentration

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

The average concentration between the SB-212 parent and duplicate was calculated for lead. That concentration was then averaged with the results of TP-A through TP-F with concentrations greater than 300 ppm to represent the "hot spot" area.

That average concentration was included in the sitewide data set for EPC calculations. The maximum detected concentration between the parent and duplicate or lowest reporting limit for non-detects was used to represent that sample for all other chemicals.

Table 4-5
Summary of the Metals Analytical Data Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis Analyte			TP-07	TP-08	TP-09	TP-10	TP-11
	Method 1 S-1/GW-3 Soil Standards	Method 1 S-2/GW-3 Soil Standards	11/9/2011	11/9/2011	11/9/2011	11/9/2011	11/9/2011
Metals (mg/kg)							
Antimony	20	30	NA	NA	NA	NA	NA
Arsenic	20	20	1.6	1.6	7.3	1.5	0.72
Barium	1,000	3,000	NA	NA	NA	NA	NA
Beryllium	100	200	NA	NA	NA	NA	NA
Cadmium	2	30	0.4 U	0.41 U	0.47 U	0.45 U	0.44 U
Chromium	30	200	12	16	10	11	9.5
Lead	300	300	47	57	240	26	6.3
Nickel	20	700	NA	NA	NA	NA	NA
Selenium	400	800	NA	NA	NA	NA	NA
Silver	100	200	NA	NA	NA	NA	NA
Thallium	8	60	NA	NA	NA	NA	NA
Vanadium	600	1,000	NA	NA	NA	NA	NA
Zinc	2,500	3,000	NA	NA	NA	NA	NA
Mercury	20	30	0.07	0.12 U	0.15	0.09 U	0.09 U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

DUP - duplicate

U - Compound was not detected at specified quantitation limit

NA - Not analyzed

EPC - Exposure Point Concentration

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

The average concentration between the SB-212 parent and duplicate was calculated for lead. That concentration was then averaged with the results of TP-A through TP-F with concentrations greater than 300 ppm to represent the "hot spot" area.

That average concentration was included in the sitewide data set for EPC calculations. The maximum detected concentration between the parent and duplicate or lowest reporting limit for non-detects was used to represent that sample for all other chemicals.

Table 4-6
Summary of EPH, PAH and SVOV Analytical Results Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID: Sample Depth(ft.): Sample Date:		BTM-1	BTM-2	BTM-3	ESW	Under Stockpile	Average						
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	1 11/3/2009	1 11/3/2009	0.5 11/3/2009	0-1 11/3/2009	Surface 11/3/2009	Concentration of BTM, ESW and Under Stockpile Samples						
EPH															
(mg/kg)	C ₉ -C ₁₈ Aliphatic hydrocarbons	1,000	3,000	35	U	36	U	35	35	U	35	U	21		
	C ₁₉ -C ₃₆ Aliphatic hydrocarbons	3,000	5,000	35	U	73		110	69		280		110		
	C ₁₁ -C ₂₂ Aromatic hydrocarbons	1,000	3,000	64		52		150	100		280		129		
	Naphthalene	500	1,000	0.59	U	0.60	U	0.56	U	0.58	U	0.58	U	0.56	U
	2-Methylnaphthalene	300	500	0.59	U	0.60	U	0.56	U	0.58	U	0.58	U	0.56	U
	Phenanthrene	500	1,000	0.92		0.83		1.9	2.0		1.5		1.4		
	Acenaphthene	1,000	3,000	0.59	U	0.60	U	0.56	U	0.58	U	0.58	U	0.56	U
	Acenaphthylene	10	10	0.59	U	0.60	U	0.56	U	0.58	U	0.58	U	0.56	U
	Fluorene	1,000	3,000	0.59	U	0.60	U	0.56	U	0.58	U	0.58	U	0.56	U
	Anthracene	1,000	3,000	0.59	U	0.60	U	0.56	U	0.58	U	0.58	U	0.56	U
	Fluoranthene	1,000	3,000	1.6		1.2		2.7	3.9		2.2		2.3		
	Pyrene	1,000	3,000	1.5		1.1		2.2	3.4		2.0		2.0		
	Benzo(a)anthracene	7	40	0.60		0.60	U	1.1	1.4		0.95		0.87		
	Chrysene	70	400	0.81		0.71		1.4	1.7		1.3		1.2		
	Benzo(b)fluoranthene	7	40	0.70		0.63		1.4	1.7		1.1		1.1		
	Benzo(k)fluoranthene	70	400	0.65		0.60	U	0.91	1.4		0.77		0.81		
	Benzo(a)pyrene	2	4	0.82		0.72		1.3	1.9		1.0		1.1		
	Indeno(1,2,3-cd)pyrene	7	40	0.59	U	0.60	U	0.88	1.3		0.58	U	0.61		
	Dibenzo(a,h)anthracene	0.7	4	0.59	U	0.60	U	0.56	U	0.58	U	0.58	U	0.56	U
	Benzo(g,h,i)perylene	1,000	3,000	0.65		0.66		0.65	1.6		0.87		0.89		
PAHs															
	Naphthalene	500	1,000	NA		NA		NA	NA		NA		NA		
	2-Methylnaphthalene	300	500	NA		NA		NA	NA		NA		NA		
	Phenanthrene	500	1,000	NA		NA		NA	NA		NA		NA		
	Acenaphthene	1,000	3,000	NA		NA		NA	NA		NA		NA		
	Acenaphthylene	10	10	NA		NA		NA	NA		NA		NA		
	Fluorene	1,000	3,000	NA		NA		NA	NA		NA		NA		
	Anthracene	1,000	3,000	NA		NA		NA	NA		NA		NA		
	Fluoranthene	1,000	3,000	NA		NA		NA	NA		NA		NA		
	Pyrene	1,000	3,000	NA		NA		NA	NA		NA		NA		
	Benzo(a)anthracene	7	40	NA		NA		NA	NA		NA		NA		
	Chrysene	70	400	NA		NA		NA	NA		NA		NA		
	Benzo(b)fluoranthene	7	40	NA		NA		NA	NA		NA		NA		
	Benzo(k)fluoranthene	70	400	NA		NA		NA	NA		NA		NA		
	Benzo(a)pyrene	2	4	NA		NA		NA	NA		NA		NA		
	Indeno(1,2,3-cd)pyrene	7	40	NA		NA		NA	NA		NA		NA		
	Dibenzo(a,h)anthracene	0.7	4	NA		NA		NA	NA		NA		NA		
	Benzo(g,h,i)perylene	1,000	3,000	NA		NA		NA	NA		NA		NA		
SVOCs															
	Naphthalene	500	1,000	NA		NA		NA	NA		NA		NA		
	2-Methylnaphthalene	300	500	NA		NA		NA	NA		NA		NA		
	Phenanthrene	500	1,000	NA		NA		NA	NA		NA		NA		
	Acenaphthene	1,000	3,000	NA		NA		NA	NA		NA		NA		
	Acenaphthylene	10	10	NA		NA		NA	NA		NA		NA		
	Fluorene	1,000	3,000	NA		NA		NA	NA		NA		NA		
	Anthracene	1,000	3,000	NA		NA		NA	NA		NA		NA		
	Fluoranthene	1,000	3,000	NA		NA		NA	NA		NA		NA		
	Pyrene	1,000	3,000	NA		NA		NA	NA		NA		NA		
	Benzo(a)anthracene	7	40	NA		NA		NA	NA		NA		NA		
	Chrysene	70	400	NA		NA		NA	NA		NA		NA		
	Benzo(b)fluoranthene	7	40	NA		NA		NA	NA		NA		NA		
	Benzo(k)fluoranthene	70	400	NA		NA		NA	NA		NA		NA		
	Benzo(a)pyrene	2	4	NA		NA		NA	NA		NA		NA		
	Indeno(1,2,3-cd)pyrene	7	40	NA		NA		NA	NA		NA		NA		
	Dibenzo(a,h)anthracene	0.7	4	NA		NA		NA	NA		NA		NA		
	Benzo(g,h,i)perylene	1,000	3,000	NA		NA		NA	NA		NA		NA		
	1,2,4-Trichlorobenzene	500	900	NA		NA		NA	NA		NA		NA		
	1,2-Dichlorobenzene	300	300	NA		NA		NA	NA		NA		NA		
	1,3-Dichlorobenzene	100	500	NA		NA		NA	NA		NA		NA		
	1,4-Dichlorobenzene	50	300	NA		NA		NA	NA		NA		NA		

**Table 4-6
Summary of EPH, PAH and SVOV Analytical Results Included in the Sitewide Soil Data Set**

Liberty Street
New Bedford, Massachusetts

Analysis	Analyte	Sample ID: Sample Depth(ft.): Sample Date:		BTM-1	BTM-2	BTM-3	ESW	Under Stockpile	Average Concentration of BTM, ESW and Under Stockpile Samples
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	1 11/3/2009	1 11/3/2009	0.5 11/3/2009	0-1 11/3/2009	Surface 11/3/2009	
	2,4,5-Trichlorophenol	600	600	NA	NA	NA	NA	NA	NA
	2,4,6-Trichlorophenol	20	20	NA	NA	NA	NA	NA	NA
	2,4-Dichlorophenol	40	40	NA	NA	NA	NA	NA	NA
	2,4-Dimethylphenol	500	1,000	NA	NA	NA	NA	NA	NA
	2,4-Dinitrophenol	50	990	NA	NA	NA	NA	NA	NA
	2,4-Dinitrotoluene	2	10	NA	NA	NA	NA	NA	NA
	2,6-Dinitrotoluene	NS	NS	NA	NA	NA	NA	NA	NA
	2-Chloronaphthalene	NS	NS	NA	NA	NA	NA	NA	NA
	2-Chlorophenol	100	300	NA	NA	NA	NA	NA	NA
	2-Methylphenol	NS	NS	NA	NA	NA	NA	NA	NA
	2-Nitrophenol	NS	NS	NA	NA	NA	NA	NA	NA
	3,3'-Dichlorobenzidine	1	10	NA	NA	NA	NA	NA	NA
	3-Methylphenol/4-Methylphenol	NS	NS	NA	NA	NA	NA	NA	NA
	4-Bromophenyl phenyl ether	NS	NS	NA	NA	NA	NA	NA	NA
	4-Chloroaniline	NS	NS	NA	NA	NA	NA	NA	NA
	4-Nitrophenol	NS	NS	NA	NA	NA	NA	NA	NA
	Acetophenone	NS	NS	NA	NA	NA	NA	NA	NA
	Aniline	NS	NS	NA	NA	NA	NA	NA	NA
	Azobenzene	NS	NS	NA	NA	NA	NA	NA	NA
	Bis(2-chloroethoxy)methane	NS	NS	NA	NA	NA	NA	NA	NA
	Bis(2-chloroethyl)ether	0.7	3	NA	NA	NA	NA	NA	NA
	Bis(2-chloroisopropyl)ether	3	50	NA	NA	NA	NA	NA	NA
	Bis(2-Ethylhexyl)phthalate	200	700	NA	NA	NA	NA	NA	NA
	Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA
	Di-n-butylphthalate	NS	NS	NA	NA	NA	NA	NA	NA
	Di-n-octylphthalate	NS	NS	NA	NA	NA	NA	NA	NA
	Dibenzofuran	NS	NS	NA	NA	NA	NA	NA	NA
	Diethyl phthalate	300	300	NA	NA	NA	NA	NA	NA
	Dimethyl phthalate	600	600	NA	NA	NA	NA	NA	NA
	Hexachlorobenzene	0.7	5	NA	NA	NA	NA	NA	NA
	Hexachlorobutadiene	6	90	NA	NA	NA	NA	NA	NA
	Hexachloroethane	9	100	NA	NA	NA	NA	NA	NA
	Isophorone	NS	NS	NA	NA	NA	NA	NA	NA
	Nitrobenzene	NS	NS	NA	NA	NA	NA	NA	NA
	Pentachlorophenol	10	10	NA	NA	NA	NA	NA	NA
	Phenol	20	20	NA	NA	NA	NA	NA	NA

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil

Standards or elevated reporting limits for non-detects

NS - No Method 1 soil standard

EPH - Extractable Petroleum Hydrocarbons

PAH - Polycyclic Aromatic Hydrocarbons

SVOC - Semi-volatile Organic Compounds

Method 1 Soil Standards from 310 CMR 40.0975(6)(a); Table 2 and 310 CMR 40.0975(6)(b); Table 3

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

NA - Not analyzed

The maximum detected concentration between a parent and duplicate or lowest reporting limit for non-detects was used to represent that sample.

Table 4-6
Summary of EPH, PAH and SVOV Analytical Results Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID:		SB-210	SB-212		SB-214	SB-216	SB-217	SB-219
		Sample Depth(ft.):	Sample Date:	5	4	4	4	4	5	4
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	6/16/2008	6/16/2008	6/16/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008
				Field Dup						
EPH										
(mg/kg)	C ₉ -C ₁₈ Aliphatic hydrocarbons	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	C ₁₉ -C ₃₆ Aliphatic hydrocarbons	3,000	5,000	NA	NA	NA	NA	NA	NA	NA
	C ₁₁ -C ₂₂ Aromatic hydrocarbons	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	500	1,000	NA	NA	NA	NA	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA	NA	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA	NA	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA	NA	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA	NA	NA	NA	NA
	Chrysene	70	400	NA	NA	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA	NA	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
PAHs										
	Naphthalene	500	1,000	0.231 U	0.218 U	0.222 U	1.02 U	0.186 U	0.229 U	1.14 U
	2-Methylnaphthalene	300	500	0.231 U	0.218 U	0.222 U	1.02 U	0.186 U	0.229 U	1.14 U
	Phenanthrene	500	1,000	0.231 U	0.326	0.459	4.16	0.799	0.930	1.14 U
	Acenaphthene	1,000	3,000	0.231 U	0.218 U	0.222 U	1.02 U	0.186 U	0.229 U	1.14 U
	Acenaphthylene	10	10	0.231 U	0.218 U	0.222 U	1.02 U	0.186 U	0.229 U	1.14 U
	Fluorene	1,000	3,000	0.231 U	0.218 U	0.222 U	1.02 U	0.186 U	0.229 U	1.14 U
	Anthracene	1,000	3,000	0.231 U	0.218 U	0.222 U	1.23	0.197	0.229 U	1.14 U
	Fluoranthene	1,000	3,000	0.293	0.450	0.810	5.52	1.60	1.05	1.14 U
	Pyrene	1,000	3,000	0.337	0.437	0.599	5.90	1.20	1.11	1.14 U
	Benzo(a)anthracene	7	40	0.231 U	0.284	0.448	3.95	0.643	0.643	1.14 U
	Chrysene	70	400	0.231 U	0.314	0.501	3.97	0.676	0.810	1.14 U
	Benzo(b)fluoranthene	7	40	0.231 U	0.363	0.604	4.25	0.835	0.710	1.14 U
	Benzo(k)fluoranthene	70	400	0.231 U	0.218 U	0.237	1.81	0.339	0.243	1.14 U
	Benzo(a)pyrene	2	4	0.231 U	0.267	0.435	3.57	0.698	0.410	1.14 U
	Indeno(1,2,3-cd)pyrene	7	40	0.231 U	0.218 U	0.261	1.97	0.490	0.380	1.14 U
	Dibenzo(a,h)anthracene	0.7	4	0.231 U	0.218 U	0.222 U	1.02 U	0.186 U	0.229 U	1.14 U
	Benzo(g,h,i)perylene	1,000	3,000	0.231 U	0.218 U	0.222 U	1.49	0.414	0.367	1.14 U
SVOCs										
	Naphthalene	500	1,000	NA	NA	NA	NA	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA	NA	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA	NA	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA	NA	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA	NA	NA	NA	NA
	Chrysene	70	400	NA	NA	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA	NA	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA	NA	NA	NA	NA
	1,2,4-Trichlorobenzene	500	900	NA	NA	NA	NA	NA	NA	NA
	1,2-Dichlorobenzene	300	300	NA	NA	NA	NA	NA	NA	NA
	1,3-Dichlorobenzene	100	500	NA	NA	NA	NA	NA	NA	NA
	1,4-Dichlorobenzene	50	300	NA	NA	NA	NA	NA	NA	NA

Table 4-6
Summary of EPH, PAH and SVOV Analytical Results Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID:		SB-210	SB-212		SB-214	SB-216	SB-217	SB-219	
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	5	4	4	4	4	5	4	
				6/16/2008	6/16/2008	6/16/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008	
					Field Dup						
	2,4,5-Trichlorophenol	600	600	NA	NA	NA	NA	NA	NA	NA	
	2,4,6-Trichlorophenol	20	20	NA	NA	NA	NA	NA	NA	NA	
	2,4-Dichlorophenol	40	40	NA	NA	NA	NA	NA	NA	NA	
	2,4-Dimethylphenol	500	1,000	NA	NA	NA	NA	NA	NA	NA	
	2,4-Dinitrophenol	50	990	NA	NA	NA	NA	NA	NA	NA	
	2,4-Dinitrotoluene	2	10	NA	NA	NA	NA	NA	NA	NA	
	2,6-Dinitrotoluene	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	2-Chloronaphthalene	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	2-Chlorophenol	100	300	NA	NA	NA	NA	NA	NA	NA	
	2-Methylphenol	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	2-Nitrophenol	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	3,3'-Dichlorobenzidine	1	10	NA	NA	NA	NA	NA	NA	NA	
	3-Methylphenol/4-Methylphenol	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	4-Bromophenyl phenyl ether	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	4-Chloroaniline	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	4-Nitrophenol	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	Acetophenone	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	Aniline	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	Azobenzene	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	Bis(2-chloroethoxy)methane	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	Bis(2-chloroethyl)ether	0.7	3	NA	NA	NA	NA	NA	NA	NA	
	Bis(2-chloroisopropyl)ether	3	50	NA	NA	NA	NA	NA	NA	NA	
	Bis(2-Ethylhexyl)phthalate	200	700	NA	NA	NA	NA	NA	NA	NA	
	Butyl benzyl phthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	Di-n-butylphthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	Di-n-octylphthalate	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	Dibenzofuran	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	Diethyl phthalate	300	300	NA	NA	NA	NA	NA	NA	NA	
	Dimethyl phthalate	600	600	NA	NA	NA	NA	NA	NA	NA	
	Hexachlorobenzene	0.7	5	NA	NA	NA	NA	NA	NA	NA	
	Hexachlorobutadiene	6	90	NA	NA	NA	NA	NA	NA	NA	
	Hexachloroethane	9	100	NA	NA	NA	NA	NA	NA	NA	
	Isophorone	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	Nitrobenzene	NS	NS	NA	NA	NA	NA	NA	NA	NA	
	Pentachlorophenol	10	10	NA	NA	NA	NA	NA	NA	NA	
	Phenol	20	20	NA	NA	NA	NA	NA	NA	NA	

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil

Standards or elevated reporting limits for non-detects

NS - No Method 1 soil standard

EPH - Extractable Petroleum Hydrocarbons

PAH - Polycyclic Aromatic Hydrocarbons

SVOC - Semi-volatile Organic Compounds

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

NA - Not analyzed

The maximum detected concentration between a parent and duplicate or lowest reporting limit for non-detects was used to represent that sample.

Table 4-6
Summary of EPH, PAH and SVOV Analytical Results Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID:		SB-221	TP-01	TP-02	TP-03	TP-04
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	5 Sample Depth(ft.): 6/17/2008	0-3 11/09/11	0-3 11/09/11	0-3 11/09/11	0-3 11/09/11
EPH								
(mg/kg)	C ₉ -C ₁₈ Aliphatic hydrocarbons	1,000	3,000	NA	NA	NA	NA	NA
	C ₁₉ -C ₃₆ Aliphatic hydrocarbons	3,000	5,000	NA	NA	NA	NA	NA
	C ₁₁ -C ₂₂ Aromatic hydrocarbons	1,000	3,000	NA	NA	NA	NA	NA
	Naphthalene	500	1,000	NA	NA	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA	NA	NA
	Chrysene	70	400	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA	NA	NA
PAHs								
	Naphthalene	500	1,000	0.178 U	NA	NA	NA	NA
	2-Methylnaphthalene	300	500	0.178 U	NA	NA	NA	NA
	Phenanthrene	500	1,000	0.178 U	NA	NA	NA	NA
	Acenaphthene	1,000	3,000	0.178 U	NA	NA	NA	NA
	Acenaphthylene	10	10	0.178 U	NA	NA	NA	NA
	Fluorene	1,000	3,000	0.178 U	NA	NA	NA	NA
	Anthracene	1,000	3,000	0.178 U	NA	NA	NA	NA
	Fluoranthene	1,000	3,000	0.178 U	NA	NA	NA	NA
	Pyrene	1,000	3,000	0.178 U	NA	NA	NA	NA
	Benzo(a)anthracene	7	40	0.178 U	NA	NA	NA	NA
	Chrysene	70	400	0.178 U	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	40	0.178 U	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	400	0.178 U	NA	NA	NA	NA
	Benzo(a)pyrene	2	4	0.178 U	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	0.178 U	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	0.178 U	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	0.178 U	NA	NA	NA	NA
SVOVs								
	Naphthalene	500	1,000	NA	1.8 U	0.36 U	1.8 U	0.34 U
	2-Methylnaphthalene	300	500	NA	2.2 U	0.43 U	2.1 U	0.41 U
	Phenanthrene	500	1,000	NA	1.1 U	1.6	2.1	3.6
	Acenaphthene	1,000	3,000	NA	1.4 U	0.28 U	1.4 U	0.27 U
	Acenaphthylene	10	10	NA	1.4 U	0.32	1.4 U	0.27 U
	Fluorene	1,000	3,000	NA	1.8 U	0.36	1.8 U	0.37
	Anthracene	1,000	3,000	NA	1.1 U	0.48	1.1 U	0.37
	Fluoranthene	1,000	3,000	NA	1.4	1.5	2.8	2.5
	Pyrene	1,000	3,000	NA	1.2	1.7	3	3.1
	Benzo(a)anthracene	7	40	NA	1.1 U	0.91	1.6	1.4
	Chrysene	70	400	NA	1.1 U	0.96	1.6	1.4
	Benzo(b)fluoranthene	7	40	NA	1.1 U	0.58	1.2	1.3
	Benzo(k)fluoranthene	70	400	NA	1.1 U	0.72	1.2	0.48
	Benzo(a)pyrene	2	4	NA	1.4 U	0.77	1.4	1.1
	Indeno(1,2,3-cd)pyrene	7	40	NA	1.4 U	0.4	1.4 U	0.73
	Dibenzo(a,h)anthracene	0.7	4	NA	1.1 U	0.21 U	1.1 U	0.2 U
	Benzo(g,h,i)perylene	1,000	3,000	NA	1.4 U	0.43	1.4 U	0.69
	1,2,4-Trichlorobenzene	500	900	NA	1.8 U	0.36 U	1.8 U	0.34 U
	1,2-Dichlorobenzene	300	300	NA	1.8 U	0.36 U	1.8 U	0.34 U
	1,3-Dichlorobenzene	100	500	NA	1.8 U	0.36 U	1.8 U	0.34 U
	1,4-Dichlorobenzene	50	300	NA	1.8 U	0.36 U	1.8 U	0.34 U

Table 4-6
Summary of EPH, PAH and SVOV Analytical Results Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID:		SB-221	TP-01	TP-02	TP-03	TP-04
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	5 Sample Depth(ft.): 6/17/2008	0-3 11/09/11	0-3 11/09/11	0-3 11/09/11	0-3 11/09/11
	2,4,5-Trichlorophenol	600	600	NA	1.8 U	0.36 U	1.8 U	0.34 U
	2,4,6-Trichlorophenol	20	20	NA	1.1 U	0.21 U	1.1 U	0.2 U
	2,4-Dichlorophenol	40	40	NA	1.6 U	0.32 U	1.6 U	0.31 U
	2,4-Dimethylphenol	500	1,000	NA	1.8 U	0.36 U	1.8 U	0.34 U
	2,4-Dinitrophenol	50	990	NA	8.6 U	1.7 U	8.5 U	1.6 U
	2,4-Dinitrotoluene	2	10	NA	1.8 U	0.36 U	1.8 U	0.34 U
	2,6-Dinitrotoluene	NS	NS	NA	1.8 U	0.36 U	1.8 U	0.34 U
	2-Chloronaphthalene	NS	NS	NA	1.8 U	0.36 U	1.8 U	0.34 U
	2-Chlorophenol	100	300	NA	1.8 U	0.36 U	1.8 U	0.34 U
	2-Methylphenol	NS	NS	NA	1.8 U	0.36 U	1.8 U	0.34 U
	2-Nitrophenol	NS	NS	NA	3.9 U	0.77 U	3.8 U	0.74 U
	3,3'-Dichlorobenzidine	1	10	NA	1.8 U	0.36 U	1.8 U	0.34 U
	3-Methylphenol/4-Methylphenol	NS	NS	NA	2.6 U	0.51 U	2.6 U	0.49 U
	4-Bromophenyl phenyl ether	NS	NS	NA	1.8 U	0.36 U	1.8 U	0.34 U
	4-Chloroaniline	NS	NS	NA	1.8 U	0.36 U	1.8 U	0.34 U
	4-Nitrophenol	NS	NS	NA	2.5 U	0.5 U	2.5 U	0.48 U
	Acetophenone	NS	NS	NA	1.8 U	0.36 U	1.8 U	0.34 U
	Aniline	NS	NS	NA	2.2 U	0.43 U	2.1 U	0.41 U
	Azobenzene	NS	NS	NA	1.8 U	0.36 U	1.8 U	0.34 U
	Bis(2-chloroethoxy)methane	NS	NS	NA	1.9 U	0.38 U	1.9 U	0.37 U
	Bis(2-chloroethyl)ether	0.7	3	NA	1.6 U	0.32 U	1.6 U	0.31 U
	Bis(2-chloroisopropyl)ether	3	50	NA	2.2 U	0.43 U	2.1 U	0.41 U
	Bis(2-Ethylhexyl)phthalate	200	700	NA	1.8 U	0.36 U	1.8 U	0.34 U
	Butyl benzyl phthalate	NS	NS	NA	1.8 U	0.36 U	1.8 U	0.34 U
	Di-n-butylphthalate	NS	NS	NA	1.8 U	0.36 U	1.8 U	0.34 U
	Di-n-octylphthalate	NS	NS	NA	1.8 U	0.36 U	1.8 U	0.34 U
	Dibenzofuran	NS	NS	NA	1.8 U	0.36 U	1.8 U	0.34 U
	Diethyl phthalate	300	300	NA	1.8 U	0.36 U	1.8 U	0.34 U
	Dimethyl phthalate	600	600	NA	1.8 U	0.36 U	1.8 U	0.34 U
	Hexachlorobenzene	0.7	5	NA	1.1 U	0.21 U	1.1 U	0.2 U
	Hexachlorobutadiene	6	90	NA	1.8 U	0.36 U	1.8 U	0.34 U
	Hexachloroethane	9	100	NA	1.4 U	0.28 U	1.4 U	0.27 U
	Isophorone	NS	NS	NA	1.6 U	0.32 U	1.6 U	0.31 U
	Nitrobenzene	NS	NS	NA	1.6 U	0.32 U	1.6 U	0.31 U
	Pentachlorophenol	10	10	NA	3.6 U	0.71 U	3.6 U	0.68 U
	Phenol	20	20	NA	1.8 U	0.36 U	1.8 U	0.34 U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil

Standards or elevated reporting limits for non-detects

NS - No Method 1 soil standard

EPH - Extractable Petroleum Hydrocarbons

PAH - Polycyclic Aromatic Hydrocarbons

SVOC - Semi-volatile Organic Compounds

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

NA - Not analyzed

The maximum detected concentration between a parent and duplicate or lowest reporting limit for non-detects was used to represent that sample.

Table 4-6
Summary of EPH, PAH and SVOV Analytical Results Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID:		TP-05 0-3 11/09/11	TP-06 0-3 11/09/11	TP-07 0-3 11/09/11	TP-08 0-3 11/09/11
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards				
EPH							
(mg/kg)	C ₉ -C ₁₈ Aliphatic hydrocarbons	1,000	3,000	NA	NA	NA	NA
	C ₁₉ -C ₃₆ Aliphatic hydrocarbons	3,000	5,000	NA	NA	NA	NA
	C ₁₁ -C ₂₂ Aromatic hydrocarbons	1,000	3,000	NA	NA	NA	NA
	Naphthalene	500	1,000	NA	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA	NA
	Chrysene	70	400	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA	NA
PAHs							
	Naphthalene	500	1,000	NA	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA	NA
	Chrysene	70	400	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA	NA
SVOCs							
	Naphthalene	500	1,000	3.3 U	1.6 U	3.4 U	7 U
	2-Methylnaphthalene	300	500	4 U	2 U	4 U	8.4 U
	Phenanthrene	500	1,000	2 U	0.98 U	2.6 U	4.2 U
	Acenaphthene	1,000	3,000	2.7 U	1.3 U	2.7 U	5.6 U
	Acenaphthylene	10	10	2.7 U	1.3 U	2.7 U	5.6 U
	Fluorene	1,000	3,000	3.3 U	1.6 U	3.4 U	7 U
	Anthracene	1,000	3,000	2 U	0.98 U	2 U	4.2 U
	Fluoranthene	1,000	3,000	2.1 U	0.98 U	3.5 U	5.2 U
	Pyrene	1,000	3,000	2.2 U	1 U	4.4 U	5.6 U
	Benzo(a)anthracene	7	40	2 U	0.98 U	2.4 U	4.2 U
	Chrysene	70	400	2 U	0.98 U	2.6 U	4.2 U
	Benzo(b)fluoranthene	7	40	2 U	0.98 U	2 U	4.2 U
	Benzo(k)fluoranthene	70	400	2 U	0.98 U	2 U	4.2 U
	Benzo(a)pyrene	2	4	2.7 U	1.3 U	2.7 U	5.6 U
	Indeno(1,2,3-cd)pyrene	7	40	2.7 U	1.3 U	2.7 U	5.6 U
	Dibenzo(a,h)anthracene	0.7	4	2 U	0.98 U	2 U	4.2 U
	Benzo(g,h,i)perylene	1,000	3,000	2.7 U	1.3 U	2.7 U	5.6 U
	1,2,4-Trichlorobenzene	500	900	3.3 U	1.6 U	3.4 U	7 U
	1,2-Dichlorobenzene	300	300	3.3 U	1.6 U	3.4 U	7 U
	1,3-Dichlorobenzene	100	500	3.3 U	1.6 U	3.4 U	7 U
	1,4-Dichlorobenzene	50	300	3.3 U	1.6 U	3.4 U	7 U

Table 4-6
Summary of EPH, PAH and SVOV Analytical Results Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID: Sample Depth(ft.): Sample Date:		TP-05	TP-06	TP-07	TP-08
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	0-3 11/09/11	0-3 11/09/11	0-3 11/09/11	0-3 11/09/11
	2,4,5-Trichlorophenol	600	600	3.3 U	1.6 U	3.4 U	7 U
	2,4,6-Trichlorophenol	20	20	2 U	0.98 U	2 U	4.2 U
	2,4-Dichlorophenol	40	40	3 U	1.5 U	3 U	6.3 U
	2,4-Dimethylphenol	500	1,000	3.3 U	1.6 U	3.4 U	7 U
	2,4-Dinitrophenol	50	990	16 U	7.8 U	16 U	33 U
	2,4-Dinitrotoluene	2	10	3.3 U	1.6 U	3.4 U	7 U
	2,6-Dinitrotoluene	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	2-Chloronaphthalene	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	2-Chlorophenol	100	300	3.3 U	1.6 U	3.4 U	7 U
	2-Methylphenol	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	2-Nitrophenol	NS	NS	7.2 U	3.5 U	7.2 U	15 U
	3,3'-Dichlorobenzidine	1	10	3.3 U	1.6 U	3.4 U	7 U
	3-Methylphenol/4-Methylphenol	NS	NS	4.8 U	2.4 U	4.8 U	10 U
	4-Bromophenyl phenyl ether	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	4-Chloroaniline	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	4-Nitrophenol	NS	NS	4.7 U	2.3 U	4.7 U	9.7 U
	Acetophenone	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	Aniline	NS	NS	4 U	2 U	4 U	8.4 U
	Azobenzene	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	Bis(2-chloroethoxy)methane	NS	NS	3.6 U	1.8 U	3.6 U	7.5 U
	Bis(2-chloroethyl)ether	0.7	3	3 U	1.5 U	3 U	6.3 U
	Bis(2-chloroisopropyl)ether	3	50	4 U	2 U	4 U	8.4 U
	Bis(2-Ethylhexyl)phthalate	200	700	3.3 U	1.6 U	3.4 U	7 U
	Butyl benzyl phthalate	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	Di-n-butylphthalate	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	Di-n-octylphthalate	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	Dibenzofuran	NS	NS	3.3 U	1.6 U	3.4 U	7 U
	Diethyl phthalate	300	300	3.3 U	1.6 U	3.4 U	7 U
	Dimethyl phthalate	600	600	3.3 U	1.6 U	3.4 U	7 U
	Hexachlorobenzene	0.7	5	2 U	0.98 U	2 U	4.2 U
	Hexachlorobutadiene	6	90	3.3 U	1.6 U	3.4 U	7 U
	Hexachloroethane	9	100	2.7 U	1.3 U	2.7 U	5.6 U
	Isophorone	NS	NS	3 U	1.5 U	3 U	6.3 U
	Nitrobenzene	NS	NS	3 U	1.5 U	3 U	6.3 U
	Pentachlorophenol	10	10	6.7 U	3.3 U	6.7 U	14 U
	Phenol	20	20	3.3 U	1.6 U	3.4 U	7 U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil

Standards or elevated reporting limits for non-detects

NS - No Method 1 soil standard

EPH - Extractable Petroleum Hydrocarbons

PAH - Polycyclic Aromatic Hydrocarbons

SVOC - Semi-volatile Organic Compounds

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

NA - Not analyzed

The maximum detected concentration between a parent and duplicate or lowest reporting limit for non-detects was used to represent that sample.

Table 4-6
Summary of EPH, PAH and SVOV Analytical Results Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID: Sample Depth(ft.): Sample Date:	TP-09 0-3 11/09/11	TP-10 0-3 11/09/11	TP-11 0-3 11/09/11	
		S-1/GW-3 Method 1 Soil Standards				
		S-2/GW-3 Method 1 Soil Standards				
EPH						
(mg/kg)	C ₉ -C ₁₈ Aliphatic hydrocarbons	1,000	3,000	NA	NA	NA
	C ₁₉ -C ₃₆ Aliphatic hydrocarbons	3,000	5,000	NA	NA	NA
	C ₁₁ -C ₂₂ Aromatic hydrocarbons	1,000	3,000	NA	NA	NA
	Naphthalene	500	1,000	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA
	Chrysene	70	400	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA
PAHs						
	Naphthalene	500	1,000	NA	NA	NA
	2-Methylnaphthalene	300	500	NA	NA	NA
	Phenanthrene	500	1,000	NA	NA	NA
	Acenaphthene	1,000	3,000	NA	NA	NA
	Acenaphthylene	10	10	NA	NA	NA
	Fluorene	1,000	3,000	NA	NA	NA
	Anthracene	1,000	3,000	NA	NA	NA
	Fluoranthene	1,000	3,000	NA	NA	NA
	Pyrene	1,000	3,000	NA	NA	NA
	Benzo(a)anthracene	7	40	NA	NA	NA
	Chrysene	70	400	NA	NA	NA
	Benzo(b)fluoranthene	7	40	NA	NA	NA
	Benzo(k)fluoranthene	70	400	NA	NA	NA
	Benzo(a)pyrene	2	4	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	40	NA	NA	NA
	Dibenzo(a,h)anthracene	0.7	4	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	3,000	NA	NA	NA
SVOCs						
	Naphthalene	500	1,000	1.9 U	0.38 U	0.36 U
	2-Methylnaphthalene	300	500	2.3 U	0.46 U	0.44 U
	Phenanthrene	500	1,000	1.2 U	0.23 U	0.22 U
	Acenaphthene	1,000	3,000	1.5 U	0.3 U	0.29 U
	Acenaphthylene	10	10	1.5 U	0.3 U	0.29 U
	Fluorene	1,000	3,000	1.9 U	0.38 U	0.36 U
	Anthracene	1,000	3,000	1.2 U	0.23 U	0.22 U
	Fluoranthene	1,000	3,000	1.2 U	0.23 U	0.22 U
	Pyrene	1,000	3,000	1.2 U	0.23 U	0.22 U
	Benzo(a)anthracene	7	40	1.2 U	0.23 U	0.22 U
	Chrysene	70	400	1.2 U	0.23 U	0.22 U
	Benzo(b)fluoranthene	7	40	1.2 U	0.23 U	0.22 U
	Benzo(k)fluoranthene	70	400	1.2 U	0.23 U	0.22 U
	Benzo(a)pyrene	2	4	1.5 U	0.3 U	0.29 U
	Indeno(1,2,3-cd)pyrene	7	40	1.5 U	0.3 U	0.29 U
	Dibenzo(a,h)anthracene	0.7	4	1.2 U	0.23 U	0.22 U
	Benzo(g,h,i)perylene	1,000	3,000	1.5 U	0.3 U	0.29 U
	1,2,4-Trichlorobenzene	500	900	1.9 U	0.38 U	0.36 U
	1,2-Dichlorobenzene	300	300	1.9 U	0.38 U	0.36 U
	1,3-Dichlorobenzene	100	500	1.9 U	0.38 U	0.36 U
	1,4-Dichlorobenzene	50	300	1.9 U	0.38 U	0.36 U

Table 4-6
Summary of EPH, PAH and SVOV Analytical Results Included in the Sitewide Soil Data Set

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID: Sample Depth(ft.): Sample Date:		TP-09 0-3 11/09/11		TP-10 0-3 11/09/11		TP-11 0-3 11/09/11	
		S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards						
	2,4,5-Trichlorophenol	600	600	1.9	U	0.38	U	0.36	U
	2,4,6-Trichlorophenol	20	20	1.2	U	0.23	U	0.22	U
	2,4-Dichlorophenol	40	40	1.7	U	0.34	U	0.33	U
	2,4-Dimethylphenol	500	1,000	1.9	U	0.38	U	0.36	U
	2,4-Dinitrophenol	50	990	9.2	U	1.8	U	1.8	U
	2,4-Dinitrotoluene	2	10	1.9	U	0.38	U	0.36	U
	2,6-Dinitrotoluene	NS	NS	1.9	U	0.38	U	0.36	U
	2-Chloronaphthalene	NS	NS	1.9	U	0.38	U	0.36	U
	2-Chlorophenol	100	300	1.9	U	0.38	U	0.36	U
	2-Methylphenol	NS	NS	1.9	U	0.38	U	0.36	U
	2-Nitrophenol	NS	NS	4.2	U	0.82	U	0.79	U
	3,3'-Dichlorobenzidine	1	10	1.9	U	0.38	U	0.36	U
	3-Methylphenol/4-Methylphenol	NS	NS	2.8	U	0.55	U	0.53	U
	4-Bromophenyl phenyl ether	NS	NS	1.9	U	0.38	U	0.36	U
	4-Chloroaniline	NS	NS	1.9	U	0.38	U	0.36	U
	4-Nitrophenol	NS	NS	2.7	U	0.53	U	0.51	U
	Acetophenone	NS	NS	1.9	U	0.38	U	0.36	U
	Aniline	NS	NS	2.3	U	0.46	U	0.44	U
	Azobenzene	NS	NS	1.9	U	0.38	U	0.36	U
	Bis(2-chloroethoxy)methane	NS	NS	2.1	U	0.41	U	0.39	U
	Bis(2-chloroethyl)ether	0.7	3	1.7	U	0.34	U	0.33	U
	Bis(2-chloroisopropyl)ether	3	50	2.3	U	0.46	U	0.44	U
	Bis(2-Ethylhexyl)phthalate	200	700	1.9	U	0.38	U	0.36	U
	Butyl benzyl phthalate	NS	NS	1.9	U	0.38	U	0.36	U
	Di-n-butylphthalate	NS	NS	1.9	U	0.38	U	0.36	U
	Di-n-octylphthalate	NS	NS	1.9	U	0.38	U	0.36	U
	Dibenzofuran	NS	NS	1.9	U	0.38	U	0.36	U
	Diethyl phthalate	300	300	1.9	U	0.38	U	0.36	U
	Dimethyl phthalate	600	600	1.9	U	0.38	U	0.36	U
	Hexachlorobenzene	0.7	5	1.2	U	0.23	U	0.22	U
	Hexachlorobutadiene	6	90	1.9	U	0.38	U	0.36	U
	Hexachloroethane	9	100	1.5	U	0.3	U	0.29	U
	Isophorone	NS	NS	1.7	U	0.34	U	0.33	U
	Nitrobenzene	NS	NS	1.7	U	0.34	U	0.33	U
	Pentachlorophenol	10	10	3.8	U	0.76	U	0.73	U
	Phenol	20	20	1.9	U	0.38	U	0.36	U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil

Standards or elevated reporting limits for non-detects

NS - No Method 1 soil standard

EPH - Extractable Petroleum Hydrocarbons

PAH - Polycyclic Aromatic Hydrocarbons

SVOC - Semi-volatile Organic Compounds

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

NA - Not analyzed

The maximum detected concentration between a parent and duplicate or lowest reporting limit for non-detects was used to represent that sample.

Table 4-7
Summary of VOC Analytical Results Included in the Surface Soil and Sitewide Soil Data Sets

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID: Sample Date: Sample Depth (ft): S-1/GW-3 Method 1 Soil Standards	Sample ID: Sample Date: Sample Depth (ft): S-2/GW-3 Method 1 Soil Standards	TRC-BTM-1	TRC-BTM-2	TRC-BTM-22	TRC-BTM-3	TRC-ESW
				12/17/2009 1	12/17/2009 1	12/17/2009 1 Field Dup	12/17/2009 0.5	12/17/2009 0-1
VOCs (mg/kg)	Acetone	400	400	0.082 U	0.069 U	0.070 U	0.067 U	0.076 U
	tert-Amyl Methyl Ether (TAME)	NS	NS	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	Benzene	30	200	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Bromobenzene	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Bromochloromethane	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Bromodichloromethane	20	100	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Bromoform	200	800	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	Bromomethane	30	300	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	2-Butanone (MEK)	400	400	0.033 U	0.028 U	0.028 U	0.027 U	0.030 U
	n-Butylbenzene	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	sec-Butylbenzene	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	tert-Butylbenzene	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	tert-Butyl Ethyl Ether (TBEE)	NS	NS	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	Carbon Disulfide	NS	NS	0.0049 U	0.0042 U	0.0042 U	0.0040 U	0.0046 U
	Carbon Tetrachloride	10	60	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	Chlorobenzene	100	100	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Chlorodibromomethane	20	100	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	Chloroethane	NS	NS	0.016 U	0.014 U	0.014 U	0.013 U	0.015 U
	Chloroform	400	800	0.0033 U	0.0028 U	0.0028 U	0.0027 U	0.0030 U
	Chloromethane	NS	NS	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	2-Chlorotoluene	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	4-Chlorotoluene	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2-Dibromo-3-chloropropane (DBCP)	NS	NS	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	1,2-Dibromoethane (EDB)	0.7	4	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	Dibromomethane	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2-Dichlorobenzene	300	300	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,3-Dichlorobenzene	100	500	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,4-Dichlorobenzene	50	300	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Dichlorodifluoromethane (Freon 12)	NS	NS	0.016 U	0.014 U	0.014 U	0.013 U	0.015 U
	1,1-Dichloroethane	500	1,000	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2-Dichloroethane	10	90	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,1-Dichloroethylene	500	1,000	0.0033 U	0.0028 U	0.0028 U	0.0027 U	0.0030 U
	cis-1,2-Dichloroethylene	100	500	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	trans-1,2-Dichloroethylene	500	1,000	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2-Dichloropropane	10	100	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,3-Dichloropropane	NS	NS	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	2,2-Dichloropropane	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,1-Dichloropropene	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	cis-1,3-Dichloropropene	NS	NS	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	trans-1,3-Dichloropropene	NS	NS	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	Diethyl Ether	NS	NS	0.016 U	0.014 U	0.014 U	0.013 U	0.015 U
	Diisopropyl Ether (DIPE)	NS	NS	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	1,4-Dioxane	70	500	0.082 U	0.069 U	0.070 U	0.067 U	0.076 U
	Ethylbenzene	500	1,000	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Hexachlorobutadiene	6	90	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	2-Hexanone (MBK)	NS	NS	0.016 U	0.014 U	0.014 U	0.013 U	0.015 U
	Isopropylbenzene (Cumene)	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	p-Isopropyltoluene (p-Cymene)	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Methyl tert-Butyl Ether (MTBE)	100	500	0.0033 U	0.0028 U	0.0028 U	0.0027 U	0.0030 U
	Methylene Chloride	200	900	0.016 U	0.014 U	0.014 U	0.013 U	0.015 U
	4-Methyl-2-pentanone (MIBK)	400	400	0.016 U	0.014 U	0.014 U	0.013 U	0.015 U
	Naphthalene	500	1,000	0.0033 U	0.0028 U	0.0028 U	0.0027 U	0.0030 U
	n-Propylbenzene	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Styrene	30	200	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,1,1,2-Tetrachloroethane	7	100	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,1,1,2,2-Tetrachloroethane	0.8	10	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	Tetrachloroethylene	30	200	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Tetrahydrofuran	NS	NS	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	Toluene	500	1,000	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2,3-Trichlorobenzene	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2,4-Trichlorobenzene	500	900	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U

Table 4-7
Summary of VOC Analytical Results Included in the Surface Soil and Sitewide Soil Data Sets

Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample ID: Sample Date: Sample Depth (ft): S-1/GW-3 Method 1 Soil Standards	S-2/GW-3 Method 1 Soil Standards	TRC-BTM-1	TRC-BTM-2	TRC-BTM-22	TRC-BTM-3	TRC-ESW
				12/17/2009 1 1	12/17/2009 1 1	12/17/2009 1 Field Dup	12/17/2009 0.5	12/17/2009 0-1
	1,1,1-Trichloroethane	500	1,000	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,1,2-Trichloroethane	4	60	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Trichloroethylene	90	700	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Trichlorofluoromethane (Freon 11)	NS	NS	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	1,2,3-Trichloropropane	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2,4-Trimethylbenzene	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,3,5-Trimethylbenzene	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Vinyl Chloride	0.6	4	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	m+p Xylene	NS	NS	0.0033 U	0.0028 U	0.0028 U	0.0027 U	0.0030 U
	o-Xylene	NS	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Total Xylenes (calculated)	500	1,000	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm)

NS - No Method 1 soil standard

U - Compound was not detected at specified quantitation limit

VOCs - Volatile Organic Compounds

Values in **Bold** indicate the compound was detected above one or more of the Method 1 Soil Standards

Method 1 Soil Standards from 310 CMR 40.0975(6)(a): Table 2 and 310 CMR 40.0975(6)(b): Table 3

The surface soil data set includes samples collected from 0 to 3 feet below ground surface (bgs)

The sitewide soil data set includes samples collected from 0 to 15 feet below ground surface (bgs)

NA - Not analyzed

Total xylenes includes the sum of detected isomers or the lowest reporting limit for non-detects.

Table 4-8
Summary of Detected Chemicals and Selection of Chemicals of Concern for Surface Soil

Liberty Street
 New Bedford, Massachusetts

Parameter	Minimum Detected Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	MassDEP Background Concentration⁽¹⁾ (mg/kg)	Number of Detected Samples	Number of Samples	Frequency of Detection	Selected as a Chemical of Concern?	Reason for Exclusion
<u>Metals</u>								
Arsenic	0.72	7.3	20	11	11	100%	No	Background
Chromium	9.5	16	40	11	11	100%	No	Background
Lead	6.3	260	600	11	11	100%	No	Background
Mercury	0.07	0.18	1	7	11	64%	No	Background
<u>Polychlorinated Biphenyls</u>								
PCBs	0.061	3.92	NE	15	16	94%	Yes	
<u>EPH/PAHs/SVOCs</u>								
C ₉ -C ₁₈ Aliphatic hydrocarbons	21	21	NE	1	1	100%	Yes	
C ₁₉ -C ₃₆ Aliphatic hydrocarbons	110	110	NE	1	1	100%	Yes	
C ₁₁ -C ₂₂ Aromatic hydrocarbons	129	129	NE	1	1	100%	Yes	
Phenanthrene	1.4	3.6	20	5	12	42%	No	Background
Acenaphthylene	0.32	0.32	1	1	12	8%	No	Background/FOD
Fluorene	0.36	0.37	2	2	12	17%	No	Background
Anthracene	0.37	0.48	4	2	12	17%	No	Background
Fluoranthene	1.2	5.2	10	9	12	75%	No	Background
Pyrene	0.23	5.6	20	11	12	92%	No	Background
Benzo(a)anthracene	0.87	2.4	9	5	12	42%	No	Background
Chrysene	0.96	2.6	7	5	12	42%	No	Background
Benzo(b)fluoranthene	0.58	1.3	8	4	12	33%	No	Background
Benzo(k)fluoranthene	0.48	1.2	4	4	12	33%	No	Background
Benzo(a)pyrene	0.77	1.4	7	4	12	33%	No	Background
Indeno(1,2,3-cd)pyrene	0.4	0.73	3	3	12	25%	No	Background
Benzo(g,h,i)perylene	0.43	0.89	3	3	12	25%	No	Background

Notes:

NA: Not applicable

ND: Not detected

NE: No background concentration established

EPH: Extractable Petroleum Hydrocarbons

PAHs: Polycyclic Aromatic Hydrocarbons

SVOCs: Semi-volatile Organic Compounds

Background: Eliminated based on background concentrations (maximum detected concentration was less than or equal to background level)

FOD: Eliminated based on a low frequency of detection of 10% or less

(1): Background levels in soil containing coal or wood ash from: Technical Update: *Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil*. MassDEP. May, 2002b.

**Table 4-9
Summary of Detected Chemicals and Selection of Chemicals of Concern for Sitewide Soil**

Liberty Street
New Bedford, Massachusetts

Parameter	Minimum Detected Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	MassDEP Background Concentration⁽¹⁾ (mg/kg)	Number of Detected Samples	Number of Samples	Frequency of Detection	Selected as a Chemical of Concern?	Reason for Exclusion
<u>Metals</u>								
Arsenic	0.72	18.4	20	17	18	94%	No	Background
Barium	27.8	707	50	7	7	100%	Yes	
Beryllium	0.36	0.87	0.9	4	7	57%	No	Background
Cadmium	0.49	2.92	3	5	18	28%	No	Background
Chromium	5.27	35.9	40	18	18	100%	No	Background
Lead	2.48	1,500	600	18	18	100%	Yes	
Nickel	3.72	73.6	30	7	7	100%	Yes	
Silver	1.11	12.2	5	7	7	100%	Yes	
Vanadium	9.43	34.5	30	7	7	100%	Yes	
Zinc	12.3	579	300	7	7	100%	Yes	
Mercury	0.07	2.47	1	13	18	72%	Yes	
<u>Polychlorinated Biphenyls</u>								
PCBs	0.0607	3.918	NE	22	45	49%	Yes	
<u>EPH/PAHs/SVOCs</u>								
C ₉ -C ₁₈ Aliphatic hydrocarbons	21	21	NE	1	1	100%	Yes	
C ₁₉ -C ₃₆ Aliphatic hydrocarbons	110	110	NE	1	1	100%	Yes	
C ₁₁ -C ₂₂ Aromatic hydrocarbons	129	129	NE	1	1	100%	Yes	
Phenanthrene	0.459	4.16	20	9	19	47%	No	Background
Acenaphthylene	0.32	0.32	1	1	19	5%	No	Background/FOD
Fluorene	0.36	0.37	2	2	19	11%	No	Background
Anthracene	0.197	1.23	4	4	19	21%	No	Background
Fluoranthene	0.293	5.52	10	14	19	74%	No	Background
Pyrene	0.23	5.9	20	16	19	84%	No	Background
Benzo(a)anthracene	0.448	3.95	9	9	19	47%	No	Background
Chrysene	0.501	3.97	7	9	19	47%	No	Background
Benzo(b)fluoranthene	0.58	4.25	8	8	19	42%	No	Background
Benzo(k)fluoranthene	0.237	1.81	4	8	19	42%	No	Background
Benzo(a)pyrene	0.41	3.57	7	8	19	42%	No	Background
Indeno(1,2,3-cd)pyrene	0.261	1.97	3	7	19	37%	No	Background
Benzo(g,h,i)perylene	0.367	1.49	3	6	19	32%	No	Background

Notes:

NE: No background concentration established

EPH: Extractable Petroleum Hydrocarbons

PAHs: Polycyclic Aromatic Hydrocarbons

SVOCs: Semi-volatile Organic Compounds

Background: Eliminated based on background concentrations (maximum detected concentration was less than or equal to background level)

FOD: Eliminated based on a low frequency of detection of 10% or less

(1): Background levels in soil containing coal or wood ash from: Technical Update: *Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil*. MassDEP. May, 2002b.

Table 4-10
Averaging Criteria Check for Surface Soil Using Risk-Based Concentrations ⁽¹⁾

Liberty Street
 New Bedford, Massachusetts

Chemical	RBC (mg/kg)	EPC ⁽²⁾ (mg/kg)	Number of Samples Above RBC	Number of Samples	Percentage of Samples Above RBC	Percentage of Samples Below RBC	Number of Samples 10 Times Greater than RBC
<u>Polychlorinated Biphenyls</u>							
PCBs	2	0.54	1	16	6%	94%	0
<u>EPH/PAHs/SVOCs</u>							
C ₉ -C ₁₈ Aliphatic hydrocarbons	3,000	21	0	1	0%	100%	0
C ₁₉ -C ₃₆ Aliphatic hydrocarbons	3,000	110	0	1	0%	100%	0
C ₁₁ -C ₂₂ Aromatic hydrocarbons	1,000	129	0	1	0%	100%	0

Notes:

mg/kg: milligrams per kilogram

RBC: Risk Based Concentration based on the S-1/GW-3 soil standard

EPC: Exposure Point Concentration

(1): Average concentrations are below RBCs; 75% of the data points are below RBCs; and no result is 10 times greater than an RBC. Therefore, it is appropriate to use average concentrations for EPCs.

(2): Since only one sample was included in the data set for the EPH ranges, the detected concentration of each was used as the EPC.

Table 4-11
Averaging Criteria Check for Sitewide Soil Using Risk-Based Concentrations ⁽¹⁾

Liberty Street
 New Bedford, Massachusetts

Chemical	RBC (mg/kg)	EPC ⁽²⁾ (mg/kg)	Number of Samples Above RBC	Number of Samples	Percentage of Samples Above RBC	Percentage of Samples Below RBC	Number of Samples 10 Times Greater than RBC
<u>Metals</u>							
Barium	3,000	298	0	7	0%	100%	0
Lead	300	287	5	21	24%	76%	0
Nickel	700	25	0	7	0%	100%	0
Silver	200	5.0	0	7	0%	100%	0
Vanadium	1,000	22	0	7	0%	100%	0
Zinc	3,000	356	0	7	0%	100%	0
Mercury	30	0.26	0	18	0%	100%	0
<u>Polychlorinated Biphenyls</u>							
PCBs	3	0.29	1	45	2%	98%	0
<u>EPH/PAHs/SVOCs</u>							
C ₉ -C ₁₈ Aliphatic hydrocarbons	3,000	21	0	1	0%	100%	0
C ₁₉ -C ₃₆ Aliphatic hydrocarbons	5,000	110	0	1	0%	100%	0
C ₁₁ -C ₂₂ Aromatic hydrocarbons	3,000	129	0	1	0%	100%	0

Notes:

mg/kg: milligrams per kilogram

RBC: Risk Based Concentration based on the S-2/GW-3 soil standard

EPC: Exposure Point Concentration

(1): Average concentrations are below RBCs; 75% of the data points are below RBCs; and no result is 10 times greater than an RBC. Therefore, it is appropriate to use average concentrations for EPCs.

(2): Since only one sample was included in the data set for the EPH ranges, the detected concentration of each was used as the EPC.

Section 5

Phase II Completion Statement

This section presents a summary of the Phase II CSA. Public involvement documentation, as required by 310 CMR 40.1403(3)(e), is included as **Appendix A** of this report. The Phase II CSA portion of this Phase II CSA/RAO-P Statement covers the nature and extent of impacts of the parcel, addresses the potential current and future risks to human health and the environment, and provides recommendations for closure at the site.

5.1 Phase II CSA Summary and Completion Statement

A total of 60 soil samples were collected and analyzed during site investigation activities completed to support the Phase II CSA. CDM Smith collected a total of 17 samples during two test pit programs conducted in November 2011 and May 2012. These samples supplemented a total of 43 samples collected by TRC to characterize the edge of the property along Liberty Street, support a URAM, and to conduct post-remedial characterization of a portion of the parcel from which 55-gallon drums were removed. These data identified lead and other metals, PCBs, and PAHs in soil at locations across the site. The 11 soil samples collected during the November 2011 test pit program from depths of approximately 0-3 feet identified select metals and PAHs across the parcel as well as coal ash and debris at one location (TP-2). The six samples collected during the May 2012 test pit program further characterized lead concentrations in the vicinity of a location (SB-212) previously identified to warrant additional evaluation for lead. Lead concentrations from samples collected at these test pits ranged from 67 ppm to 550 ppm. Collectively, the data supporting the Phase II CSA and the historical record indicate that soil conditions are likely associated with wide distribution of fill material across the parcel. Compounds detected in the site surface soil (zero to 3 feet) and site-wide data set (zero to 15 feet) include metals, EPH ranges, PAH target analytes, and PCBs. The concentrations of metals and PAHs were below typical background concentrations associated with coal or wood ash. Historically impacted soil/ fill material across the parcel is generally within the top five feet of the surface.

Due to the properties and nature of metals, PAHs, and PCBs identified in soil at the parcel, they are likely to remain in the soil matrix. Due to their low solubility in water, metals, PAHs, and PCBs found in soil are not likely to impact groundwater. Thus, groundwater, which is located approximately five to seven feet below ground surface, is not a medium of concern for the Liberty Street Parcel. Thus, CDM Smith has completed the Phase II CSA for the parcel. The affected medium at the parcel has been identified as soil, which has been adequately characterized as to the nature and extent of impact from releases at the parcel.

A condition of no significant risk of harm to health, public welfare, and the environment exists at the parcel for current exposure to surface soil based on the results of a Method 1 risk characterization. A level of no significant risk exists for safety as well. The EPCs for COCs in site-wide soil are below the applicable S-2/GW-3 soil standards; however, the EPC for nickel is above the most stringent S-1/GW-3 soil standard. Since a condition of no significant risk exists at the parcel, no remedial actions are required and, therefore, a Phase III is not required. However, the parcel is not acceptable for unrestricted future use and an Activity and Use Limitation (AUL) is required to maintain a condition of no significant risk at the parcel. The AUL, which has been implemented for this parcel to support the RAO-P described in this combined submittal, restricts the use of the property, e.g., prohibiting

unrestricted future residential use of the property. The AUL requires a soil management plan for any future excavations of soil at the parcel.

5.2 LSP Opinion

The response actions that are the subject of this submittal (i) have been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) are appropriate and reasonable to accomplish the purposes of such response actions as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply with the identified provisions of all orders, permits, and approvals identified in this submittal.

Section 6

Justification for Class B-2 Partial Response Action Outcome

This section provides the necessary information to demonstrate that the requirements of a Class B-2 RAO-P pursuant to 310 CMR 40.1000 have been met for the Liberty Street Parcel portion of RTN 4-15685. The boundary of this portion of the disposal site subject to this RAO-P is illustrated on Figure 1-2. The Class B-2 RAO-P is applicable if the following applies:

- Disposal sites where remedial actions have not been conducted because a level of No Significant Risk exists but such a level of No Significant Risk is contingent upon an Activity and Use Limitation (AUL); and
- No concentration of oil or hazardous material exceeds an Upper Concentration Limit (UCL) in soil or groundwater.

Based on the outcome of the site investigation for the Liberty Street Parcel, the parcel is eligible for a Class B-2 RAO-P for the following reasons:

1. A level of No Significant Risk exists at the parcel for current and all reasonably foreseeable future uses, based on the results of a Method 1 Risk Characterization.
2. Based on the site evaluation, the Liberty Street Parcel data does not exceed the UCLs.
3. An AUL has been placed on the parcel. The AUL area has been set as the limits of the property that will be used for future development for solar panels. The AUL restricts future residential use of the property and requires a soil management plan for future excavations at the parcel. A copy of the AUL is presented in **Appendix F**.

A blue L-shaped line is positioned in the top-left corner of the page, consisting of a vertical line extending downwards and a horizontal line extending to the right.

Appendix A Letters



50 Hampshire Street
Cambridge, Massachusetts 02139
tel: 617 452-6000
fax: 617 452-8000

June 18, 2013

Mayor Jonathan Mitchell
City of New Bedford
133 William Street
New Bedford, Massachusetts 02740

Subject: Notification of Comprehensive Site Assessment (CSA)/RAO-P Statement
Liberty Street Parcel
New Bedford, Massachusetts
Release Tracking Number (RTN) 4-15685

Dear Mayor Mitchell:

On behalf of the New Bedford Department of Environmental Stewardship, CDM Smith Inc., serving as environmental consultant, has prepared this letter in accordance with the provisions set forth in 310 CMR 40.1403 of the Massachusetts Contingency Plan (MCP). This letter serves as notification that a Phase II Comprehensive Site Assessment (CSA)/Partial Response Action Outcome (RAO-P) Statement was submitted to the Massachusetts Department of Environmental Protection (MassDEP) in May 2013. Attached is a copy of the summary of findings and statement of conclusions for the Phase II CSA. A Class B-2 RAO-P has been achieved at this site with no remedial actions required.

If you have any questions regarding this submittal or would like a copy of the RAO-P Statement, please contact me at 617-452-6000.

Very truly yours,

Kathleen G. Murphy, P.E., LSP
CDM Smith Inc.

cc: MassDEP – Bureau of Waste Site Cleanup
City of New Bedford, Michele Paul, Cheryl Henlin



Phase II CSA Summary

A total of 60 soil samples were collected and analyzed during site investigation activities completed to support the Phase II CSA. CDM Smith collected a total of 17 samples during two test pit programs conducted in November 2011 and May 2012. These samples supplemented a total of 43 samples collected by TRC to characterize the edge of the property along Liberty Street, support a URAM, and to conduct post-remedial characterization of a portion of the site from which 55-gallon drums were removed. These data identified lead and other metals, PCBs, and PAHs in soil at locations across the site. The 11 soil samples collected during the November 2011 test pit program from depths of approximately 0-3 feet identified select metals and PAHs across the site as well as coal ash and debris at one location (TP-2). The six samples collected during the May 2012 test pit program further characterized lead concentrations in the vicinity of a location (SB-212) previously identified require additional evaluation for lead. Lead concentrations from samples collected at these test pits ranged from 67 ppm to 550 ppm. Collectively, the data supporting the Phase II CSA and the historical record indicate that contamination in soil is likely associated with wide distribution of fill material across the site. Chemicals detected in the site surface soil (zero to 3 feet) and site-wide data set (zero to 15 feet) include metals, EPH ranges, PAH target analytes, and PCBs. The concentrations of metals and PAHs were below typical background concentrations associated with coal or wood ash. Historically impacted soil/ fill material across the site is generally within the top five feet of the surface.

Due to the properties and nature of metals, PAHs, and PCBs identified in soil at the site, they are likely to remain in the soil matrix. Due to their low solubility in water, metals, PAHs, and PCBs found in soil are not likely to impact groundwater. Thus, groundwater, which is located approximately five to seven feet below ground surface, is not a medium of concern for the Liberty Street Parcel.

A condition of no significant risk of harm to health, public welfare, and the environment exists at the site for current exposure to surface soil based on the results of a Method 1 risk characterization. A level of no significant risk exists for safety as well. The EPCs for COCs in site-wide soil are below the applicable S-2/GW-3 soil standards; however, the EPC for nickel is above the most stringent S-1/GW-3 soil standard. Since a condition of no significant risk exists at the site, no remedial actions are required and, therefore, a Phase III is not required. However, the site is not acceptable for unrestricted future use and an Activity and Use Limitation (AUL) is required to maintain a condition of no significant risk at the site. The AUL, which has been implemented at this site to support the Partial Response Action Outcome (RAO-P) Statement, restricts the use of the property, e.g., prohibiting unrestricted future residential use of the property.



50 Hampshire Street
Cambridge, Massachusetts 02139
tel: 617 452-6000
fax: 617 452-8000

June 18, 2013

Dr. Brenda Weis, Director
New Bedford Board of Health
1213 Purchase Street
New Bedford, Massachusetts 02740

Subject: Notification of Phase II Comprehensive Site Assessment/RAO-P Statement
Liberty Street Parcel
New Bedford, Massachusetts
Release Tracking Number (RTN) 4-15685

Dr. Weis:

On behalf of the New Bedford Department of Environmental Stewardship, CDM Smith Inc., serving as environmental consultant, has prepared this letter in accordance with the provisions set forth in 310 CMR 40.1403 of the Massachusetts Contingency Plan (MCP). This letter serves as notification that a Phase II Comprehensive Site Assessment (CSA)/Partial Response Action Outcome (RAO-P) Statement was submitted to the Massachusetts Department of Environmental Protection (MassDEP) in May 2013. Attached is a copy of the summary of findings and statement of conclusions for the Phase II CSA. A Class B-2 RAO-P has been achieved at this site with no remedial actions required.

If you have any questions regarding this submittal or would like a copy of the RAO-P Statement, please contact me at 617-452-6000.

Very truly yours,

Kathleen G. Murphy, P.E., LSP
CDM Smith Inc.

cc: MassDEP – Bureau of Waste Site Cleanup
City of New Bedford, Michele Paul, Cheryl Henlin



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Due to the properties and nature of metals, PAHs, and PCBs identified in soil at the site, they are likely to remain in the soil matrix. Due to their low solubility in water, metals, PAHs, and PCBs found in soil are not likely to impact groundwater. Thus, groundwater, which is located approximately five to seven feet below ground surface, is not a medium of concern for the Liberty Street Parcel.

A condition of no significant risk of harm to health, public welfare, and the environment exists at the site for current exposure to surface soil based on the results of a Method 1 risk characterization. A level of no significant risk exists for safety as well. The EPCs for COCs in site-wide soil are below the applicable S-2/GW-3 soil standards; however, the EPC for nickel is above the most stringent S-1/GW-3 soil standard. Since a condition of no significant risk exists at the site, no remedial actions are required and, therefore, a Phase III is not required. However, the site is not acceptable for unrestricted future use and an Activity and Use Limitation (AUL) is required to maintain a condition of no significant risk at the site. The AUL, which has been implemented at this site to support the Partial Response Action Outcome (RAO-P) Statement, restricts the use of the property, e.g., prohibiting unrestricted future residential use of the property.



Appendix B Existing Data



Drum Removal



LEGEND:

SAMPLE LOCATION ● BTM-1
(TRC-BTM-1)



LOITHERSTEIN ENVIRONMENTAL ENGINEERING, INC.
SAMPLE IDENTIFICATION
(TRC SAMPLE IDENTIFICATION)

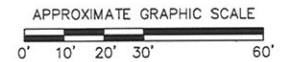


CONCRETE BLOCKS

EXCAVATION AREA



SITE BOUNDARY



ENVIRONMENTAL INVESTIGATION AND RELATED ENVIRONMENTAL CONSULTING SERVICES NEW BEDFORD HIGH SCHOOL & SURROUNDING NEIGHBORHOOD NEW BEDFORD, MASSACHUSETTS	
RELEASE SITE MAP LIBERTY STREET RELEASE	
	Wannalancott Mills 850 Suffolk Street Lowell, MA 01854 (978) 970-5600
DRAWN BY: HWB	DATE: DEC 2009
CHECKED BY: DNP	

FIGURE 2

NOTE:
AERIAL SOURCE: MASSGIS 2005

TABLE 2
Summary of TRC VOC Analytical Results for Soil Samples
Liberty Street City Yard Release
New Bedford, Massachusetts

Analysis	Analyte	Sample ID:	TRC-BTM-1	TRC-BTM-2	TRC-BTM-22	TRC-BTM-3	TRC-ESW
		Sample Date:	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009
		S-1/GW-3					
VOCs							
(mg/kg)	Acetone	400	0.082 U	0.069 U	0.070 U	0.067 U	0.076 U
	tert-Amyl Methyl Ether (TAME)	NS	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	Benzene	30	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Bromobenzene	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Bromochloromethane	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Bromodichloromethane	20	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Bromoform	200	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	Bromomethane	30	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	2-Butanone (MEK)	400	0.033 U	0.028 U	0.028 U	0.027 U	0.030 U
	n-Butylbenzene	100 ⁽¹⁾	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	sec-Butylbenzene	100 ⁽¹⁾	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	tert-Butylbenzene	100 ⁽¹⁾	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	tert-Butyl Ethyl Ether (TBEE)	NS	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	Carbon Disulfide	NS	0.0049 U	0.0042 U	0.0042 U	0.0040 U	0.0046 U
	Carbon Tetrachloride	10	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	Chlorobenzene	100	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Chlorodibromomethane	20	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	Chloroethane	NS	0.016 U	0.014 U	0.014 U	0.013 U	0.015 U
	Chloroform	400	0.0033 U	0.0028 U	0.0028 U	0.0027 U	0.0030 U
	Chloromethane	NS	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	2-Chlorotoluene	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	4-Chlorotoluene	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2-Dibromo-3-chloropropane (DBCP)	NS	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	1,2-Dibromoethane (EDB)	0.7	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	Dibromomethane	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2-Dichlorobenzene	300	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,3-Dichlorobenzene	100	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,4-Dichlorobenzene	50	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Dichlorodifluoromethane (Freon 12)	NS	0.016 U	0.014 U	0.014 U	0.013 U	0.015 U
	1,1-Dichloroethane	500	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2-Dichloroethane	10	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,1-Dichloroethylene	500	0.0033 U	0.0028 U	0.0028 U	0.0027 U	0.0030 U
	cis-1,2-Dichloroethylene	100	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	trans-1,2-Dichloroethylene	500	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2-Dichloropropane	10	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,3-Dichloropropane	NS	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	2,2-Dichloropropane	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,1-Dichloropropene	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	cis-1,3-Dichloropropene	9 ⁽²⁾	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	trans-1,3-Dichloropropene	9 ⁽²⁾	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	Diethyl Ether	NS	0.016 U	0.014 U	0.014 U	0.013 U	0.015 U
	Diisopropyl Ether (DIPE)	NS	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	1,4-Dioxane	70	0.082 U	0.069 U	0.070 U	0.067 U	0.076 U
	Ethylbenzene	500	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Hexachlorobutadiene	6	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	2-Hexanone (MBK)	NS	0.016 U	0.014 U	0.014 U	0.013 U	0.015 U
	Isopropylbenzene (Cumene)	100 ⁽¹⁾	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	p-Isopropyltoluene (p-Cymene)	100 ⁽¹⁾	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Methyl tert-Butyl Ether (MTBE)	100	0.0033 U	0.0028 U	0.0028 U	0.0027 U	0.0030 U
	Methylene Chloride	200	0.016 U	0.014 U	0.014 U	0.013 U	0.015 U
	4-Methyl-2-pentanone (MIBK)	400	0.016 U	0.014 U	0.014 U	0.013 U	0.015 U
	Naphthalene	500	0.0033 U	0.0028 U	0.0028 U	0.0027 U	0.0030 U
	n-Propylbenzene	100 ⁽¹⁾	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Styrene	30	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,1,1,2-Tetrachloroethane	7	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,1,2,2-Tetrachloroethane	0.8	0.00082 U	0.00069 U	0.00070 U	0.00067 U	0.00076 U
	Tetrachloroethylene	30	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Tetrahydrofuran	NS	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	Toluene	500	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2,3-Trichlorobenzene	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2,4-Trichlorobenzene	500	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,1,1-Trichloroethane	500	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,1,2-Trichloroethane	4	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Trichloroethylene	90	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Trichlorofluoromethane (Freon 11)	NS	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	1,2,3-Trichloropropane	NS	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,2,4-Trimethylbenzene	100 ⁽¹⁾	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	1,3,5-Trimethylbenzene	100 ⁽¹⁾	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U
	Vinyl Chloride	0.6	0.0082 U	0.0069 U	0.0070 U	0.0067 U	0.0076 U
	m+p Xylene	500	0.0033 U	0.0028 U	0.0028 U	0.0027 U	0.0030 U
	o-Xylene	500	0.0016 U	0.0014 U	0.0014 U	0.0013 U	0.0015 U

Notes:
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
NS - No MassDEP standards exist for this compound.
U - Compound was not detected at specified quantitation limit.
VOCs - Volatile Organic Compounds.
(1) - MassDEP Method 1 standards for C9-C10 aromatics used.
(2) - MassDEP Method 1 standards for 1,3-Dichloropropene used.
* - Background Concentration for natural soil.

TABLE 1
Summary of TRC EPH and target PAH Analytical Results for Soil Samples
Liberty Street City Yard Release
Across from 230 Hathaway Boulevard
New Bedford, Massachusetts

Analysis	Analyte	Sample ID:	BTM-1	BTM-2	BTM-3	ESW	Under Stockpile
		Sample Depth(ft.):	1	1	0.5	0-1	Surface
		Sample Date:	11/3/2009	11/3/2009	11/3/2009	11/3/2009	11/3/2009
		S-1/GW-3					
EPH							
(mg/kg)	C9-C18 Aliphatics	1,000	35 U	36 U	35	35 U	35 U
	C19-C36 Aliphatics	3,000	35 U	73	110	69	280
	C11-C22 Aromatics	1,000	64	52	150	100	280
	Naphthalene	500	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U
	2-Methylnaphthalene	300	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U
	Phenanthrene	500	0.92	0.83	1.9	2.0	1.5
	Acenaphthene	1,000	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U
	Acenaphthylene	10	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U
	Fluorene	1,000	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U
	Anthracene	1,000	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U
	Fluoranthene	1,000	1.6	1.2	2.7	3.9	2.2
	Pyrene	1,000	1.5	1.1	2.2	3.4	2.0
	Benzo(a)anthracene	7	0.60	0.60 U	1.1	1.4	0.95
	Chrysene	70	0.81	0.71	1.4	1.7	1.3
	Benzo(b)fluoranthene	7	0.70	0.63	1.4	1.7	1.1
	Benzo(k)fluoranthene	70	0.65	0.60 U	0.91	1.4	0.77
	Benzo(a)pyrene	2	0.82	0.72	1.3	1.9	1.0
	Indeno(1,2,3-cd)pyrene	7	0.59 U	0.60 U	0.88	1.3	0.58 U
	Dibenz(a,h)anthracene	0.7	0.59 U	0.60 U	0.56 U	0.58 U	0.58 U
	Benzo(g,h,i)perylene	1,000	0.65	0.66	0.65	1.6	0.87

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

NS - No MassDEP standards exist for this compound.

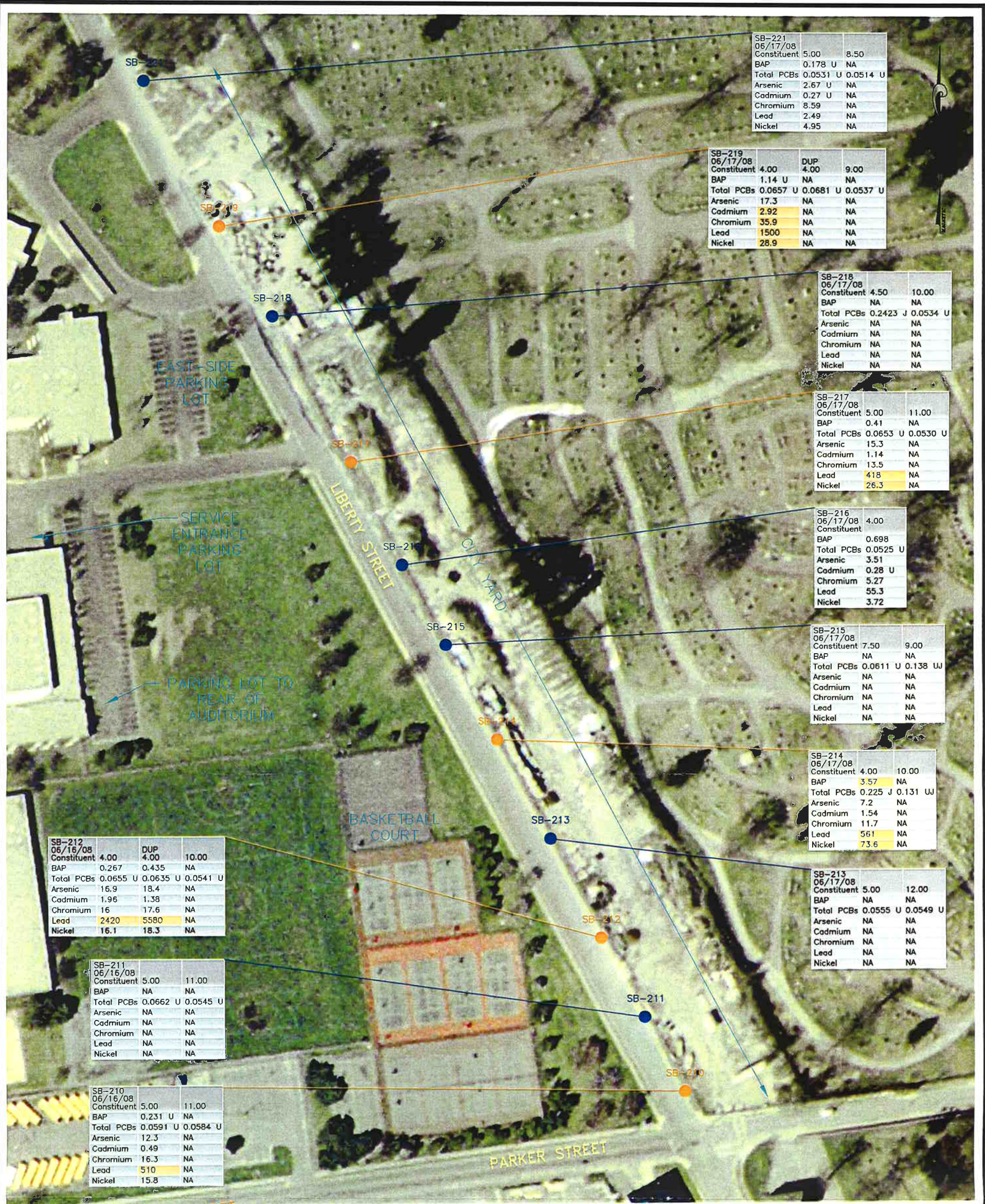
U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

EPH - Extractable Petroleum Hydrocarbons.



Transect B



SB-221	06/17/08	Constituent	5.00	8.50
BAP	0.178	U	NA	NA
Total PCBs	0.0531	U	0.0514	U
Arsenic	2.67	U	NA	NA
Cadmium	0.27	U	NA	NA
Chromium	8.59	U	NA	NA
Lead	2.49	U	NA	NA
Nickel	4.95	U	NA	NA

SB-219	06/17/08	Constituent	4.00	DUP 4.00	9.00
BAP	1.14	U	NA	NA	NA
Total PCBs	0.0657	U	0.0681	U	0.0537
Arsenic	17.3	U	NA	NA	NA
Cadmium	2.92	U	NA	NA	NA
Chromium	35.9	U	NA	NA	NA
Lead	1500	U	NA	NA	NA
Nickel	28.9	U	NA	NA	NA

SB-218	06/17/08	Constituent	4.50	10.00
BAP	NA	U	NA	NA
Total PCBs	0.2423	J	0.0534	U
Arsenic	NA	U	NA	NA
Cadmium	NA	U	NA	NA
Chromium	NA	U	NA	NA
Lead	NA	U	NA	NA
Nickel	NA	U	NA	NA

SB-217	06/17/08	Constituent	5.00	11.00
BAP	0.41	U	NA	NA
Total PCBs	0.0653	U	0.0530	U
Arsenic	15.3	U	NA	NA
Cadmium	1.14	U	NA	NA
Chromium	13.5	U	NA	NA
Lead	418	U	NA	NA
Nickel	26.3	U	NA	NA

SB-216	06/17/08	Constituent	4.00	
BAP	0.698	U	NA	NA
Total PCBs	0.0525	U	NA	NA
Arsenic	3.51	U	NA	NA
Cadmium	0.28	U	NA	NA
Chromium	5.27	U	NA	NA
Lead	55.3	U	NA	NA
Nickel	3.72	U	NA	NA

SB-215	06/17/08	Constituent	7.50	9.00
BAP	NA	U	NA	NA
Total PCBs	0.0611	U	0.138	UJ
Arsenic	NA	U	NA	NA
Cadmium	NA	U	NA	NA
Chromium	NA	U	NA	NA
Lead	NA	U	NA	NA
Nickel	NA	U	NA	NA

SB-214	06/17/08	Constituent	4.00	10.00
BAP	3.57	U	NA	NA
Total PCBs	0.225	J	0.131	UJ
Arsenic	7.2	U	NA	NA
Cadmium	1.54	U	NA	NA
Chromium	11.7	U	NA	NA
Lead	561	U	NA	NA
Nickel	73.6	U	NA	NA

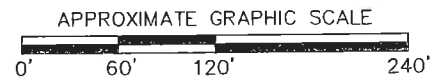
SB-213	06/17/08	Constituent	5.00	12.00
BAP	NA	U	NA	NA
Total PCBs	0.0555	U	0.0549	U
Arsenic	NA	U	NA	NA
Cadmium	NA	U	NA	NA
Chromium	NA	U	NA	NA
Lead	NA	U	NA	NA
Nickel	NA	U	NA	NA

SB-212	06/16/08	Constituent	4.00	DUP 4.00	10.00
BAP	0.267	U	0.435	U	NA
Total PCBs	0.0655	U	0.0635	U	0.0541
Arsenic	16.9	U	18.4	U	NA
Cadmium	1.96	U	1.38	U	NA
Chromium	16	U	17.6	U	NA
Lead	2420	U	5580	U	NA
Nickel	16.1	U	18.3	U	NA

SB-211	06/16/08	Constituent	5.00	11.00
BAP	NA	U	NA	NA
Total PCBs	0.0662	U	0.0545	U
Arsenic	NA	U	NA	NA
Cadmium	NA	U	NA	NA
Chromium	NA	U	NA	NA
Lead	NA	U	NA	NA
Nickel	NA	U	NA	NA

SB-210	06/16/08	Constituent	5.00	11.00
BAP	0.231	U	NA	NA
Total PCBs	0.0591	U	0.0584	U
Arsenic	12.3	U	NA	NA
Cadmium	0.49	U	NA	NA
Chromium	16.3	U	NA	NA
Lead	510	U	NA	NA
Nickel	15.8	U	NA	NA

Contaminant	S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1	TSCA
Names						
Benzo(a)pyrene (BAP)	2	2	4	4	2	N/A
Total PCBs	2	2	3	3	2	1
Arsenic	20	20	20	20	20	N/A
Cadmium	2	2	30	30	2	N/A
Chromium	30	30	200	200	30	N/A
Lead	300	300	300	300	300	N/A
Nickel	20	20	700	700	20	N/A



NOTES:
 ALL UNITS IN MG/KG UNLESS OTHERWISE SPECIFIED.
 MG/KG - MILLIGRAMS PER KILOGRAM (DRY WEIGHT).
 J - ESTIMATED VALUE.
 NA - SAMPLE NOT ANALYZED FOR THE LISTED ANALYTE.
 N/A - NOT APPLICABLE.
 PCBs - POLYCHLORINATED BIPHENYLS.
 TSCA - TOXIC SUBSTANCES CONTROL ACT.
 U - COMPOUND WAS NOT DETECTED AT SPECIFIED QUANTITATIVE LIMIT.
 UJ - ESTIMATED NONDETECT.

SAMPLE LOCATION	SB-211	06/16/08	5.00	11.00	SAMPLE DEPTH IN FEET
SAMPLE DATE	06/16/08	Constituent	5.00	11.00	
	BAP	NA	NA	NA	
	Total PCBs	0.0662	U	0.0545	U
	Arsenic	NA	NA	NA	
	Cadmium	NA	NA	NA	
	Chromium	NA	NA	NA	
	Lead	NA	NA	NA	
	Nickel	NA	NA	NA	

VALUES SHOWN IN PEACH BACKGROUND EXCEED ONE OR MORE OF THE LISTED MASSDEP METHOD 1 STANDARDS.

● SOIL BORING ● SOIL BORING THAT HAS CONCENTRATION WITH EXCEEDANCE

TRANSECT B
NEW BEDFORD, MASSACHUSETTS

ANALYTICAL RESULTS
SUMMARY MAP

TRC Wannalancit Mills
 650 Suffolk Street
 Lowell, MA 01854
 (978) 970-5600

FIGURE 3

DRAWN BY: PZ DATE: JULY 2008
 CHECKED BY: DMS

Table 1
Summary of TRC Analytical Results for Soil Samples - June 2008
Transect B
New Bedford, Massachusetts

Analysis	Analyte	Sample Location Sample Depth (ft) Sample Date	SB-210		SB-211		SB-212			SB-213	
			5	11	5	11	4	4	10	5	12
			6/16/2008	6/16/2008	6/16/2008	6/16/2008	6/16/2008	6/16/2008	6/16/2008	6/16/2008	6/17/2008
PAHs (mg/kg)		S-2/GW-3									
	Acenaphthene	3,000	0.231 U	NA	NA	NA	0.218 U	0.222 U	NA	NA	NA
	Acenaphthylene	10	0.231 U	NA	NA	NA	0.218 U	0.222 U	NA	NA	NA
	Anthracene	3,000	0.231 U	NA	NA	NA	0.218 U	0.222 U	NA	NA	NA
	Benzo(a)anthracene	40	0.231 U	NA	NA	NA	0.284	0.448	NA	NA	NA
	Benzo(a)pyrene	4	0.231 U	NA	NA	NA	0.267	0.435	NA	NA	NA
	Benzo(b)fluoranthene	40	0.231 U	NA	NA	NA	0.363	0.604	NA	NA	NA
	Benzo(g,h,i)perylene	3,000	0.231 U	NA	NA	NA	0.218 U	0.222 U	NA	NA	NA
	Benzo(k)fluoranthene	400	0.231 U	NA	NA	NA	0.218 U	0.237	NA	NA	NA
	Chrysene	400	0.231 U	NA	NA	NA	0.314	0.501	NA	NA	NA
	Dibenz(a,h)anthracene	4	0.231 U	NA	NA	NA	0.218 U	0.222 U	NA	NA	NA
	Fluoranthene	3,000	0.293	NA	NA	NA	0.450	0.810	NA	NA	NA
	Fluorene	3,000	0.231 U	NA	NA	NA	0.218 U	0.222 U	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	40	0.231 U	NA	NA	NA	0.218 U	0.261	NA	NA	NA
	2-Methylnaphthalene	500	0.231 U	NA	NA	NA	0.218 U	0.222 U	NA	NA	NA
	Naphthalene	1,000	0.231 U	NA	NA	NA	0.218 U	0.222 U	NA	NA	NA
	Phenanthrene	1,000	0.231 U	NA	NA	NA	0.326	0.459	NA	NA	NA
	Pyrene	3,000	0.337	NA	NA	NA	0.437	0.599	NA	NA	NA
PCBs (mg/kg)											
	Aroclor 1016	3	0.0591 U	0.0584 U	0.0662 U	0.0545 U	0.0655 U	0.0635 U	0.0541 U	0.0555 U	0.0549 U
	Aroclor 1221	3	0.0591 U	0.0584 U	0.0662 U	0.0545 U	0.0655 U	0.0635 U	0.0541 U	0.0555 U	0.0549 U
	Aroclor 1232	3	0.0591 U	0.0584 U	0.0662 U	0.0545 U	0.0655 U	0.0635 U	0.0541 U	0.0555 U	0.0549 U
	Aroclor 1242	3	0.0591 U	0.0584 U	0.0662 U	0.0545 U	0.0655 U	0.0635 U	0.0541 U	0.0555 U	0.0549 U
	Aroclor 1248	3	0.0591 U	0.0584 U	0.0662 U	0.0545 U	0.0655 U	0.0635 U	0.0541 U	0.0555 U	0.0549 U
	Aroclor 1254	3	0.0591 U	0.0584 U	0.0662 U	0.0545 U	0.0655 U	0.0635 U	0.0541 U	0.0555 U	0.0549 U
	Aroclor 1260	3	0.0591 U	0.0584 U	0.0662 U	0.0545 U	0.0655 U	0.0635 U	0.0541 U	0.0555 U	0.0549 U
	Total PCBs	3	0.0591 U	0.0584 U	0.0662 U	0.0545 U	0.0655 U	0.0635 U	0.0541 U	0.0555 U	0.0549 U
PCB Homologs (mg/kg)											
	Monochlorobiphenyl	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dichlorobiphenyl	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Trichlorobiphenyl	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Tetrachlorobiphenyl	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Pentachlorobiphenyl	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Hexachlorobiphenyl	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Heptachlorobiphenyl	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Octachlorobiphenyl	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nonachlorobiphenyl	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Decachlorobiphenyl	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Total PCBs	3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals (mg/kg)											
	Antimony	30	5.53 U	NA	NA	NA	5.23 U	5.33 U	NA	NA	NA
	Arsenic	20	12.3	NA	NA	NA	16.9	18.4	NA	NA	NA
	Barium	3,000	260	NA	NA	NA	697	707	NA	NA	NA
	Beryllium	200	0.64	NA	NA	NA	0.57	0.66	NA	NA	NA
	Cadmium	30	0.49	NA	NA	NA	1.96	1.38	NA	NA	NA
	Chromium	200	16.3	NA	NA	NA	16.0	17.6	NA	NA	NA
	Lead	300	510	NA	NA	NA	2,420	5,580	NA	NA	NA
	Nickel	700	15.8	NA	NA	NA	16.1	18.3	NA	NA	NA
	Selenium	800	6.91 U	NA	NA	NA	6.53 U	6.66 U	NA	NA	NA
	Silver	200	4.13	NA	NA	NA	5.82	4.30	NA	NA	NA
	Thallium	60	4.15 U	NA	NA	NA	3.92 U	4.00 U	NA	NA	NA
	Vanadium	1,000	34.5	NA	NA	NA	27.3	31.4	NA	NA	NA
	Zinc	3,000	371	NA	NA	NA	483	428	NA	NA	NA
	Mercury	30	0.154	NA	NA	NA	0.265	2.47	NA	NA	NA

Notes:

All units in mg/kg unless otherwise specified.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

J - Estimated value.

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable.

U - Compound was not detected at specified quantitation limit.

UJ - Estimated nondetect.

Values in **Bold** indicate the compound was detected.

Values shown in **Bold and shaded type** exceed applicable Method 1 standards.

PAHs - Polynuclear Aromatic Hydrocarbons.

PCBs - Polychlorinated Biphenyls.

Table 1
Summary of TRC Analytical Results for Soil Samples - June 2008
Transect B
New Bedford, Massachusetts

Analysis	Analyte	Sample Location Sample Depth (ft) Sample Date S-2/GW-3	SB-214		SB-215		SB-216	SB-217		SB-218	
			4	10	7.5	9	4	5	11	4.5	10
			6/17/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008	6/17/2008
PAHs (mg/kg)	Acenaphthene	3,000	1.02 U	NA	NA	NA	0.186 U	0.229 U	NA	NA	NA
	Acenaphthylene	10	1.02 U	NA	NA	NA	0.186 U	0.229 U	NA	NA	NA
	Anthracene	3,000	1.23	NA	NA	NA	0.197	0.229 U	NA	NA	NA
	Benzo(a)anthracene	40	3.95	NA	NA	NA	0.643	0.643	NA	NA	NA
	Benzo(a)pyrene	4	3.57	NA	NA	NA	0.698	0.410	NA	NA	NA
	Benzo(b)fluoranthene	40	4.25	NA	NA	NA	0.835	0.710	NA	NA	NA
	Benzo(g,h,i)perylene	3,000	1.49	NA	NA	NA	0.414	0.367	NA	NA	NA
	Benzo(k)fluoranthene	400	1.81	NA	NA	NA	0.339	0.243	NA	NA	NA
	Chrysene	400	3.97	NA	NA	NA	0.676	0.810	NA	NA	NA
	Dibenz(a,h)anthracene	4	1.02 U	NA	NA	NA	0.186 U	0.229 U	NA	NA	NA
	Fluoranthene	3,000	5.52	NA	NA	NA	1.60	1.05	NA	NA	NA
	Fluorene	3,000	1.02 U	NA	NA	NA	0.186 U	0.229 U	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	40	1.97	NA	NA	NA	0.490	0.380	NA	NA	NA
	2-Methylnaphthalene	500	1.02 U	NA	NA	NA	0.186 U	0.229 U	NA	NA	NA
	Naphthalene	1,000	1.02 U	NA	NA	NA	0.186 U	0.229 U	NA	NA	NA
	Phenanthrene	1,000	4.16	NA	NA	NA	0.799	0.930	NA	NA	NA
	Pyrene	3,000	5.90	NA	NA	NA	1.20	1.11	NA	NA	NA
PCBs (mg/kg)	Aroclor 1016	3	0.0604 U	0.131 UJ	0.0611 U	0.138 UJ	0.0525 U	0.0653 U	0.0530 U	0.0581 U	0.0534 U
	Aroclor 1221	3	0.0604 U	0.131 UJ	0.0611 U	0.138 UJ	0.0525 U	0.0653 U	0.0530 U	0.0581 U	0.0534 U
	Aroclor 1232	3	0.0604 U	0.131 UJ	0.0611 U	0.138 UJ	0.0525 U	0.0653 U	0.0530 U	0.0581 U	0.0534 U
	Aroclor 1242	3	0.0604 U	0.131 UJ	0.0611 U	0.138 UJ	0.0525 U	0.0653 U	0.0530 U	0.0581 U	0.0534 U
	Aroclor 1248	3	0.0604 U	0.131 UJ	0.0611 U	0.138 UJ	0.0525 U	0.0653 U	0.0530 U	0.0581 U	0.0534 U
	Aroclor 1254	3	0.225 J	0.131 UJ	0.0611 U	0.138 UJ	0.0525 U	0.0653 U	0.0530 U	0.158 J	0.0534 U
	Aroclor 1260	3	0.0604 U	0.131 UJ	0.0611 U	0.138 UJ	0.0525 U	0.0653 U	0.0530 U	0.0843 J	0.0534 U
	Total PCBs	3	0.225 J	0.131 UJ	0.0611 U	0.138 UJ	0.0525 U	0.0653 U	0.0530 U	0.2423 J	0.0534 U
PCB Homologs (mg/kg)	Monochlorobiphenyl	N/A	NA	NA	NA	NA	NA	0.017 U	NA	NA	NA
	Dichlorobiphenyl	N/A	NA	NA	NA	NA	NA	0.017 U	NA	NA	NA
	Trichlorobiphenyl	N/A	NA	NA	NA	NA	NA	0.017 U	NA	NA	NA
	Tetrachlorobiphenyl	N/A	NA	NA	NA	NA	NA	0.033 U	NA	NA	NA
	Pentachlorobiphenyl	N/A	NA	NA	NA	NA	NA	0.033 U	NA	NA	NA
	Hexachlorobiphenyl	N/A	NA	NA	NA	NA	NA	0.033 U	NA	NA	NA
	Heptachlorobiphenyl	N/A	NA	NA	NA	NA	NA	0.050 U	NA	NA	NA
	Octachlorobiphenyl	N/A	NA	NA	NA	NA	NA	0.050 U	NA	NA	NA
	Nonachlorobiphenyl	N/A	NA	NA	NA	NA	NA	0.083 U	NA	NA	NA
	Decachlorobiphenyl	N/A	NA	NA	NA	NA	NA	0.083 U	NA	NA	NA
Total PCBs	3	NA	NA	NA	NA	NA	0.083 U	NA	NA	NA	
Metals (mg/kg)	Antimony	30	4.89 U	NA	NA	NA	4.45 U	5.50 U	NA	NA	NA
	Arsenic	20	7.20	NA	NA	NA	3.51	15.3	NA	NA	NA
	Barium	3,000	211	NA	NA	NA	31.9	513	NA	NA	NA
	Beryllium	200	0.36	NA	NA	NA	0.28 U	0.87	NA	NA	NA
	Cadmium	30	1.54	NA	NA	NA	0.28 U	1.14	NA	NA	NA
	Chromium	200	11.7	NA	NA	NA	5.27	13.5	NA	NA	NA
	Lead	300	561	NA	NA	NA	55.3	418	NA	NA	NA
	Nickel	700	73.6	NA	NA	NA	3.72	26.3	NA	NA	NA
	Selenium	800	6.11 U	NA	NA	NA	5.56 U	6.87 U	NA	NA	NA
	Silver	200	3.03	NA	NA	NA	1.23	7.72	NA	NA	NA
	Thallium	60	3.67 U	NA	NA	NA	3.34 U	4.13 U	NA	NA	NA
	Vanadium	1,000	17.6	NA	NA	NA	9.43	23.3	NA	NA	NA
	Zinc	3,000	445	NA	NA	NA	43.6	560	NA	NA	NA
	Mercury	30	0.272	NA	NA	NA	0.446	0.111	NA	NA	NA

Notes:

All units in mg/kg unless otherwise specified.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

J - Estimated value.

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable.

U - Compound was not detected at specified quantitation limit.

UJ - Estimated nondetect.

Values in **Bold** indicate the compound was detected.

Values shown in **Bold and shaded type** exceed applicable Method 1 standards.

PAHs - Polynuclear Aromatic Hydrocarbons.

PCBs - Polychlorinated Biphenyls.

Table 1
Summary of TRC Analytical Results for Soil Samples - June 2008
Transect B
New Bedford, Massachusetts

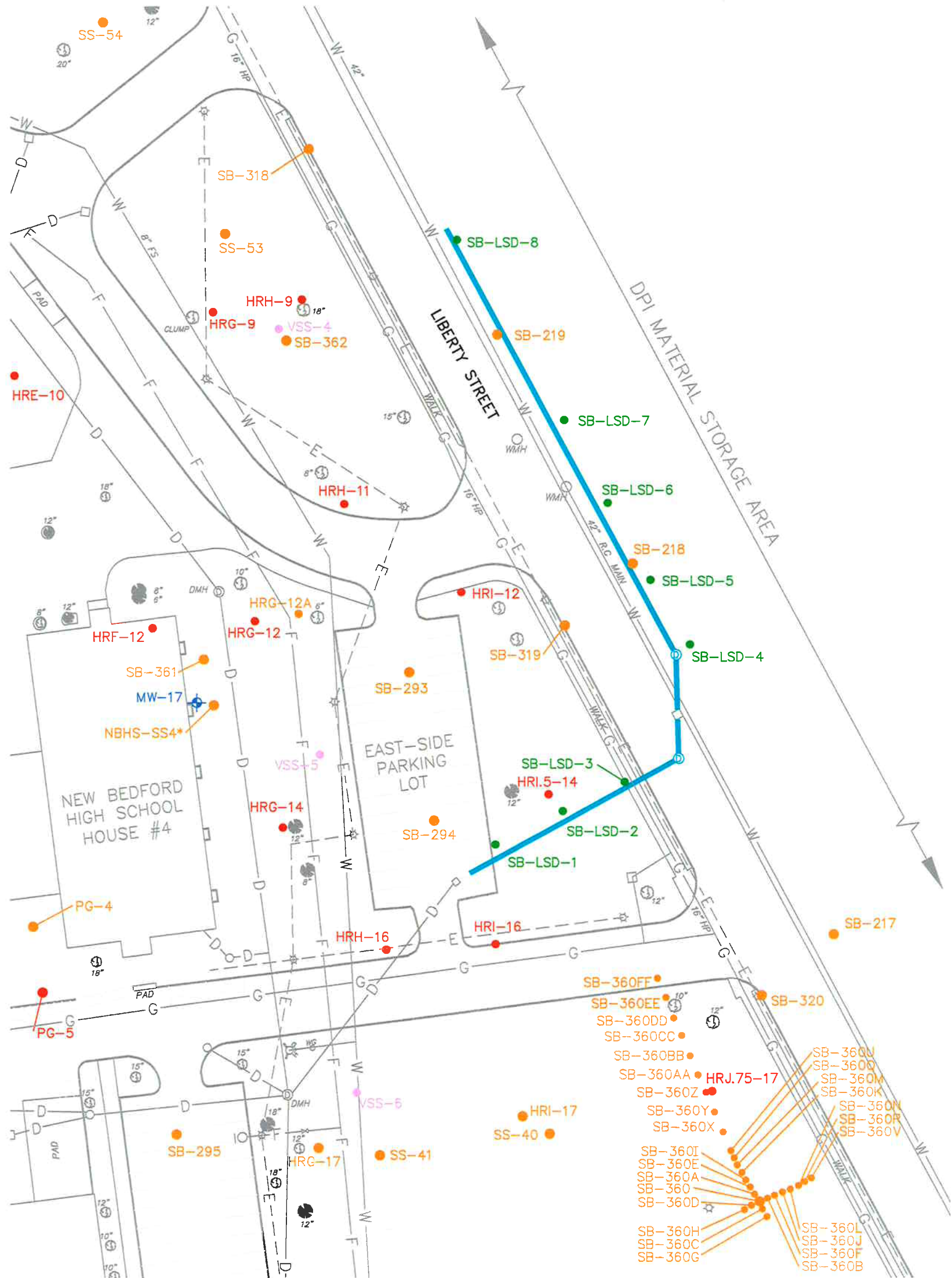
Analysis	Analyte	Sample Location Sample Depth (ft) Sample Date	SB-219			SB-221	
			4	4	9	5	8.5
			6/17/2008	6/17/2008 Field Dup	6/17/2008	6/17/2008	6/17/2008
PAHs							
(mg/kg)	Acenaphthene	3,000	1.14 U	NA	NA	0.178 U	NA
	Acenaphthylene	10	1.14 U	NA	NA	0.178 U	NA
	Anthracene	3,000	1.14 U	NA	NA	0.178 U	NA
	Benzo(a)anthracene	40	1.14 U	NA	NA	0.178 U	NA
	Benzo(a)pyrene	4	1.14 U	NA	NA	0.178 U	NA
	Benzo(b)fluoranthene	40	1.14 U	NA	NA	0.178 U	NA
	Benzo(g,h,i)perylene	3,000	1.14 U	NA	NA	0.178 U	NA
	Benzo(k)fluoranthene	400	1.14 U	NA	NA	0.178 U	NA
	Chrysene	400	1.14 U	NA	NA	0.178 U	NA
	Dibenz(a,h)anthracene	4	1.14 U	NA	NA	0.178 U	NA
	Fluoranthene	3,000	1.14 U	NA	NA	0.178 U	NA
	Fluorene	3,000	1.14 U	NA	NA	0.178 U	NA
	Indeno(1,2,3-cd)pyrene	40	1.14 U	NA	NA	0.178 U	NA
	2-Methylnaphthalene	500	1.14 U	NA	NA	0.178 U	NA
	Naphthalene	1,000	1.14 U	NA	NA	0.178 U	NA
	Phenanthrene	1,000	1.14 U	NA	NA	0.178 U	NA
	Pyrene	3,000	1.14 U	NA	NA	0.178 U	NA
PCBs							
(mg/kg)	Aroclor 1016	3	0.0657 U	0.0681 U	0.0537 U	0.0531 U	0.0514 U
	Aroclor 1221	3	0.0657 U	0.0681 U	0.0537 U	0.0531 U	0.0514 U
	Aroclor 1232	3	0.0657 U	0.0681 U	0.0537 U	0.0531 U	0.0514 U
	Aroclor 1242	3	0.0657 U	0.0681 U	0.0537 U	0.0531 U	0.0514 U
	Aroclor 1248	3	0.0657 U	0.0681 U	0.0537 U	0.0531 U	0.0514 U
	Aroclor 1254	3	0.0657 U	0.0681 U	0.0537 U	0.0531 U	0.0514 U
	Aroclor 1260	3	0.0657 U	0.0681 U	0.0537 U	0.0531 U	0.0514 U
	Total PCBs	3	0.0657 U	0.0681 U	0.0537 U	0.0531 U	0.0514 U
PCB Homologs							
(mg/kg)	Monochlorobiphenyl	N/A	NA	NA	NA	NA	NA
	Dichlorobiphenyl	N/A	NA	NA	NA	NA	NA
	Trichlorobiphenyl	N/A	NA	NA	NA	NA	NA
	Tetrachlorobiphenyl	N/A	NA	NA	NA	NA	NA
	Pentachlorobiphenyl	N/A	NA	NA	NA	NA	NA
	Hexachlorobiphenyl	N/A	NA	NA	NA	NA	NA
	Heptachlorobiphenyl	N/A	NA	NA	NA	NA	NA
	Octachlorobiphenyl	N/A	NA	NA	NA	NA	NA
	Nonachlorobiphenyl	N/A	NA	NA	NA	NA	NA
	Decachlorobiphenyl	N/A	NA	NA	NA	NA	NA
	Total PCBs	3	NA	NA	NA	NA	NA
Metals							
(mg/kg)	Antimony	30	5.45 U	NA	NA	4.27 U	NA
	Arsenic	20	17.3	NA	NA	2.67 U	NA
	Barium	3,000	337	NA	NA	27.8	NA
	Beryllium	200	0.35 U	NA	NA	0.27 U	NA
	Cadmium	30	2.92	NA	NA	0.27 U	NA
	Chromium	200	35.9	NA	NA	8.59	NA
	Lead	300	1,500	NA	NA	2.49	NA
	Nickel	700	28.9	NA	NA	4.95	NA
	Selenium	800	6.82 U	NA	NA	5.34 U	NA
	Silver	200	12.2	NA	NA	1.11	NA
	Thallium	60	4.09 U	NA	NA	3.20 U	NA
	Vanadium	1,000	28.5	NA	NA	12.0	NA
	Zinc	3,000	579	NA	NA	12.3	NA
	Mercury	30	0.281	NA	NA	0.014 U	NA

Notes:

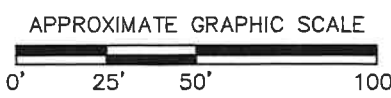
All units in mg/kg unless otherwise specified.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
J - Estimated value.
NA - Sample not analyzed for the listed analyte.
N/A - Not applicable.
U - Compound was not detected at specified quantitation limit.
UJ - Estimated nondetect.
Values in **Bold** indicate the compound was detected.
Values shown in Bold and shaded type exceed applicable Method 1 standards.
PAHs - Polynuclear Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.



URAM



- LEGEND:**
- APPROXIMATE LOCATION OF DRAINAGE LINE
 - APPROXIMATE LOCATION OF DRAIN LINE
 - APPROXIMATE LOCATION OF FIRE LINE
 - APPROXIMATE LOCATION OF GAS LINE
 - APPROXIMATE LOCATION OF ELECTRIC LINE
 - APPROXIMATE LOCATION OF WATER LINE
 - VHB SOIL BORING LOCATION
 - BETA SOIL BORING LOCATION
 - PREVIOUS TRC SOIL BORING & SURFACE SOIL LOCATION
 - TRC SOIL BORING LOCATION (MAY 2009)
 - TRC MONITORING WELL LOCATION



NEW BEDFORD HIGH SCHOOL LIBERTY STREET DRAINAGE CONSTRUCTION AREA NEW BEDFORD, MASSACHUSETTS	
SITE PLAN	
Wannalancit Mills 650 Suffolk Street Lowell, MA 01854 (978) 970-5600	FIGURE 2

Summary of TRC Analytical Results for Soil Samples - May 2010
 Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample Location:		SB-LSD-1			SB-LSD-2				SB-LSD-3			SB-LSD-4		
		Sample Depth (ft.):		0-1	1-3	3-4	0-1	1-3	1-3	3-4	0-1	1-3	4-5	0-1	1-3	3.5-4.5
		Sample Date:		5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010
		S-1/GW-3	S-2/GW-3	Field Dup												
PCBs (mg/kg)	Aroclor 1016	2	3	0.0544 U	0.0521 U	0.0567 U	0.0569 U	0.0570 U	0.0560 U	0.0563 U	0.0551 U	0.0555 U	0.0599 U	0.0559 U	0.0564 U	0.0608 U
	Aroclor 1221	2	3	0.0544 U	0.0521 U	0.0567 U	0.0569 U	0.0570 U	0.0560 U	0.0563 U	0.0551 U	0.0555 U	0.0599 U	0.0559 U	0.0564 U	0.0608 U
	Aroclor 1232	2	3	0.0544 U	0.0521 U	0.0567 U	0.0569 U	0.0570 U	0.0560 U	0.0563 U	0.0551 U	0.0555 U	0.0599 U	0.0559 U	0.0564 U	0.0608 U
	Aroclor 1242	2	3	0.0544 U	0.0521 U	0.0567 U	0.0569 U	0.0570 U	0.0560 U	0.0563 U	0.0551 U	0.0555 U	0.0599 U	0.0559 U	0.0564 U	0.0608 U
	Aroclor 1248	2	3	0.0544 U	0.0521 U	0.0567 U	0.0569 U	0.0570 U	0.0560 U	0.0563 U	0.0551 U	0.0555 U	0.0599 U	0.0559 U	0.0564 U	0.0608 U
	Aroclor 1254	2	3	0.0685 J	0.0521 U	0.611 J	0.131 J	0.510 J	0.478 J	0.523 J	0.0615 J	0.0555 U	0.0599 U	0.0759 J	0.163 J	0.0608 U
	Aroclor 1260	2	3	0.0544 U	0.0521 U	0.227 J	0.0569 U	0.221 J	0.210 J	0.215 J	0.0551 U	0.0607 J	0.0599 U	0.0559 U	0.109 J	0.0608 U
	Total PCBs	2	3	0.0685 J	0.0521 U	0.838 J	0.131 J	0.731 J	0.688 J	0.738 J	0.0615 J	0.0607 J	0.0599 U	0.0759 J	0.272 J	0.0608 U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

Values shown in **Bold and shaded type** exceed one or more of the listed MassDEP Method 1 standards.

PCBs - Polychlorinated Biphenyls.

Summary of TRC Analytical Results for Soil Samples - May 2010
 Liberty Street
 New Bedford, Massachusetts

Analysis	Analyte	Sample Location:		SB-LSD-5			SB-LSD-6			SB-LSD-7				SB-LSD-8		
		Sample Depth (ft.):		0-1	1-3	3.5-4.5	0-1	1-3	3.5-5	0-1	1-3	1-3	3.5-4.5	0-1	1-3	3.5-4.5
		Sample Date:		5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010
		S-1/GW-3	S-2/GW-3	Field Dup												
PCBs (mg/kg)	Aroclor 1016	2	3	0.0588 U	0.0540 U	0.0517 U	0.0540 U	0.0623 U	0.0582 U	0.0610 U	0.0585 U	0.0581 U	0.0500 U	0.0563 U	0.0569 U	0.0551 U
	Aroclor 1221	2	3	0.0588 U	0.0540 U	0.0517 U	0.0540 U	0.0623 U	0.0582 U	0.0610 U	0.0585 U	0.0581 U	0.0500 U	0.0563 U	0.0569 U	0.0551 U
	Aroclor 1232	2	3	0.0588 U	0.0540 U	0.0517 U	0.0540 U	0.0623 U	0.0582 U	0.0610 U	0.0585 U	0.0581 U	0.0500 U	0.0563 U	0.0569 U	0.0551 U
	Aroclor 1242	2	3	0.0588 U	0.0540 U	0.0517 U	0.0540 U	0.0623 U	0.0582 U	0.0610 U	0.0585 U	0.0581 U	0.0500 U	0.0563 U	0.0569 U	0.0551 U
	Aroclor 1248	2	3	0.0588 U	0.0540 U	0.0517 U	0.0540 U	0.0623 U	0.0582 U	0.0610 U	0.0585 U	0.0581 U	0.0500 U	0.0563 U	0.0569 U	0.0551 U
	Aroclor 1254	2	3	0.458 J	3.01 J	0.0645 J	0.117 J	0.277 J	0.0582 U	0.365 J	0.676 J	0.676 J	0.0819 J	0.256 J	0.105 J	0.150 J
	Aroclor 1260	2	3	0.252 J	0.908 J	0.0517 U	0.096 J	0.146 J	0.0582 U	0.129 J	0.243 J	0.221 J	0.0500 U	0.102 J	0.0569 U	0.0944 J
	Total PCBs	2	3	0.710 J	3.918 J	0.0645 J	0.213 J	0.423 J	0.0582 U	0.494 J	0.919 J	0.897 J	0.0819 J	0.358 J	0.105 J	0.2444 J

Notes:
 mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
 J - Estimated value.
 U - Compound was not detected at specified quantitation limit.
 Values in **Bold** indicate the compound was detected.
Values shown in Bold and shaded type exceed one or more of the listed MassDEP MCLs.
 PCBs - Polychlorinated Biphenyls.



Appendix C

Coal Ash Data



11/18/2011

CDM
50 Hampshire Street
Cambridge, MA 02139
Attn: Kate Murphy

Project#: 70514.LSP.LIBERTY
Project Name: Liberty Street,
New Bedford, MA
Job #: 4653

Dear Kate:

This report covers the methods and findings of the Coal/Coal Ash analysis that MicroVision Laboratories, Inc. conducted on two (2) soil samples submitted for this testing from your Liberty Street, New Bedford, MA project. The purpose of this analysis was to detect and document any coal, coal ash, or wood ash that may be present in the submitted soil samples, by use of a combination of microscopy techniques including SEM/EDS, PLM, and macroscopic inspection.

Methods:

The samples were dried and examined by eye and under the stereomicroscope for any suspect dark components to the soil. Dark suspect particles were separated from the soil samples and prepared for examination by Polarized Light Microscopy (PLM) and Scanning Electron Microscopy with Energy Dispersive X-Ray Spectroscopy (SEM/EDS).

For the PLM examination, the suspect particle types detected in the samples were ground in a mortar and pestle, mounted on glass slides in immersion oil ($n=1.515$) and covered with glass cover slips. These sample particles were then examined at various magnifications and digital images were taken.

For the SEM examination, the suspect particle types were mounted on an aluminum analysis stub with double sided adhesive tape, coated with evaporated graphite and examined under the SEM by EDS to obtain elemental data in the form of EDS spectra. Digital images were taken of the sample particles at various magnifications with the SEM.

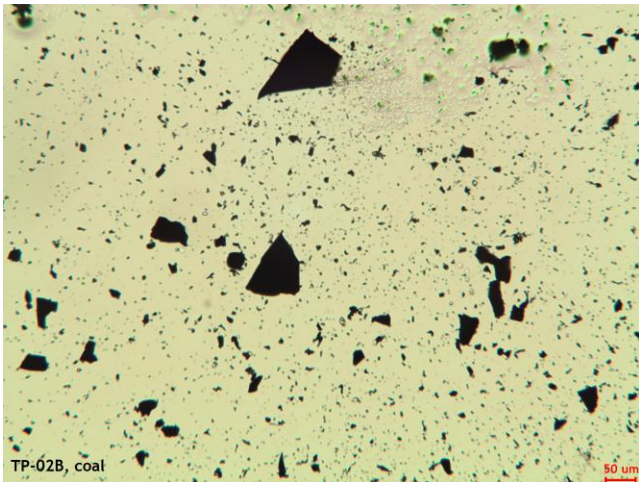
Findings:

The following pages display the data for each particle type detected in the samples for this project. Each page contains a PLM image, SEM image, and EDS spectrum for the particle types identified in each sample as well as particle type descriptions and observations.

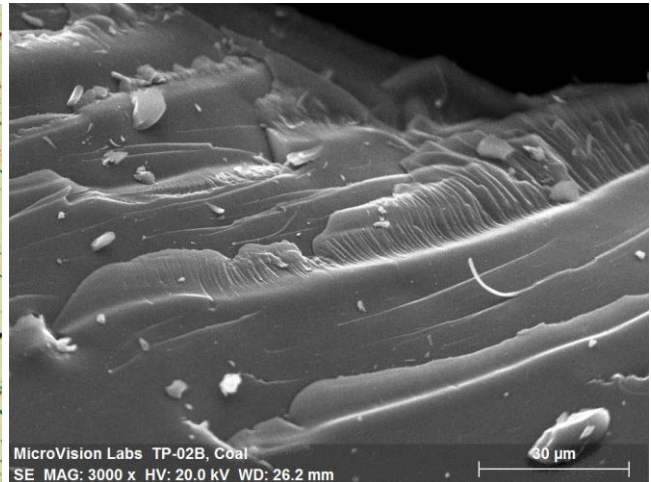
Sample: TP-02 B

Number of Suspect Particle Types: Two (2)

Particle type 1 consisted of approximately fifteen (15) shiny, black grains which were 2mm-10mm in diameter. The PLM examination indicated this particle type to be consistent with coal. The PLM and SEM images of this particle type show the angular edges and typical conchoidal fractures found in coal.

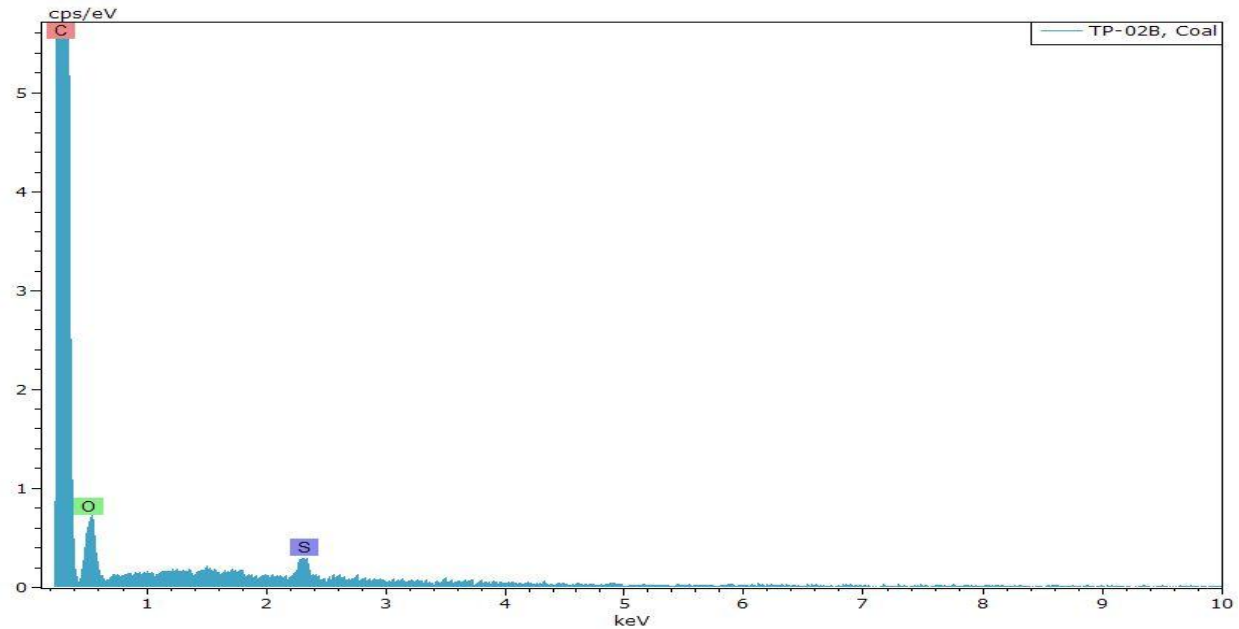


PLM Image

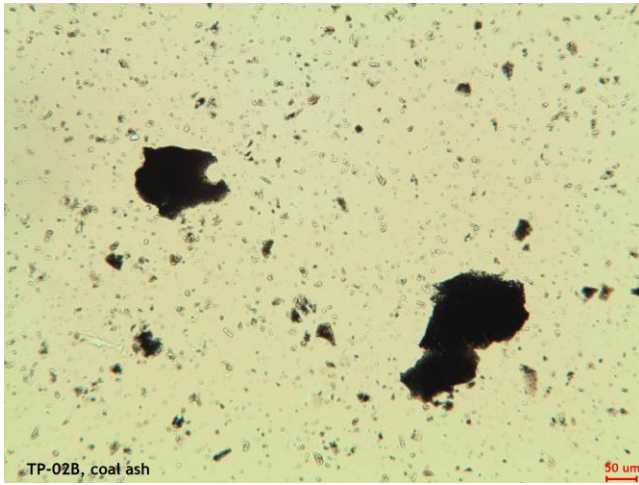


SEM Image

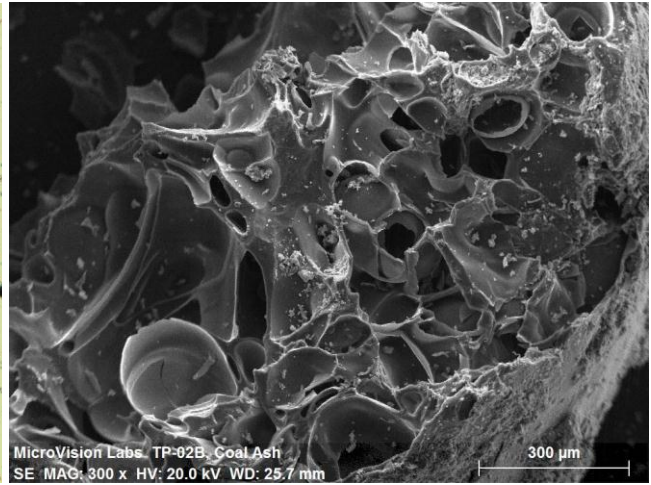
The EDS spectrum, shown below, confirms that this particle type is coal. The analysis for this particle shows a strong peak concentration of carbon, with lower peak concentrations of oxygen and sulfur.



Particle type 2 consisted of five (5) dark, porous grains which were 3mm-50mm in diameter. The PLM examination indicated this particle type to be consistent with coal ash. The PLM and SEM images show the spherical gas voids that formed during combustion.

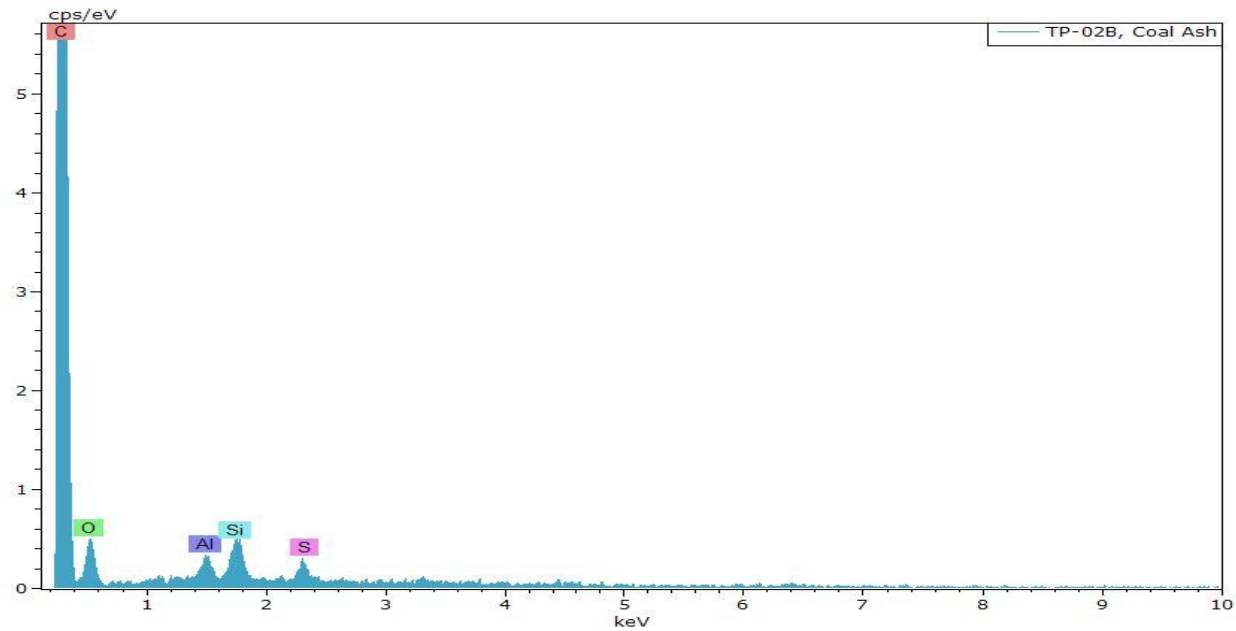


PLM Image



SEM Image

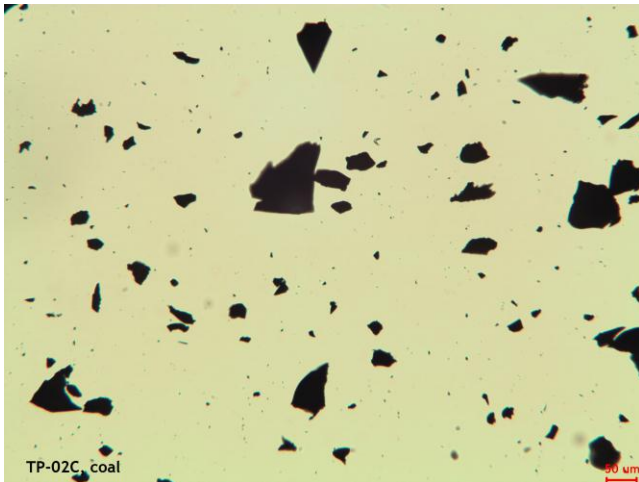
The EDS spectrum, shown below, confirms this particle type is coal ash. The analysis for this particle shows strong peak concentrations of carbon, with lower peak concentrations of oxygen, aluminum, silicon and sulfur.



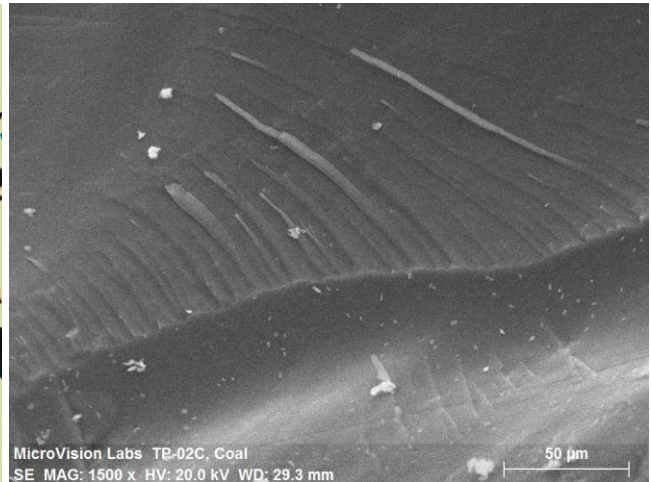
Sample: TP-02 C

Number of Suspect Particle Types: Two (2)

Particle type 1 consisted of approximately ten (10) shiny, black grains which were 1mm-3mm in diameter. The PLM examination indicated this particle type to be consistent with coal. The PLM and SEM images of this particle type show the angular edges and typical conchoidal fractures found in coal.

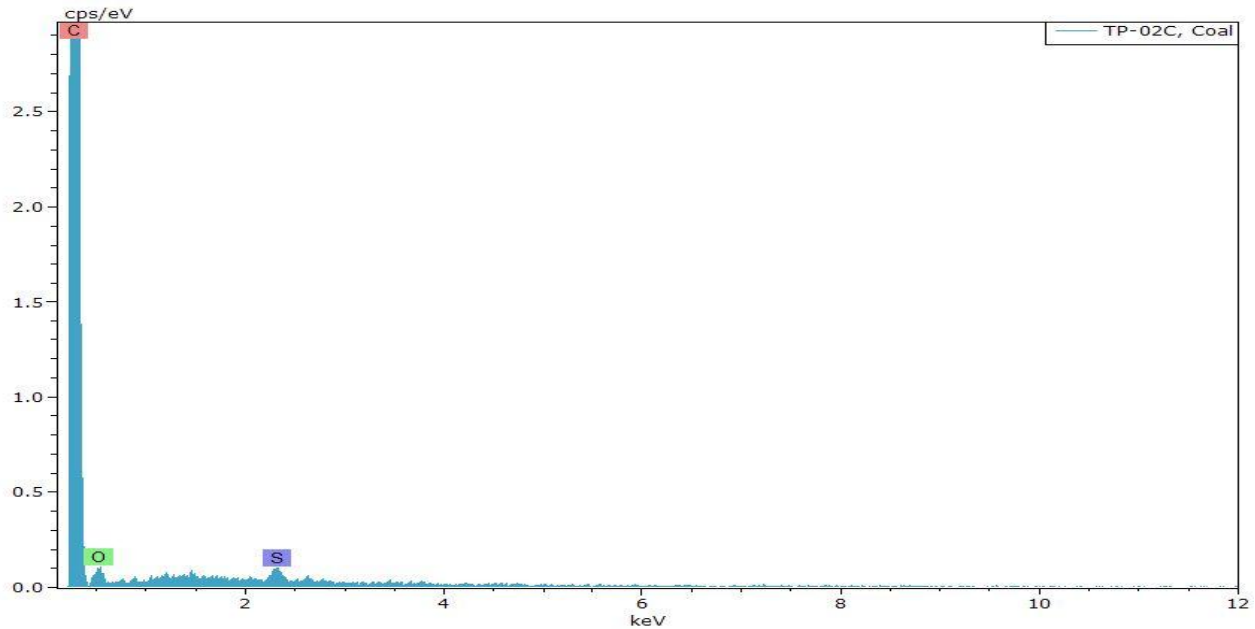


PLM Image

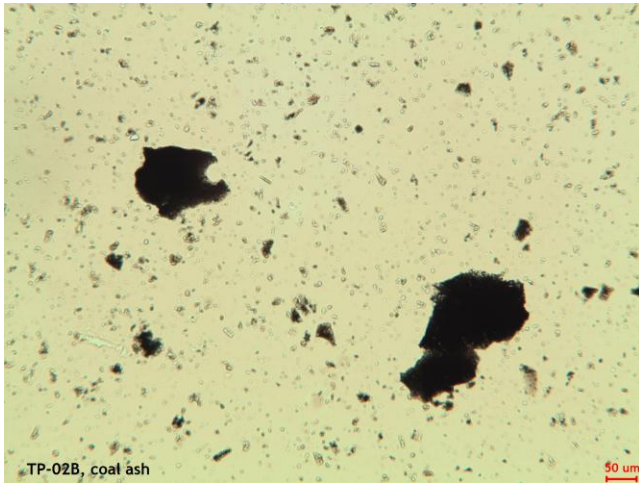


SEM Image

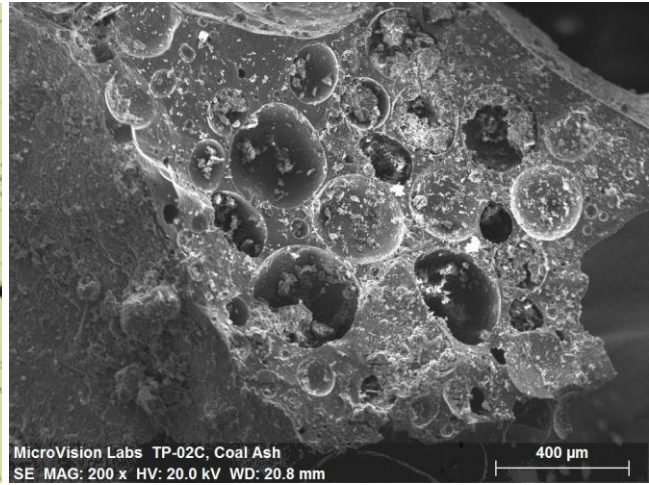
The EDS spectrum, shown below, confirms that this particle type is coal. The analysis for this particle shows a strong peak concentration of carbon, with lower peak concentrations of oxygen and sulfur.



Particle type 2 consisted of ten (10) dark, porous grains approximately 3mm-40mm in diameter. The PLM examination indicated this particle type to be consistent with coal ash. The PLM and SEM images show the spherical gas voids that formed during combustion.

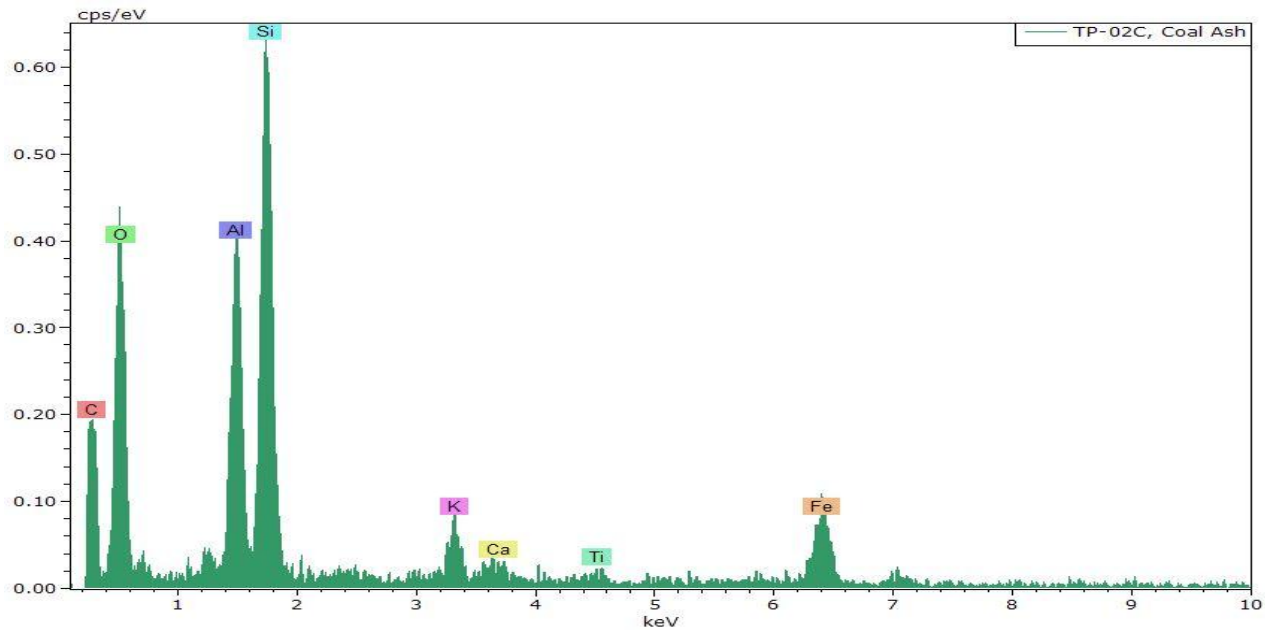


PLM Image



SEM Image

The EDS spectrum, shown below, confirms this particle type is coal ash. The analysis for this particle shows strong peak concentrations of carbon, oxygen, aluminum and silicon, with lower peak concentrations of potassium, calcium, titanium and iron.



Results Summary Table:

Sample Name	Material Detected
TP-02B	Coal (moderate), Coal Ash (moderate)
TP-02C	Coal (light), Coal Ash (moderate)

The concentrations of the particle types detected in these samples are listed in parenthesis in the table above and are based on the number of particles found and the relative difficulty in finding them. The concentration information is listed for informational purposes only and has no bearing on exemption status. Please let me know if you have any questions about this analysis or if there is anything else I can do for you.


Sincerely,



Robert Romano
Microscopist



Denise Weidler
Microscopist



MICROVISION
LABORATORIES, INC.

Chain Of Custody		Client Information		MicroVision Labs Job#: 4653	
Client: CDM		Billing Address: 50 Hampshire Street Cambridge MA		Project Name: Liberty Street New Bedford MA	
Phone: 617-452-8302		Fax: 617-452-8302		Project Location: New Bedford MA	
Email: murphykg@cdm.com		Project Number: 705/413P/LIBERTY		Project Manager: Kate Murphy	
PO#: N/A					

Sample ID	Collected Date	Sampler's Initials	Coal Ash Test	Lead Paint	SEM/EDS	PLM/Light Microscopy	Soot	Dust ID	Unknow Mat'l ID	FTIR	Polished Cross Section	Particle Size Analysis	Other
1) TP-02 B	11/09/11	ECD	✓										
2) TP-02 C	11/09/11	ECD	✓										
3)													
4)													
5)													
6)													
7)													
8)													
9)													
10)													
11)													
12)													

Relinquished By: <i>[Signature]</i>	Date/Time: 11/01/11 08:00	Received By: <i>[Signature]</i>	Date/Time: 11/01/11 08:00
Standard TAT			

Analytical Report Requested: YES NO

MicroVision Laboratories, Inc.
187 Billerica Road, Chelmsford, MA 01824
Phone 978-250-9909 Fax 978-250-9901 Toll Free 1-877-250-9909
microvisionlabs.com



Appendix D
Laboratory Reports



CDM Smith Lab Reports



ANALYTICAL REPORT

Lab Number:	L1118751
Client:	Camp Dresser & McKee, Inc. 1 Cambridge Place 50 Hampshire Street Cambridge, MA 02139
ATTN:	Bill Swanson
Phone:	(617) 452-6274
Project Name:	NEW BEDFORD PITS
Project Number:	70514.LSP.LIBERTY
Report Date:	11/17/11

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1118751-01	TP-01	NEW BEDFORD, MA	11/09/11 08:35
L1118751-02	TP-02	NEW BEDFORD, MA	11/09/11 09:00
L1118751-03	TP-03	NEW BEDFORD, MA	11/09/11 09:45
L1118751-04	TP-04	NEW BEDFORD, MA	11/09/11 09:55
L1118751-05	TP-05	NEW BEDFORD, MA	11/09/11 10:10
L1118751-06	TP-06	NEW BEDFORD, MA	11/09/11 11:00
L1118751-07	TP-07	NEW BEDFORD, MA	11/09/11 11:15
L1118751-08	TP-08	NEW BEDFORD, MA	11/09/11 11:30
L1118751-09	TP-09	NEW BEDFORD, MA	11/09/11 11:50
L1118751-10	TP-10	NEW BEDFORD, MA	11/09/11 12:00
L1118751-11	TP-11	NEW BEDFORD, MA	11/09/11 12:40

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

MCP Related Narratives

Sample Receipt

In reference to question H:

A Matrix Spike was not submitted for the analysis of Metals.

Semivolatile Organics

L1118751-01, -03, -05, -06, -07 and -09 have elevated detection limits due to the dilutions required by the sample matrix (extracts were dark and viscous).

L1118751-08 has elevated detection limits due to the dilution required by the matrix interferences encountered during the concentration of the sample and the analytical dilution required by the sample matrix (extract was dark and viscous).

In reference to question G:

Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

Case Narrative (continued)

L1118751-01, -03 and -05 through -09: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The surrogate recoveries for L1118751-08 are below the acceptance criteria for 2-Fluorophenol, Phenol-d6, Nitrobenzene-d5, 2-Fluorobiphenyl, 2,4,6-Tribromophenol, and 4-Terphenyl-d14 (all 0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

The surrogate recovery for L1118751-10 is outside the individual acceptance criteria for 2,4,6-Tribromophenol (131%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG501641-3 LCSD recoveries, associated with L1118751-07 through -11, are below the individual acceptance criteria for Aniline (33%) and 2,4-Dinitrophenol (12%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.

The WG501641-2/-3 LCS/LCSD RPD, associated with L1118751-07 through -11, is above the acceptance criteria for 2,4-Dinitrophenol (111%).

The WG501663-2 LCS recoveries, associated with L1118751-01 through -06, are below the individual acceptance criteria for Aniline (33%) and 2,4-Dinitrophenol (15%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.

The WG501663-2/-3 LCS/LCSD RPDs, associated with L1118751-01 through -06, are above the acceptance criteria for Aniline (41%) and 2,4-Dinitrophenol (72%).

Metals

In reference to question I:

All samples were analyzed for a subset of MCP elements per the Chain of Custody.

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 providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Elizabeth Simmons

Title: Technical Director/Representative

Date: 11/17/11

ORGANICS

SEMIVOLATILES

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-01 D
 Client ID: TP-01
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Analytical Method: 97,8270C
 Analytical Date: 11/14/11 17:22
 Analyst: JB
 Percent Solids: 90%

Date Collected: 11/09/11 08:35
 Date Received: 11/10/11
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 11/11/11 05:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	1400	--	5
1,2,4-Trichlorobenzene	ND		ug/kg	1800	--	5
Hexachlorobenzene	ND		ug/kg	1100	--	5
Bis(2-chloroethyl)ether	ND		ug/kg	1600	--	5
2-Chloronaphthalene	ND		ug/kg	1800	--	5
1,2-Dichlorobenzene	ND		ug/kg	1800	--	5
1,3-Dichlorobenzene	ND		ug/kg	1800	--	5
1,4-Dichlorobenzene	ND		ug/kg	1800	--	5
3,3'-Dichlorobenzidine	ND		ug/kg	1800	--	5
2,4-Dinitrotoluene	ND		ug/kg	1800	--	5
2,6-Dinitrotoluene	ND		ug/kg	1800	--	5
Azobenzene	ND		ug/kg	1800	--	5
Fluoranthene	1400		ug/kg	1100	--	5
4-Bromophenyl phenyl ether	ND		ug/kg	1800	--	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	2200	--	5
Bis(2-chloroethoxy)methane	ND		ug/kg	1900	--	5
Hexachlorobutadiene	ND		ug/kg	1800	--	5
Hexachloroethane	ND		ug/kg	1400	--	5
Isophorone	ND		ug/kg	1600	--	5
Naphthalene	ND		ug/kg	1800	--	5
Nitrobenzene	ND		ug/kg	1600	--	5
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	1800	--	5
Butyl benzyl phthalate	ND		ug/kg	1800	--	5
Di-n-butylphthalate	ND		ug/kg	1800	--	5
Di-n-octylphthalate	ND		ug/kg	1800	--	5
Diethyl phthalate	ND		ug/kg	1800	--	5
Dimethyl phthalate	ND		ug/kg	1800	--	5
Benzo(a)anthracene	ND		ug/kg	1100	--	5
Benzo(a)pyrene	ND		ug/kg	1400	--	5
Benzo(b)fluoranthene	ND		ug/kg	1100	--	5
Benzo(k)fluoranthene	ND		ug/kg	1100	--	5

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-01 D

Date Collected: 11/09/11 08:35

Client ID: TP-01

Date Received: 11/10/11

Sample Location: NEW BEDFORD, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Chrysene	ND		ug/kg	1100	--	5
Acenaphthylene	ND		ug/kg	1400	--	5
Anthracene	ND		ug/kg	1100	--	5
Benzo(ghi)perylene	ND		ug/kg	1400	--	5
Fluorene	ND		ug/kg	1800	--	5
Phenanthrene	ND		ug/kg	1100	--	5
Dibenzo(a,h)anthracene	ND		ug/kg	1100	--	5
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	1400	--	5
Pyrene	1200		ug/kg	1100	--	5
Aniline	ND		ug/kg	2200	--	5
4-Chloroaniline	ND		ug/kg	1800	--	5
Dibenzofuran	ND		ug/kg	1800	--	5
2-Methylnaphthalene	ND		ug/kg	2200	--	5
Acetophenone	ND		ug/kg	1800	--	5
2,4,6-Trichlorophenol	ND		ug/kg	1100	--	5
2-Chlorophenol	ND		ug/kg	1800	--	5
2,4-Dichlorophenol	ND		ug/kg	1600	--	5
2,4-Dimethylphenol	ND		ug/kg	1800	--	5
2-Nitrophenol	ND		ug/kg	3900	--	5
4-Nitrophenol	ND		ug/kg	2500	--	5
2,4-Dinitrophenol	ND		ug/kg	8600	--	5
Pentachlorophenol	ND		ug/kg	3600	--	5
Phenol	ND		ug/kg	1800	--	5
2-Methylphenol	ND		ug/kg	1800	--	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	2600	--	5
2,4,5-Trichlorophenol	ND		ug/kg	1800	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	92		30-130
Phenol-d6	100		30-130
Nitrobenzene-d5	91		30-130
2-Fluorobiphenyl	96		30-130
2,4,6-Tribromophenol	109		30-130
4-Terphenyl-d14	103		30-130

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-02
 Client ID: TP-02
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Analytical Method: 97,8270C
 Analytical Date: 11/14/11 17:45
 Analyst: JB
 Percent Solids: 90%

Date Collected: 11/09/11 09:00
 Date Received: 11/10/11
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 11/11/11 05:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	280	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	360	--	1
Hexachlorobenzene	ND		ug/kg	210	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	320	--	1
2-Chloronaphthalene	ND		ug/kg	360	--	1
1,2-Dichlorobenzene	ND		ug/kg	360	--	1
1,3-Dichlorobenzene	ND		ug/kg	360	--	1
1,4-Dichlorobenzene	ND		ug/kg	360	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	360	--	1
2,4-Dinitrotoluene	ND		ug/kg	360	--	1
2,6-Dinitrotoluene	ND		ug/kg	360	--	1
Azobenzene	ND		ug/kg	360	--	1
Fluoranthene	1500		ug/kg	210	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	360	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	430	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	380	--	1
Hexachlorobutadiene	ND		ug/kg	360	--	1
Hexachloroethane	ND		ug/kg	280	--	1
Isophorone	ND		ug/kg	320	--	1
Naphthalene	ND		ug/kg	360	--	1
Nitrobenzene	ND		ug/kg	320	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	360	--	1
Butyl benzyl phthalate	ND		ug/kg	360	--	1
Di-n-butylphthalate	ND		ug/kg	360	--	1
Di-n-octylphthalate	ND		ug/kg	360	--	1
Diethyl phthalate	ND		ug/kg	360	--	1
Dimethyl phthalate	ND		ug/kg	360	--	1
Benzo(a)anthracene	910		ug/kg	210	--	1
Benzo(a)pyrene	770		ug/kg	280	--	1
Benzo(b)fluoranthene	580		ug/kg	210	--	1
Benzo(k)fluoranthene	720		ug/kg	210	--	1

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-02
 Client ID: TP-02
 Sample Location: NEW BEDFORD, MA

Date Collected: 11/09/11 09:00
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Chrysene	960		ug/kg	210	--	1
Acenaphthylene	320		ug/kg	280	--	1
Anthracene	480		ug/kg	210	--	1
Benzo(ghi)perylene	430		ug/kg	280	--	1
Fluorene	360		ug/kg	360	--	1
Phenanthrene	1600		ug/kg	210	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	210	--	1
Indeno(1,2,3-cd)Pyrene	400		ug/kg	280	--	1
Pyrene	1700		ug/kg	210	--	1
Aniline	ND		ug/kg	430	--	1
4-Chloroaniline	ND		ug/kg	360	--	1
Dibenzofuran	ND		ug/kg	360	--	1
2-Methylnaphthalene	ND		ug/kg	430	--	1
Acetophenone	ND		ug/kg	360	--	1
2,4,6-Trichlorophenol	ND		ug/kg	210	--	1
2-Chlorophenol	ND		ug/kg	360	--	1
2,4-Dichlorophenol	ND		ug/kg	320	--	1
2,4-Dimethylphenol	ND		ug/kg	360	--	1
2-Nitrophenol	ND		ug/kg	770	--	1
4-Nitrophenol	ND		ug/kg	500	--	1
2,4-Dinitrophenol	ND		ug/kg	1700	--	1
Pentachlorophenol	ND		ug/kg	710	--	1
Phenol	ND		ug/kg	360	--	1
2-Methylphenol	ND		ug/kg	360	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	510	--	1
2,4,5-Trichlorophenol	ND		ug/kg	360	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	92		30-130
Phenol-d6	101		30-130
Nitrobenzene-d5	94		30-130
2-Fluorobiphenyl	95		30-130
2,4,6-Tribromophenol	114		30-130
4-Terphenyl-d14	107		30-130

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-03 D
 Client ID: TP-03
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Analytical Method: 97,8270C
 Analytical Date: 11/14/11 18:07
 Analyst: JB
 Percent Solids: 91%

Date Collected: 11/09/11 09:45
 Date Received: 11/10/11
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 11/11/11 05:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	1400	--	5
1,2,4-Trichlorobenzene	ND		ug/kg	1800	--	5
Hexachlorobenzene	ND		ug/kg	1100	--	5
Bis(2-chloroethyl)ether	ND		ug/kg	1600	--	5
2-Chloronaphthalene	ND		ug/kg	1800	--	5
1,2-Dichlorobenzene	ND		ug/kg	1800	--	5
1,3-Dichlorobenzene	ND		ug/kg	1800	--	5
1,4-Dichlorobenzene	ND		ug/kg	1800	--	5
3,3'-Dichlorobenzidine	ND		ug/kg	1800	--	5
2,4-Dinitrotoluene	ND		ug/kg	1800	--	5
2,6-Dinitrotoluene	ND		ug/kg	1800	--	5
Azobenzene	ND		ug/kg	1800	--	5
Fluoranthene	2800		ug/kg	1100	--	5
4-Bromophenyl phenyl ether	ND		ug/kg	1800	--	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	2100	--	5
Bis(2-chloroethoxy)methane	ND		ug/kg	1900	--	5
Hexachlorobutadiene	ND		ug/kg	1800	--	5
Hexachloroethane	ND		ug/kg	1400	--	5
Isophorone	ND		ug/kg	1600	--	5
Naphthalene	ND		ug/kg	1800	--	5
Nitrobenzene	ND		ug/kg	1600	--	5
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	1800	--	5
Butyl benzyl phthalate	ND		ug/kg	1800	--	5
Di-n-butylphthalate	ND		ug/kg	1800	--	5
Di-n-octylphthalate	ND		ug/kg	1800	--	5
Diethyl phthalate	ND		ug/kg	1800	--	5
Dimethyl phthalate	ND		ug/kg	1800	--	5
Benzo(a)anthracene	1600		ug/kg	1100	--	5
Benzo(a)pyrene	1400		ug/kg	1400	--	5
Benzo(b)fluoranthene	1200		ug/kg	1100	--	5
Benzo(k)fluoranthene	1200		ug/kg	1100	--	5

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-03 D

Date Collected: 11/09/11 09:45

Client ID: TP-03

Date Received: 11/10/11

Sample Location: NEW BEDFORD, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Chrysene	1600		ug/kg	1100	--	5
Acenaphthylene	ND		ug/kg	1400	--	5
Anthracene	ND		ug/kg	1100	--	5
Benzo(ghi)perylene	ND		ug/kg	1400	--	5
Fluorene	ND		ug/kg	1800	--	5
Phenanthrene	2100		ug/kg	1100	--	5
Dibenzo(a,h)anthracene	ND		ug/kg	1100	--	5
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	1400	--	5
Pyrene	3000		ug/kg	1100	--	5
Aniline	ND		ug/kg	2100	--	5
4-Chloroaniline	ND		ug/kg	1800	--	5
Dibenzofuran	ND		ug/kg	1800	--	5
2-Methylnaphthalene	ND		ug/kg	2100	--	5
Acetophenone	ND		ug/kg	1800	--	5
2,4,6-Trichlorophenol	ND		ug/kg	1100	--	5
2-Chlorophenol	ND		ug/kg	1800	--	5
2,4-Dichlorophenol	ND		ug/kg	1600	--	5
2,4-Dimethylphenol	ND		ug/kg	1800	--	5
2-Nitrophenol	ND		ug/kg	3800	--	5
4-Nitrophenol	ND		ug/kg	2500	--	5
2,4-Dinitrophenol	ND		ug/kg	8500	--	5
Pentachlorophenol	ND		ug/kg	3600	--	5
Phenol	ND		ug/kg	1800	--	5
2-Methylphenol	ND		ug/kg	1800	--	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	2600	--	5
2,4,5-Trichlorophenol	ND		ug/kg	1800	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		30-130
Phenol-d6	91		30-130
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	87		30-130
2,4,6-Tribromophenol	95		30-130
4-Terphenyl-d14	94		30-130

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-04
 Client ID: TP-04
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Analytical Method: 97,8270C
 Analytical Date: 11/15/11 13:17
 Analyst: JB
 Percent Solids: 94%

Date Collected: 11/09/11 09:55
 Date Received: 11/10/11
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 11/11/11 05:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	270	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	340	--	1
Hexachlorobenzene	ND		ug/kg	200	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	310	--	1
2-Chloronaphthalene	ND		ug/kg	340	--	1
1,2-Dichlorobenzene	ND		ug/kg	340	--	1
1,3-Dichlorobenzene	ND		ug/kg	340	--	1
1,4-Dichlorobenzene	ND		ug/kg	340	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	340	--	1
2,4-Dinitrotoluene	ND		ug/kg	340	--	1
2,6-Dinitrotoluene	ND		ug/kg	340	--	1
Azobenzene	ND		ug/kg	340	--	1
Fluoranthene	2500		ug/kg	200	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	340	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	410	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	370	--	1
Hexachlorobutadiene	ND		ug/kg	340	--	1
Hexachloroethane	ND		ug/kg	270	--	1
Isophorone	ND		ug/kg	310	--	1
Naphthalene	ND		ug/kg	340	--	1
Nitrobenzene	ND		ug/kg	310	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	340	--	1
Butyl benzyl phthalate	ND		ug/kg	340	--	1
Di-n-butylphthalate	ND		ug/kg	340	--	1
Di-n-octylphthalate	ND		ug/kg	340	--	1
Diethyl phthalate	ND		ug/kg	340	--	1
Dimethyl phthalate	ND		ug/kg	340	--	1
Benzo(a)anthracene	1400		ug/kg	200	--	1
Benzo(a)pyrene	1100		ug/kg	270	--	1
Benzo(b)fluoranthene	1300		ug/kg	200	--	1
Benzo(k)fluoranthene	480		ug/kg	200	--	1

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-04
 Client ID: TP-04
 Sample Location: NEW BEDFORD, MA

Date Collected: 11/09/11 09:55
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Chrysene	1400		ug/kg	200	--	1
Acenaphthylene	ND		ug/kg	270	--	1
Anthracene	370		ug/kg	200	--	1
Benzo(ghi)perylene	690		ug/kg	270	--	1
Fluorene	370		ug/kg	340	--	1
Phenanthrene	3600		ug/kg	200	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	200	--	1
Indeno(1,2,3-cd)Pyrene	730		ug/kg	270	--	1
Pyrene	3100		ug/kg	200	--	1
Aniline	ND		ug/kg	410	--	1
4-Chloroaniline	ND		ug/kg	340	--	1
Dibenzofuran	ND		ug/kg	340	--	1
2-Methylnaphthalene	ND		ug/kg	410	--	1
Acetophenone	ND		ug/kg	340	--	1
2,4,6-Trichlorophenol	ND		ug/kg	200	--	1
2-Chlorophenol	ND		ug/kg	340	--	1
2,4-Dichlorophenol	ND		ug/kg	310	--	1
2,4-Dimethylphenol	ND		ug/kg	340	--	1
2-Nitrophenol	ND		ug/kg	740	--	1
4-Nitrophenol	ND		ug/kg	480	--	1
2,4-Dinitrophenol	ND		ug/kg	1600	--	1
Pentachlorophenol	ND		ug/kg	680	--	1
Phenol	ND		ug/kg	340	--	1
2-Methylphenol	ND		ug/kg	340	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	490	--	1
2,4,5-Trichlorophenol	ND		ug/kg	340	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		30-130
Phenol-d6	48		30-130
Nitrobenzene-d5	47		30-130
2-Fluorobiphenyl	55		30-130
2,4,6-Tribromophenol	75		30-130
4-Terphenyl-d14	61		30-130

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-05 D
 Client ID: TP-05
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Analytical Method: 97,8270C
 Analytical Date: 11/15/11 13:43
 Analyst: JB
 Percent Solids: 94%

Date Collected: 11/09/11 10:10
 Date Received: 11/10/11
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 11/11/11 05:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	2700	--	10
1,2,4-Trichlorobenzene	ND		ug/kg	3300	--	10
Hexachlorobenzene	ND		ug/kg	2000	--	10
Bis(2-chloroethyl)ether	ND		ug/kg	3000	--	10
2-Chloronaphthalene	ND		ug/kg	3300	--	10
1,2-Dichlorobenzene	ND		ug/kg	3300	--	10
1,3-Dichlorobenzene	ND		ug/kg	3300	--	10
1,4-Dichlorobenzene	ND		ug/kg	3300	--	10
3,3'-Dichlorobenzidine	ND		ug/kg	3300	--	10
2,4-Dinitrotoluene	ND		ug/kg	3300	--	10
2,6-Dinitrotoluene	ND		ug/kg	3300	--	10
Azobenzene	ND		ug/kg	3300	--	10
Fluoranthene	2100		ug/kg	2000	--	10
4-Bromophenyl phenyl ether	ND		ug/kg	3300	--	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	4000	--	10
Bis(2-chloroethoxy)methane	ND		ug/kg	3600	--	10
Hexachlorobutadiene	ND		ug/kg	3300	--	10
Hexachloroethane	ND		ug/kg	2700	--	10
Isophorone	ND		ug/kg	3000	--	10
Naphthalene	ND		ug/kg	3300	--	10
Nitrobenzene	ND		ug/kg	3000	--	10
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	3300	--	10
Butyl benzyl phthalate	ND		ug/kg	3300	--	10
Di-n-butylphthalate	ND		ug/kg	3300	--	10
Di-n-octylphthalate	ND		ug/kg	3300	--	10
Diethyl phthalate	ND		ug/kg	3300	--	10
Dimethyl phthalate	ND		ug/kg	3300	--	10
Benzo(a)anthracene	ND		ug/kg	2000	--	10
Benzo(a)pyrene	ND		ug/kg	2700	--	10
Benzo(b)fluoranthene	ND		ug/kg	2000	--	10
Benzo(k)fluoranthene	ND		ug/kg	2000	--	10

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-05 D

Date Collected: 11/09/11 10:10

Client ID: TP-05

Date Received: 11/10/11

Sample Location: NEW BEDFORD, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Chrysene	ND		ug/kg	2000	--	10
Acenaphthylene	ND		ug/kg	2700	--	10
Anthracene	ND		ug/kg	2000	--	10
Benzo(ghi)perylene	ND		ug/kg	2700	--	10
Fluorene	ND		ug/kg	3300	--	10
Phenanthrene	ND		ug/kg	2000	--	10
Dibenzo(a,h)anthracene	ND		ug/kg	2000	--	10
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	2700	--	10
Pyrene	2200		ug/kg	2000	--	10
Aniline	ND		ug/kg	4000	--	10
4-Chloroaniline	ND		ug/kg	3300	--	10
Dibenzofuran	ND		ug/kg	3300	--	10
2-Methylnaphthalene	ND		ug/kg	4000	--	10
Acetophenone	ND		ug/kg	3300	--	10
2,4,6-Trichlorophenol	ND		ug/kg	2000	--	10
2-Chlorophenol	ND		ug/kg	3300	--	10
2,4-Dichlorophenol	ND		ug/kg	3000	--	10
2,4-Dimethylphenol	ND		ug/kg	3300	--	10
2-Nitrophenol	ND		ug/kg	7200	--	10
4-Nitrophenol	ND		ug/kg	4700	--	10
2,4-Dinitrophenol	ND		ug/kg	16000	--	10
Pentachlorophenol	ND		ug/kg	6700	--	10
Phenol	ND		ug/kg	3300	--	10
2-Methylphenol	ND		ug/kg	3300	--	10
3-Methylphenol/4-Methylphenol	ND		ug/kg	4800	--	10
2,4,5-Trichlorophenol	ND		ug/kg	3300	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		30-130
Phenol-d6	83		30-130
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	90		30-130
4-Terphenyl-d14	89		30-130

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-06 D
 Client ID: TP-06
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Analytical Method: 97,8270C
 Analytical Date: 11/15/11 14:09
 Analyst: JB
 Percent Solids: 96%

Date Collected: 11/09/11 11:00
 Date Received: 11/10/11
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 11/11/11 05:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	1300	--	5
1,2,4-Trichlorobenzene	ND		ug/kg	1600	--	5
Hexachlorobenzene	ND		ug/kg	980	--	5
Bis(2-chloroethyl)ether	ND		ug/kg	1500	--	5
2-Chloronaphthalene	ND		ug/kg	1600	--	5
1,2-Dichlorobenzene	ND		ug/kg	1600	--	5
1,3-Dichlorobenzene	ND		ug/kg	1600	--	5
1,4-Dichlorobenzene	ND		ug/kg	1600	--	5
3,3'-Dichlorobenzidine	ND		ug/kg	1600	--	5
2,4-Dinitrotoluene	ND		ug/kg	1600	--	5
2,6-Dinitrotoluene	ND		ug/kg	1600	--	5
Azobenzene	ND		ug/kg	1600	--	5
Fluoranthene	ND		ug/kg	980	--	5
4-Bromophenyl phenyl ether	ND		ug/kg	1600	--	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	2000	--	5
Bis(2-chloroethoxy)methane	ND		ug/kg	1800	--	5
Hexachlorobutadiene	ND		ug/kg	1600	--	5
Hexachloroethane	ND		ug/kg	1300	--	5
Isophorone	ND		ug/kg	1500	--	5
Naphthalene	ND		ug/kg	1600	--	5
Nitrobenzene	ND		ug/kg	1500	--	5
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	1600	--	5
Butyl benzyl phthalate	ND		ug/kg	1600	--	5
Di-n-butylphthalate	ND		ug/kg	1600	--	5
Di-n-octylphthalate	ND		ug/kg	1600	--	5
Diethyl phthalate	ND		ug/kg	1600	--	5
Dimethyl phthalate	ND		ug/kg	1600	--	5
Benzo(a)anthracene	ND		ug/kg	980	--	5
Benzo(a)pyrene	ND		ug/kg	1300	--	5
Benzo(b)fluoranthene	ND		ug/kg	980	--	5
Benzo(k)fluoranthene	ND		ug/kg	980	--	5

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-06 D

Date Collected: 11/09/11 11:00

Client ID: TP-06

Date Received: 11/10/11

Sample Location: NEW BEDFORD, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Chrysene	ND		ug/kg	980	--	5
Acenaphthylene	ND		ug/kg	1300	--	5
Anthracene	ND		ug/kg	980	--	5
Benzo(ghi)perylene	ND		ug/kg	1300	--	5
Fluorene	ND		ug/kg	1600	--	5
Phenanthrene	ND		ug/kg	980	--	5
Dibenzo(a,h)anthracene	ND		ug/kg	980	--	5
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	1300	--	5
Pyrene	1000		ug/kg	980	--	5
Aniline	ND		ug/kg	2000	--	5
4-Chloroaniline	ND		ug/kg	1600	--	5
Dibenzofuran	ND		ug/kg	1600	--	5
2-Methylnaphthalene	ND		ug/kg	2000	--	5
Acetophenone	ND		ug/kg	1600	--	5
2,4,6-Trichlorophenol	ND		ug/kg	980	--	5
2-Chlorophenol	ND		ug/kg	1600	--	5
2,4-Dichlorophenol	ND		ug/kg	1500	--	5
2,4-Dimethylphenol	ND		ug/kg	1600	--	5
2-Nitrophenol	ND		ug/kg	3500	--	5
4-Nitrophenol	ND		ug/kg	2300	--	5
2,4-Dinitrophenol	ND		ug/kg	7800	--	5
Pentachlorophenol	ND		ug/kg	3300	--	5
Phenol	ND		ug/kg	1600	--	5
2-Methylphenol	ND		ug/kg	1600	--	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	2400	--	5
2,4,5-Trichlorophenol	ND		ug/kg	1600	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		30-130
Phenol-d6	76		30-130
Nitrobenzene-d5	69		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	87		30-130
4-Terphenyl-d14	81		30-130

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-07 D
 Client ID: TP-07
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Analytical Method: 97,8270C
 Analytical Date: 11/14/11 15:27
 Analyst: JB
 Percent Solids: 95%

Date Collected: 11/09/11 11:15
 Date Received: 11/10/11
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 11/11/11 05:31

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	2700	--	10
1,2,4-Trichlorobenzene	ND		ug/kg	3400	--	10
Hexachlorobenzene	ND		ug/kg	2000	--	10
Bis(2-chloroethyl)ether	ND		ug/kg	3000	--	10
2-Chloronaphthalene	ND		ug/kg	3400	--	10
1,2-Dichlorobenzene	ND		ug/kg	3400	--	10
1,3-Dichlorobenzene	ND		ug/kg	3400	--	10
1,4-Dichlorobenzene	ND		ug/kg	3400	--	10
3,3'-Dichlorobenzidine	ND		ug/kg	3400	--	10
2,4-Dinitrotoluene	ND		ug/kg	3400	--	10
2,6-Dinitrotoluene	ND		ug/kg	3400	--	10
Azobenzene	ND		ug/kg	3400	--	10
Fluoranthene	3500		ug/kg	2000	--	10
4-Bromophenyl phenyl ether	ND		ug/kg	3400	--	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	4000	--	10
Bis(2-chloroethoxy)methane	ND		ug/kg	3600	--	10
Hexachlorobutadiene	ND		ug/kg	3400	--	10
Hexachloroethane	ND		ug/kg	2700	--	10
Isophorone	ND		ug/kg	3000	--	10
Naphthalene	ND		ug/kg	3400	--	10
Nitrobenzene	ND		ug/kg	3000	--	10
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	3400	--	10
Butyl benzyl phthalate	ND		ug/kg	3400	--	10
Di-n-butylphthalate	ND		ug/kg	3400	--	10
Di-n-octylphthalate	ND		ug/kg	3400	--	10
Diethyl phthalate	ND		ug/kg	3400	--	10
Dimethyl phthalate	ND		ug/kg	3400	--	10
Benzo(a)anthracene	2400		ug/kg	2000	--	10
Benzo(a)pyrene	ND		ug/kg	2700	--	10
Benzo(b)fluoranthene	ND		ug/kg	2000	--	10
Benzo(k)fluoranthene	ND		ug/kg	2000	--	10

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-07 D

Date Collected: 11/09/11 11:15

Client ID: TP-07

Date Received: 11/10/11

Sample Location: NEW BEDFORD, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Chrysene	2600		ug/kg	2000	--	10
Acenaphthylene	ND		ug/kg	2700	--	10
Anthracene	ND		ug/kg	2000	--	10
Benzo(ghi)perylene	ND		ug/kg	2700	--	10
Fluorene	ND		ug/kg	3400	--	10
Phenanthrene	2600		ug/kg	2000	--	10
Dibenzo(a,h)anthracene	ND		ug/kg	2000	--	10
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	2700	--	10
Pyrene	4400		ug/kg	2000	--	10
Aniline	ND		ug/kg	4000	--	10
4-Chloroaniline	ND		ug/kg	3400	--	10
Dibenzofuran	ND		ug/kg	3400	--	10
2-Methylnaphthalene	ND		ug/kg	4000	--	10
Acetophenone	ND		ug/kg	3400	--	10
2,4,6-Trichlorophenol	ND		ug/kg	2000	--	10
2-Chlorophenol	ND		ug/kg	3400	--	10
2,4-Dichlorophenol	ND		ug/kg	3000	--	10
2,4-Dimethylphenol	ND		ug/kg	3400	--	10
2-Nitrophenol	ND		ug/kg	7200	--	10
4-Nitrophenol	ND		ug/kg	4700	--	10
2,4-Dinitrophenol	ND		ug/kg	16000	--	10
Pentachlorophenol	ND		ug/kg	6700	--	10
Phenol	ND		ug/kg	3400	--	10
2-Methylphenol	ND		ug/kg	3400	--	10
3-Methylphenol/4-Methylphenol	ND		ug/kg	4800	--	10
2,4,5-Trichlorophenol	ND		ug/kg	3400	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	98		30-130
Phenol-d6	105		30-130
Nitrobenzene-d5	92		30-130
2-Fluorobiphenyl	101		30-130
2,4,6-Tribromophenol	92		30-130
4-Terphenyl-d14	106		30-130

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-08 D
 Client ID: TP-08
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Analytical Method: 97,8270C
 Analytical Date: 11/14/11 15:50
 Analyst: JB
 Percent Solids: 92%

Date Collected: 11/09/11 11:30
 Date Received: 11/10/11
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 11/11/11 05:31

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	5600	--	20
1,2,4-Trichlorobenzene	ND		ug/kg	7000	--	20
Hexachlorobenzene	ND		ug/kg	4200	--	20
Bis(2-chloroethyl)ether	ND		ug/kg	6300	--	20
2-Chloronaphthalene	ND		ug/kg	7000	--	20
1,2-Dichlorobenzene	ND		ug/kg	7000	--	20
1,3-Dichlorobenzene	ND		ug/kg	7000	--	20
1,4-Dichlorobenzene	ND		ug/kg	7000	--	20
3,3'-Dichlorobenzidine	ND		ug/kg	7000	--	20
2,4-Dinitrotoluene	ND		ug/kg	7000	--	20
2,6-Dinitrotoluene	ND		ug/kg	7000	--	20
Azobenzene	ND		ug/kg	7000	--	20
Fluoranthene	5200		ug/kg	4200	--	20
4-Bromophenyl phenyl ether	ND		ug/kg	7000	--	20
Bis(2-chloroisopropyl)ether	ND		ug/kg	8400	--	20
Bis(2-chloroethoxy)methane	ND		ug/kg	7500	--	20
Hexachlorobutadiene	ND		ug/kg	7000	--	20
Hexachloroethane	ND		ug/kg	5600	--	20
Isophorone	ND		ug/kg	6300	--	20
Naphthalene	ND		ug/kg	7000	--	20
Nitrobenzene	ND		ug/kg	6300	--	20
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	7000	--	20
Butyl benzyl phthalate	ND		ug/kg	7000	--	20
Di-n-butylphthalate	ND		ug/kg	7000	--	20
Di-n-octylphthalate	ND		ug/kg	7000	--	20
Diethyl phthalate	ND		ug/kg	7000	--	20
Dimethyl phthalate	ND		ug/kg	7000	--	20
Benzo(a)anthracene	ND		ug/kg	4200	--	20
Benzo(a)pyrene	ND		ug/kg	5600	--	20
Benzo(b)fluoranthene	ND		ug/kg	4200	--	20
Benzo(k)fluoranthene	ND		ug/kg	4200	--	20

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-08 D

Date Collected: 11/09/11 11:30

Client ID: TP-08

Date Received: 11/10/11

Sample Location: NEW BEDFORD, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Chrysene	ND		ug/kg	4200	--	20
Acenaphthylene	ND		ug/kg	5600	--	20
Anthracene	ND		ug/kg	4200	--	20
Benzo(ghi)perylene	ND		ug/kg	5600	--	20
Fluorene	ND		ug/kg	7000	--	20
Phenanthrene	ND		ug/kg	4200	--	20
Dibenzo(a,h)anthracene	ND		ug/kg	4200	--	20
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	5600	--	20
Pyrene	5600		ug/kg	4200	--	20
Aniline	ND		ug/kg	8400	--	20
4-Chloroaniline	ND		ug/kg	7000	--	20
Dibenzofuran	ND		ug/kg	7000	--	20
2-Methylnaphthalene	ND		ug/kg	8400	--	20
Acetophenone	ND		ug/kg	7000	--	20
2,4,6-Trichlorophenol	ND		ug/kg	4200	--	20
2-Chlorophenol	ND		ug/kg	7000	--	20
2,4-Dichlorophenol	ND		ug/kg	6300	--	20
2,4-Dimethylphenol	ND		ug/kg	7000	--	20
2-Nitrophenol	ND		ug/kg	15000	--	20
4-Nitrophenol	ND		ug/kg	9700	--	20
2,4-Dinitrophenol	ND		ug/kg	33000	--	20
Pentachlorophenol	ND		ug/kg	14000	--	20
Phenol	ND		ug/kg	7000	--	20
2-Methylphenol	ND		ug/kg	7000	--	20
3-Methylphenol/4-Methylphenol	ND		ug/kg	10000	--	20
2,4,5-Trichlorophenol	ND		ug/kg	7000	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	0	Q	30-130
Phenol-d6	0	Q	30-130
Nitrobenzene-d5	0	Q	30-130
2-Fluorobiphenyl	0	Q	30-130
2,4,6-Tribromophenol	0	Q	30-130
4-Terphenyl-d14	0	Q	30-130

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-09 D
 Client ID: TP-09
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Analytical Method: 97,8270C
 Analytical Date: 11/14/11 16:13
 Analyst: JB
 Percent Solids: 82%

Date Collected: 11/09/11 11:50
 Date Received: 11/10/11
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 11/11/11 05:31

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	1500	--	5
1,2,4-Trichlorobenzene	ND		ug/kg	1900	--	5
Hexachlorobenzene	ND		ug/kg	1200	--	5
Bis(2-chloroethyl)ether	ND		ug/kg	1700	--	5
2-Chloronaphthalene	ND		ug/kg	1900	--	5
1,2-Dichlorobenzene	ND		ug/kg	1900	--	5
1,3-Dichlorobenzene	ND		ug/kg	1900	--	5
1,4-Dichlorobenzene	ND		ug/kg	1900	--	5
3,3'-Dichlorobenzidine	ND		ug/kg	1900	--	5
2,4-Dinitrotoluene	ND		ug/kg	1900	--	5
2,6-Dinitrotoluene	ND		ug/kg	1900	--	5
Azobenzene	ND		ug/kg	1900	--	5
Fluoranthene	1200		ug/kg	1200	--	5
4-Bromophenyl phenyl ether	ND		ug/kg	1900	--	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	2300	--	5
Bis(2-chloroethoxy)methane	ND		ug/kg	2100	--	5
Hexachlorobutadiene	ND		ug/kg	1900	--	5
Hexachloroethane	ND		ug/kg	1500	--	5
Isophorone	ND		ug/kg	1700	--	5
Naphthalene	ND		ug/kg	1900	--	5
Nitrobenzene	ND		ug/kg	1700	--	5
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	1900	--	5
Butyl benzyl phthalate	ND		ug/kg	1900	--	5
Di-n-butylphthalate	ND		ug/kg	1900	--	5
Di-n-octylphthalate	ND		ug/kg	1900	--	5
Diethyl phthalate	ND		ug/kg	1900	--	5
Dimethyl phthalate	ND		ug/kg	1900	--	5
Benzo(a)anthracene	ND		ug/kg	1200	--	5
Benzo(a)pyrene	ND		ug/kg	1500	--	5
Benzo(b)fluoranthene	ND		ug/kg	1200	--	5
Benzo(k)fluoranthene	ND		ug/kg	1200	--	5

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-09 D

Date Collected: 11/09/11 11:50

Client ID: TP-09

Date Received: 11/10/11

Sample Location: NEW BEDFORD, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Chrysene	ND		ug/kg	1200	--	5
Acenaphthylene	ND		ug/kg	1500	--	5
Anthracene	ND		ug/kg	1200	--	5
Benzo(ghi)perylene	ND		ug/kg	1500	--	5
Fluorene	ND		ug/kg	1900	--	5
Phenanthrene	ND		ug/kg	1200	--	5
Dibenzo(a,h)anthracene	ND		ug/kg	1200	--	5
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	1500	--	5
Pyrene	1200		ug/kg	1200	--	5
Aniline	ND		ug/kg	2300	--	5
4-Chloroaniline	ND		ug/kg	1900	--	5
Dibenzofuran	ND		ug/kg	1900	--	5
2-Methylnaphthalene	ND		ug/kg	2300	--	5
Acetophenone	ND		ug/kg	1900	--	5
2,4,6-Trichlorophenol	ND		ug/kg	1200	--	5
2-Chlorophenol	ND		ug/kg	1900	--	5
2,4-Dichlorophenol	ND		ug/kg	1700	--	5
2,4-Dimethylphenol	ND		ug/kg	1900	--	5
2-Nitrophenol	ND		ug/kg	4200	--	5
4-Nitrophenol	ND		ug/kg	2700	--	5
2,4-Dinitrophenol	ND		ug/kg	9200	--	5
Pentachlorophenol	ND		ug/kg	3800	--	5
Phenol	ND		ug/kg	1900	--	5
2-Methylphenol	ND		ug/kg	1900	--	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	2800	--	5
2,4,5-Trichlorophenol	ND		ug/kg	1900	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	92		30-130
Phenol-d6	102		30-130
Nitrobenzene-d5	89		30-130
2-Fluorobiphenyl	93		30-130
2,4,6-Tribromophenol	101		30-130
4-Terphenyl-d14	99		30-130

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-10
 Client ID: TP-10
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Analytical Method: 97,8270C
 Analytical Date: 11/13/11 23:59
 Analyst: JB
 Percent Solids: 84%

Date Collected: 11/09/11 12:00
 Date Received: 11/10/11
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 11/11/11 05:31

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	300	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	380	--	1
Hexachlorobenzene	ND		ug/kg	230	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	340	--	1
2-Chloronaphthalene	ND		ug/kg	380	--	1
1,2-Dichlorobenzene	ND		ug/kg	380	--	1
1,3-Dichlorobenzene	ND		ug/kg	380	--	1
1,4-Dichlorobenzene	ND		ug/kg	380	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	380	--	1
2,4-Dinitrotoluene	ND		ug/kg	380	--	1
2,6-Dinitrotoluene	ND		ug/kg	380	--	1
Azobenzene	ND		ug/kg	380	--	1
Fluoranthene	ND		ug/kg	230	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	380	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	460	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	410	--	1
Hexachlorobutadiene	ND		ug/kg	380	--	1
Hexachloroethane	ND		ug/kg	300	--	1
Isophorone	ND		ug/kg	340	--	1
Naphthalene	ND		ug/kg	380	--	1
Nitrobenzene	ND		ug/kg	340	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	380	--	1
Butyl benzyl phthalate	ND		ug/kg	380	--	1
Di-n-butylphthalate	ND		ug/kg	380	--	1
Di-n-octylphthalate	ND		ug/kg	380	--	1
Diethyl phthalate	ND		ug/kg	380	--	1
Dimethyl phthalate	ND		ug/kg	380	--	1
Benzo(a)anthracene	ND		ug/kg	230	--	1
Benzo(a)pyrene	ND		ug/kg	300	--	1
Benzo(b)fluoranthene	ND		ug/kg	230	--	1
Benzo(k)fluoranthene	ND		ug/kg	230	--	1

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-10
 Client ID: TP-10
 Sample Location: NEW BEDFORD, MA

Date Collected: 11/09/11 12:00
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Chrysene	ND		ug/kg	230	--	1
Acenaphthylene	ND		ug/kg	300	--	1
Anthracene	ND		ug/kg	230	--	1
Benzo(ghi)perylene	ND		ug/kg	300	--	1
Fluorene	ND		ug/kg	380	--	1
Phenanthrene	ND		ug/kg	230	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	230	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	300	--	1
Pyrene	230		ug/kg	230	--	1
Aniline	ND		ug/kg	460	--	1
4-Chloroaniline	ND		ug/kg	380	--	1
Dibenzofuran	ND		ug/kg	380	--	1
2-Methylnaphthalene	ND		ug/kg	460	--	1
Acetophenone	ND		ug/kg	380	--	1
2,4,6-Trichlorophenol	ND		ug/kg	230	--	1
2-Chlorophenol	ND		ug/kg	380	--	1
2,4-Dichlorophenol	ND		ug/kg	340	--	1
2,4-Dimethylphenol	ND		ug/kg	380	--	1
2-Nitrophenol	ND		ug/kg	820	--	1
4-Nitrophenol	ND		ug/kg	530	--	1
2,4-Dinitrophenol	ND		ug/kg	1800	--	1
Pentachlorophenol	ND		ug/kg	760	--	1
Phenol	ND		ug/kg	380	--	1
2-Methylphenol	ND		ug/kg	380	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	550	--	1
2,4,5-Trichlorophenol	ND		ug/kg	380	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		30-130
Phenol-d6	80		30-130
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	83		30-130
2,4,6-Tribromophenol	131	Q	30-130
4-Terphenyl-d14	106		30-130

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-11
 Client ID: TP-11
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Analytical Method: 97,8270C
 Analytical Date: 11/14/11 00:24
 Analyst: JB
 Percent Solids: 88%

Date Collected: 11/09/11 12:40
 Date Received: 11/10/11
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 11/11/11 05:31

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	290	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	360	--	1
Hexachlorobenzene	ND		ug/kg	220	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	330	--	1
2-Chloronaphthalene	ND		ug/kg	360	--	1
1,2-Dichlorobenzene	ND		ug/kg	360	--	1
1,3-Dichlorobenzene	ND		ug/kg	360	--	1
1,4-Dichlorobenzene	ND		ug/kg	360	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	360	--	1
2,4-Dinitrotoluene	ND		ug/kg	360	--	1
2,6-Dinitrotoluene	ND		ug/kg	360	--	1
Azobenzene	ND		ug/kg	360	--	1
Fluoranthene	ND		ug/kg	220	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	360	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	440	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	390	--	1
Hexachlorobutadiene	ND		ug/kg	360	--	1
Hexachloroethane	ND		ug/kg	290	--	1
Isophorone	ND		ug/kg	330	--	1
Naphthalene	ND		ug/kg	360	--	1
Nitrobenzene	ND		ug/kg	330	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	360	--	1
Butyl benzyl phthalate	ND		ug/kg	360	--	1
Di-n-butylphthalate	ND		ug/kg	360	--	1
Di-n-octylphthalate	ND		ug/kg	360	--	1
Diethyl phthalate	ND		ug/kg	360	--	1
Dimethyl phthalate	ND		ug/kg	360	--	1
Benzo(a)anthracene	ND		ug/kg	220	--	1
Benzo(a)pyrene	ND		ug/kg	290	--	1
Benzo(b)fluoranthene	ND		ug/kg	220	--	1
Benzo(k)fluoranthene	ND		ug/kg	220	--	1

Project Name: NEW BEDFORD PITS**Lab Number:** L1118751**Project Number:** 70514.LSP.LIBERTY**Report Date:** 11/17/11**SAMPLE RESULTS**

Lab ID: L1118751-11
 Client ID: TP-11
 Sample Location: NEW BEDFORD, MA

Date Collected: 11/09/11 12:40
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Chrysene	ND		ug/kg	220	--	1
Acenaphthylene	ND		ug/kg	290	--	1
Anthracene	ND		ug/kg	220	--	1
Benzo(ghi)perylene	ND		ug/kg	290	--	1
Fluorene	ND		ug/kg	360	--	1
Phenanthrene	ND		ug/kg	220	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	220	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	290	--	1
Pyrene	ND		ug/kg	220	--	1
Aniline	ND		ug/kg	440	--	1
4-Chloroaniline	ND		ug/kg	360	--	1
Dibenzofuran	ND		ug/kg	360	--	1
2-Methylnaphthalene	ND		ug/kg	440	--	1
Acetophenone	ND		ug/kg	360	--	1
2,4,6-Trichlorophenol	ND		ug/kg	220	--	1
2-Chlorophenol	ND		ug/kg	360	--	1
2,4-Dichlorophenol	ND		ug/kg	330	--	1
2,4-Dimethylphenol	ND		ug/kg	360	--	1
2-Nitrophenol	ND		ug/kg	790	--	1
4-Nitrophenol	ND		ug/kg	510	--	1
2,4-Dinitrophenol	ND		ug/kg	1800	--	1
Pentachlorophenol	ND		ug/kg	730	--	1
Phenol	ND		ug/kg	360	--	1
2-Methylphenol	ND		ug/kg	360	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	530	--	1
2,4,5-Trichlorophenol	ND		ug/kg	360	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		30-130
Phenol-d6	76		30-130
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	71		30-130
2,4,6-Tribromophenol	96		30-130
4-Terphenyl-d14	92		30-130

Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270C
Analytical Date: 11/13/11 15:25
Analyst: JB

Extraction Method: EPA 3546
Extraction Date: 11/11/11 02:46

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 07-11 Batch: WG501641-1					
Acenaphthene	ND		ug/kg	260	--
1,2,4-Trichlorobenzene	ND		ug/kg	320	--
Hexachlorobenzene	ND		ug/kg	200	--
Bis(2-chloroethyl)ether	ND		ug/kg	290	--
2-Chloronaphthalene	ND		ug/kg	320	--
1,2-Dichlorobenzene	ND		ug/kg	320	--
1,3-Dichlorobenzene	ND		ug/kg	320	--
1,4-Dichlorobenzene	ND		ug/kg	320	--
3,3'-Dichlorobenzidine	ND		ug/kg	320	--
2,4-Dinitrotoluene	ND		ug/kg	320	--
2,6-Dinitrotoluene	ND		ug/kg	320	--
Azobenzene	ND		ug/kg	320	--
Fluoranthene	ND		ug/kg	200	--
4-Bromophenyl phenyl ether	ND		ug/kg	320	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	390	--
Bis(2-chloroethoxy)methane	ND		ug/kg	350	--
Hexachlorobutadiene	ND		ug/kg	320	--
Hexachloroethane	ND		ug/kg	260	--
Isophorone	ND		ug/kg	290	--
Naphthalene	ND		ug/kg	320	--
Nitrobenzene	ND		ug/kg	290	--
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	320	--
Butyl benzyl phthalate	ND		ug/kg	320	--
Di-n-butylphthalate	ND		ug/kg	320	--
Di-n-octylphthalate	ND		ug/kg	320	--
Diethyl phthalate	ND		ug/kg	320	--
Dimethyl phthalate	ND		ug/kg	320	--
Benzo(a)anthracene	ND		ug/kg	200	--
Benzo(a)pyrene	ND		ug/kg	260	--
Benzo(b)fluoranthene	ND		ug/kg	200	--
Benzo(k)fluoranthene	ND		ug/kg	200	--

Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270C
Analytical Date: 11/13/11 15:25
Analyst: JB

Extraction Method: EPA 3546
Extraction Date: 11/11/11 02:46

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 07-11 Batch: WG501641-1					
Chrysene	ND		ug/kg	200	--
Acenaphthylene	ND		ug/kg	260	--
Anthracene	ND		ug/kg	200	--
Benzo(ghi)perylene	ND		ug/kg	260	--
Fluorene	ND		ug/kg	320	--
Phenanthrene	ND		ug/kg	200	--
Dibenzo(a,h)anthracene	ND		ug/kg	200	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	260	--
Pyrene	ND		ug/kg	200	--
Aniline	ND		ug/kg	390	--
4-Chloroaniline	ND		ug/kg	320	--
Dibenzofuran	ND		ug/kg	320	--
2-Methylnaphthalene	ND		ug/kg	390	--
Acetophenone	ND		ug/kg	320	--
2,4,6-Trichlorophenol	ND		ug/kg	200	--
2-Chlorophenol	ND		ug/kg	320	--
2,4-Dichlorophenol	ND		ug/kg	290	--
2,4-Dimethylphenol	ND		ug/kg	320	--
2-Nitrophenol	ND		ug/kg	700	--
4-Nitrophenol	ND		ug/kg	460	--
2,4-Dinitrophenol	ND		ug/kg	1600	--
Pentachlorophenol	ND		ug/kg	650	--
Phenol	ND		ug/kg	320	--
2-Methylphenol	ND		ug/kg	320	--
3-Methylphenol/4-Methylphenol	ND		ug/kg	470	--
2,4,5-Trichlorophenol	ND		ug/kg	320	--

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270C
 Analytical Date: 11/13/11 15:25
 Analyst: JB

Extraction Method: EPA 3546
 Extraction Date: 11/11/11 02:46

Parameter	Result	Qualifier	Units	RL	MDL
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MCP Semivolatile Organics - Westborough Lab for sample(s): 07-11 Batch: WG501641-1

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	102		30-130
Phenol-d6	100		30-130
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	91		30-130
2,4,6-Tribromophenol	109		30-130
4-Terphenyl-d14	103		30-130

Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270C
Analytical Date: 11/13/11 17:59
Analyst: JB

Extraction Method: EPA 3546
Extraction Date: 11/11/11 05:27

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-06 Batch: WG501663-1					
Acenaphthene	ND		ug/kg	250	--
1,2,4-Trichlorobenzene	ND		ug/kg	320	--
Hexachlorobenzene	ND		ug/kg	190	--
Bis(2-chloroethyl)ether	ND		ug/kg	280	--
2-Chloronaphthalene	ND		ug/kg	320	--
1,2-Dichlorobenzene	ND		ug/kg	320	--
1,3-Dichlorobenzene	ND		ug/kg	320	--
1,4-Dichlorobenzene	ND		ug/kg	320	--
3,3'-Dichlorobenzidine	ND		ug/kg	320	--
2,4-Dinitrotoluene	ND		ug/kg	320	--
2,6-Dinitrotoluene	ND		ug/kg	320	--
Azobenzene	ND		ug/kg	320	--
Fluoranthene	ND		ug/kg	190	--
4-Bromophenyl phenyl ether	ND		ug/kg	320	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	380	--
Bis(2-chloroethoxy)methane	ND		ug/kg	340	--
Hexachlorobutadiene	ND		ug/kg	320	--
Hexachloroethane	ND		ug/kg	250	--
Isophorone	ND		ug/kg	280	--
Naphthalene	ND		ug/kg	320	--
Nitrobenzene	ND		ug/kg	280	--
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	320	--
Butyl benzyl phthalate	ND		ug/kg	320	--
Di-n-butylphthalate	ND		ug/kg	320	--
Di-n-octylphthalate	ND		ug/kg	320	--
Diethyl phthalate	ND		ug/kg	320	--
Dimethyl phthalate	ND		ug/kg	320	--
Benzo(a)anthracene	ND		ug/kg	190	--
Benzo(a)pyrene	ND		ug/kg	250	--
Benzo(b)fluoranthene	ND		ug/kg	190	--
Benzo(k)fluoranthene	ND		ug/kg	190	--

Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270C
Analytical Date: 11/13/11 17:59
Analyst: JB

Extraction Method: EPA 3546
Extraction Date: 11/11/11 05:27

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-06 Batch: WG501663-1					
Chrysene	ND		ug/kg	190	--
Acenaphthylene	ND		ug/kg	250	--
Anthracene	ND		ug/kg	190	--
Benzo(ghi)perylene	ND		ug/kg	250	--
Fluorene	ND		ug/kg	320	--
Phenanthrene	ND		ug/kg	190	--
Dibenzo(a,h)anthracene	ND		ug/kg	190	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	250	--
Pyrene	ND		ug/kg	190	--
Aniline	ND		ug/kg	380	--
4-Chloroaniline	ND		ug/kg	320	--
Dibenzofuran	ND		ug/kg	320	--
2-Methylnaphthalene	ND		ug/kg	380	--
Acetophenone	ND		ug/kg	320	--
2,4,6-Trichlorophenol	ND		ug/kg	190	--
2-Chlorophenol	ND		ug/kg	320	--
2,4-Dichlorophenol	ND		ug/kg	280	--
2,4-Dimethylphenol	ND		ug/kg	320	--
2-Nitrophenol	ND		ug/kg	680	--
4-Nitrophenol	ND		ug/kg	440	--
2,4-Dinitrophenol	ND		ug/kg	1500	--
Pentachlorophenol	ND		ug/kg	630	--
Phenol	ND		ug/kg	320	--
2-Methylphenol	ND		ug/kg	320	--
3-Methylphenol/4-Methylphenol	ND		ug/kg	460	--
2,4,5-Trichlorophenol	ND		ug/kg	320	--

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270C
 Analytical Date: 11/13/11 17:59
 Analyst: JB

Extraction Method: EPA 3546
 Extraction Date: 11/11/11 05:27

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-06 Batch: WG501663-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	80		30-130
Phenol-d6	78		30-130
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	79		30-130
4-Terphenyl-d14	84		30-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 07-11 Batch: WG501641-2 WG501641-3								
Acenaphthene	85		85		40-140	0		30
1,2,4-Trichlorobenzene	83		79		40-140	5		30
Hexachlorobenzene	101		98		40-140	3		30
Bis(2-chloroethyl)ether	79		76		40-140	4		30
2-Chloronaphthalene	112		109		40-140	3		30
1,2-Dichlorobenzene	84		87		40-140	4		30
1,3-Dichlorobenzene	81		83		40-140	2		30
1,4-Dichlorobenzene	86		82		40-140	5		30
3,3'-Dichlorobenzidine	55		43		40-140	24		30
2,4-Dinitrotoluene	116		118		40-140	2		30
2,6-Dinitrotoluene	113		112		40-140	1		30
Azobenzene	95		93		40-140	2		30
Fluoranthene	100		102		40-140	2		30
4-Bromophenyl phenyl ether	99		102		40-140	3		30
Bis(2-chloroisopropyl)ether	91		87		40-140	4		30
Bis(2-chloroethoxy)methane	82		80		40-140	2		30
Hexachlorobutadiene	82		79		40-140	4		30
Hexachloroethane	81		80		40-140	1		30
Isophorone	85		79		40-140	7		30
Naphthalene	85		87		40-140	2		30
Nitrobenzene	84		79		40-140	6		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 07-11 Batch: WG501641-2 WG501641-3								
Bis(2-Ethylhexyl)phthalate	102		95		40-140	7		30
Butyl benzyl phthalate	113		113		40-140	0		30
Di-n-butylphthalate	105		103		40-140	2		30
Di-n-octylphthalate	97		92		40-140	5		30
Diethyl phthalate	102		106		40-140	4		30
Dimethyl phthalate	99		94		40-140	5		30
Benzo(a)anthracene	92		92		40-140	0		30
Benzo(a)pyrene	93		93		40-140	0		30
Benzo(b)fluoranthene	99		102		40-140	3		30
Benzo(k)fluoranthene	105		96		40-140	9		30
Chrysene	95		93		40-140	2		30
Acenaphthylene	106		102		40-140	4		30
Anthracene	95		94		40-140	1		30
Benzo(ghi)perylene	107		106		40-140	1		30
Fluorene	100		98		40-140	2		30
Phenanthrene	91		90		40-140	1		30
Dibenzo(a,h)anthracene	114		114		40-140	0		30
Indeno(1,2,3-cd)Pyrene	112		115		40-140	3		30
Pyrene	109		101		40-140	8		30
Aniline	40		35	Q	40-140	13		30
4-Chloroaniline	55		43		40-140	24		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD PITS

Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751

Report Date: 11/17/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 07-11 Batch: WG501641-2 WG501641-3								
Dibenzofuran	98		100		40-140	2		30
2-Methylnaphthalene	91		90		40-140	1		30
Acetophenone	90		95		40-140	5		30
2,4,6-Trichlorophenol	93		102		30-130	9		30
2-Chlorophenol	89		93		30-130	4		30
2,4-Dichlorophenol	103		107		30-130	4		30
2,4-Dimethylphenol	88		96		30-130	9		30
2-Nitrophenol	92		97		30-130	5		30
4-Nitrophenol	91		94		30-130	3		30
2,4-Dinitrophenol	42		12	Q	30-130	111	Q	30
Pentachlorophenol	68		70		30-130	3		30
Phenol	88		92		30-130	4		30
2-Methylphenol	99		100		30-130	1		30
3-Methylphenol/4-Methylphenol	96		98		30-130	2		30
2,4,5-Trichlorophenol	103		105		30-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 07-11 Batch: WG501641-2 WG501641-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	91		90		30-130
Phenol-d6	90		95		30-130
Nitrobenzene-d5	79		83		30-130
2-Fluorobiphenyl	93		93		30-130
2,4,6-Tribromophenol	108		106		30-130
4-Terphenyl-d14	105		98		30-130

MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-06 Batch: WG501663-2 WG501663-3								
Acenaphthene	82		90		40-140	9		30
1,2,4-Trichlorobenzene	68		84		40-140	21		30
Hexachlorobenzene	87		94		40-140	8		30
Bis(2-chloroethyl)ether	78		92		40-140	16		30
2-Chloronaphthalene	89		102		40-140	14		30
1,2-Dichlorobenzene	73		85		40-140	15		30
1,3-Dichlorobenzene	69		81		40-140	16		30
1,4-Dichlorobenzene	71		84		40-140	17		30
3,3'-Dichlorobenzidine	55		56		40-140	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-06 Batch: WG501663-2 WG501663-3								
2,4-Dinitrotoluene	96		103		40-140	7		30
2,6-Dinitrotoluene	92		103		40-140	11		30
Azobenzene	100		105		40-140	5		30
Fluoranthene	98		104		40-140	6		30
4-Bromophenyl phenyl ether	91		98		40-140	7		30
Bis(2-chloroisopropyl)ether	78		90		40-140	14		30
Bis(2-chloroethoxy)methane	82		96		40-140	16		30
Hexachlorobutadiene	69		85		40-140	21		30
Hexachloroethane	70		83		40-140	17		30
Isophorone	84		98		40-140	15		30
Naphthalene	74		89		40-140	18		30
Nitrobenzene	78		93		40-140	18		30
Bis(2-Ethylhexyl)phthalate	109		117		40-140	7		30
Butyl benzyl phthalate	106		109		40-140	3		30
Di-n-butylphthalate	105		111		40-140	6		30
Di-n-octylphthalate	107		114		40-140	6		30
Diethyl phthalate	94		99		40-140	5		30
Dimethyl phthalate	92		96		40-140	4		30
Benzo(a)anthracene	93		99		40-140	6		30
Benzo(a)pyrene	87		95		40-140	9		30
Benzo(b)fluoranthene	87		95		40-140	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-06 Batch: WG501663-2 WG501663-3								
Benzo(k)fluoranthene	98		101		40-140	3		30
Chrysene	95		103		40-140	8		30
Acenaphthylene	86		99		40-140	14		30
Anthracene	96		102		40-140	6		30
Benzo(ghi)perylene	96		100		40-140	4		30
Fluorene	85		91		40-140	7		30
Phenanthrene	91		97		40-140	6		30
Dibenzo(a,h)anthracene	98		102		40-140	4		30
Indeno(1,2,3-cd)Pyrene	94		100		40-140	6		30
Pyrene	94		100		40-140	6		30
Aniline	33	Q	50		40-140	41	Q	30
4-Chloroaniline	45		60		40-140	29		30
Dibenzofuran	88		96		40-140	9		30
2-Methylnaphthalene	76		90		40-140	17		30
Acetophenone	85		99		40-140	15		30
2,4,6-Trichlorophenol	93		106		30-130	13		30
2-Chlorophenol	82		95		30-130	15		30
2,4-Dichlorophenol	86		99		30-130	14		30
2,4-Dimethylphenol	96		104		30-130	8		30
2-Nitrophenol	81		97		30-130	18		30
4-Nitrophenol	113		119		30-130	5		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-06 Batch: WG501663-2 WG501663-3								
2,4-Dinitrophenol	15	Q	32		30-130	72	Q	30
Pentachlorophenol	90		101		30-130	12		30
Phenol	83		101		30-130	20		30
2-Methylphenol	86		100		30-130	15		30
3-Methylphenol/4-Methylphenol	84		98		30-130	15		30
2,4,5-Trichlorophenol	97		108		30-130	11		30

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
2-Fluorophenol	80		96		30-130
Phenol-d6	87		101		30-130
Nitrobenzene-d5	78		94		30-130
2-Fluorobiphenyl	78		93		30-130
2,4,6-Tribromophenol	98		104		30-130
4-Terphenyl-d14	95		104		30-130

METALS

Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-01
 Client ID: TP-01
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Percent Solids: 90%

Date Collected: 11/09/11 08:35
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	4.4		mg/kg	0.42	--	1	11/11/11 11:10	11/15/11 11:13	EPA 3050B	97,6010B	MG
Cadmium, Total	ND		mg/kg	0.42	--	1	11/11/11 11:10	11/15/11 11:13	EPA 3050B	97,6010B	MG
Chromium, Total	9.7		mg/kg	0.42	--	1	11/11/11 11:10	11/15/11 11:13	EPA 3050B	97,6010B	MG
Lead, Total	190		mg/kg	2.1	--	1	11/11/11 11:10	11/15/11 11:13	EPA 3050B	97,6010B	MG
Mercury, Total	0.18		mg/kg	0.07	--	1	11/16/11 17:10	11/16/11 19:49	EPA 7471A	97,7471A	JP



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-02
 Client ID: TP-02
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Percent Solids: 90%

Date Collected: 11/09/11 09:00
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	4.6		mg/kg	0.42	--	1	11/11/11 11:10	11/15/11 11:16	EPA 3050B	97,6010B	MG
Cadmium, Total	ND		mg/kg	0.42	--	1	11/11/11 11:10	11/15/11 11:16	EPA 3050B	97,6010B	MG
Chromium, Total	10		mg/kg	0.42	--	1	11/11/11 11:10	11/15/11 11:16	EPA 3050B	97,6010B	MG
Lead, Total	43		mg/kg	2.1	--	1	11/11/11 11:10	11/15/11 11:16	EPA 3050B	97,6010B	MG
Mercury, Total	0.08		mg/kg	0.07	--	1	11/16/11 17:10	11/16/11 19:55	EPA 7471A	97,7471A	JP



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-03
 Client ID: TP-03
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Percent Solids: 91%

Date Collected: 11/09/11 09:45
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	2.1		mg/kg	0.42	--	1	11/11/11 11:10	11/15/11 11:18	EPA 3050B	97,6010B	MG
Cadmium, Total	ND		mg/kg	0.42	--	1	11/11/11 11:10	11/15/11 11:18	EPA 3050B	97,6010B	MG
Chromium, Total	14		mg/kg	0.42	--	1	11/11/11 11:10	11/15/11 11:18	EPA 3050B	97,6010B	MG
Lead, Total	180		mg/kg	2.1	--	1	11/11/11 11:10	11/15/11 11:18	EPA 3050B	97,6010B	MG
Mercury, Total	0.13		mg/kg	0.07	--	1	11/16/11 17:10	11/16/11 19:57	EPA 7471A	97,7471A	JP



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-04
 Client ID: TP-04
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Percent Solids: 94%

Date Collected: 11/09/11 09:55
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	2.0		mg/kg	0.40	--	1	11/11/11 11:10	11/15/11 11:21	EPA 3050B	97,6010B	MG
Cadmium, Total	ND		mg/kg	0.40	--	1	11/11/11 11:10	11/15/11 11:21	EPA 3050B	97,6010B	MG
Chromium, Total	10		mg/kg	0.40	--	1	11/11/11 11:10	11/15/11 11:21	EPA 3050B	97,6010B	MG
Lead, Total	47		mg/kg	2.0	--	1	11/11/11 11:10	11/15/11 11:21	EPA 3050B	97,6010B	MG
Mercury, Total	0.12		mg/kg	0.10	--	1	11/16/11 17:10	11/16/11 19:59	EPA 7471A	97,7471A	JP



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-05
 Client ID: TP-05
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Percent Solids: 94%

Date Collected: 11/09/11 10:10
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	1.6		mg/kg	0.41	--	1	11/11/11 11:10	11/15/11 11:23	EPA 3050B	97,6010B	MG
Cadmium, Total	ND		mg/kg	0.41	--	1	11/11/11 11:10	11/15/11 11:23	EPA 3050B	97,6010B	MG
Chromium, Total	15		mg/kg	0.41	--	1	11/11/11 11:10	11/15/11 11:23	EPA 3050B	97,6010B	MG
Lead, Total	260		mg/kg	2.0	--	1	11/11/11 11:10	11/15/11 11:23	EPA 3050B	97,6010B	MG
Mercury, Total	0.09		mg/kg	0.07	--	1	11/16/11 17:10	11/16/11 20:01	EPA 7471A	97,7471A	JP



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-06
 Client ID: TP-06
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Percent Solids: 96%

Date Collected: 11/09/11 11:00
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	1.2		mg/kg	0.40	--	1	11/11/11 11:10	11/15/11 11:26	EPA 3050B	97,6010B	MG
Cadmium, Total	ND		mg/kg	0.40	--	1	11/11/11 11:10	11/15/11 11:26	EPA 3050B	97,6010B	MG
Chromium, Total	12		mg/kg	0.40	--	1	11/11/11 11:10	11/15/11 11:26	EPA 3050B	97,6010B	MG
Lead, Total	38		mg/kg	2.0	--	1	11/11/11 11:10	11/15/11 11:26	EPA 3050B	97,6010B	MG
Mercury, Total	ND		mg/kg	0.10	--	1	11/16/11 17:10	11/16/11 20:03	EPA 7471A	97,7471A	JP



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-07
 Client ID: TP-07
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Percent Solids: 95%

Date Collected: 11/09/11 11:15
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	1.6		mg/kg	0.40	--	1	11/11/11 11:10	11/15/11 11:28	EPA 3050B	97,6010B	MG
Cadmium, Total	ND		mg/kg	0.40	--	1	11/11/11 11:10	11/15/11 11:28	EPA 3050B	97,6010B	MG
Chromium, Total	12		mg/kg	0.40	--	1	11/11/11 11:10	11/15/11 11:28	EPA 3050B	97,6010B	MG
Lead, Total	47		mg/kg	2.0	--	1	11/11/11 11:10	11/15/11 11:28	EPA 3050B	97,6010B	MG
Mercury, Total	0.07		mg/kg	0.07	--	1	11/16/11 17:10	11/16/11 20:04	EPA 7471A	97,7471A	JP



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-08
 Client ID: TP-08
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Percent Solids: 92%

Date Collected: 11/09/11 11:30
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	1.6		mg/kg	0.41	--	1	11/11/11 11:10	11/15/11 11:30	EPA 3050B	97,6010B	MG
Cadmium, Total	ND		mg/kg	0.41	--	1	11/11/11 11:10	11/15/11 11:30	EPA 3050B	97,6010B	MG
Chromium, Total	16		mg/kg	0.41	--	1	11/11/11 11:10	11/15/11 11:30	EPA 3050B	97,6010B	MG
Lead, Total	57		mg/kg	2.0	--	1	11/11/11 11:10	11/15/11 11:30	EPA 3050B	97,6010B	MG
Mercury, Total	ND		mg/kg	0.12	--	1	11/16/11 17:10	11/16/11 20:06	EPA 7471A	97,7471A	JP



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-09
 Client ID: TP-09
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Percent Solids: 82%

Date Collected: 11/09/11 11:50
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	7.3		mg/kg	0.47	--	1	11/11/11 11:10	11/15/11 11:38	EPA 3050B	97,6010B	MG
Cadmium, Total	ND		mg/kg	0.47	--	1	11/11/11 11:10	11/15/11 11:38	EPA 3050B	97,6010B	MG
Chromium, Total	10		mg/kg	0.47	--	1	11/11/11 11:10	11/15/11 11:38	EPA 3050B	97,6010B	MG
Lead, Total	240		mg/kg	2.3	--	1	11/11/11 11:10	11/15/11 11:38	EPA 3050B	97,6010B	MG
Mercury, Total	0.15		mg/kg	0.08	--	1	11/16/11 17:10	11/16/11 20:08	EPA 7471A	97,7471A	JP



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-10
 Client ID: TP-10
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Percent Solids: 84%

Date Collected: 11/09/11 12:00
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	1.5		mg/kg	0.45	--	1	11/11/11 11:10	11/15/11 11:40	EPA 3050B	97,6010B	MG
Cadmium, Total	ND		mg/kg	0.45	--	1	11/11/11 11:10	11/15/11 11:40	EPA 3050B	97,6010B	MG
Chromium, Total	11		mg/kg	0.45	--	1	11/11/11 11:10	11/15/11 11:40	EPA 3050B	97,6010B	MG
Lead, Total	26		mg/kg	2.3	--	1	11/11/11 11:10	11/15/11 11:40	EPA 3050B	97,6010B	MG
Mercury, Total	ND		mg/kg	0.09	--	1	11/16/11 17:10	11/16/11 20:10	EPA 7471A	97,7471A	JP



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-11
 Client ID: TP-11
 Sample Location: NEW BEDFORD, MA
 Matrix: Soil
 Percent Solids: 88%

Date Collected: 11/09/11 12:40
 Date Received: 11/10/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	0.72		mg/kg	0.44	--	1	11/11/11 11:10	11/15/11 11:43	EPA 3050B	97,6010B	MG
Cadmium, Total	ND		mg/kg	0.44	--	1	11/11/11 11:10	11/15/11 11:43	EPA 3050B	97,6010B	MG
Chromium, Total	9.5		mg/kg	0.44	--	1	11/11/11 11:10	11/15/11 11:43	EPA 3050B	97,6010B	MG
Lead, Total	6.3		mg/kg	2.2	--	1	11/11/11 11:10	11/15/11 11:43	EPA 3050B	97,6010B	MG
Mercury, Total	ND		mg/kg	0.09	--	1	11/16/11 17:10	11/16/11 20:12	EPA 7471A	97,7471A	JP



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01-11 Batch: WG501767-1									
Arsenic, Total	ND	mg/kg	0.40	--	1	11/11/11 11:10	11/15/11 10:29	97,6010B	MG
Cadmium, Total	ND	mg/kg	0.40	--	1	11/11/11 11:10	11/15/11 10:29	97,6010B	MG
Chromium, Total	ND	mg/kg	0.40	--	1	11/11/11 11:10	11/15/11 10:29	97,6010B	MG
Lead, Total	ND	mg/kg	2.0	--	1	11/11/11 11:10	11/15/11 10:29	97,6010B	MG

Prep Information

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01-11 Batch: WG502853-1									
Mercury, Total	ND	mg/kg	0.08	--	1	11/16/11 17:10	11/16/11 19:09	97,7471A	JP

Prep Information

Digestion Method: EPA 7471A

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Total Metals - Westborough Lab Associated sample(s): 01-11 Batch: WG501767-2 WG501767-3 SRM Lot Number: 0518-10-02								
Arsenic, Total	104		100		81-119	4		30
Cadmium, Total	98		98		82-117	0		30
Chromium, Total	97		97		80-119	0		30
Lead, Total	100		96		80-120	4		30
MCP Total Metals - Westborough Lab Associated sample(s): 01-11 Batch: WG502853-2 WG502853-3 SRM Lot Number: 0518-10-02								
Mercury, Total	95		105		67-133	10		30

INORGANICS & MISCELLANEOUS

Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-01
Client ID: TP-01
Sample Location: NEW BEDFORD, MA
Matrix: Soil

Date Collected: 11/09/11 08:35
Date Received: 11/10/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90		%	0.10	NA	1	-	11/14/11 14:26	30,2540G	MD



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-02
Client ID: TP-02
Sample Location: NEW BEDFORD, MA
Matrix: Soil

Date Collected: 11/09/11 09:00
Date Received: 11/10/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90		%	0.10	NA	1	-	11/14/11 14:26	30,2540G	MD



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-03
Client ID: TP-03
Sample Location: NEW BEDFORD, MA
Matrix: Soil

Date Collected: 11/09/11 09:45
Date Received: 11/10/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91		%	0.10	NA	1	-	11/14/11 14:26	30,2540G	MD



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-04
Client ID: TP-04
Sample Location: NEW BEDFORD, MA
Matrix: Soil

Date Collected: 11/09/11 09:55
Date Received: 11/10/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94		%	0.10	NA	1	-	11/14/11 15:01	30,2540G	MD



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-05
Client ID: TP-05
Sample Location: NEW BEDFORD, MA
Matrix: Soil

Date Collected: 11/09/11 10:10
Date Received: 11/10/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94		%	0.10	NA	1	-	11/14/11 15:01	30,2540G	MD



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-06
Client ID: TP-06
Sample Location: NEW BEDFORD, MA
Matrix: Soil

Date Collected: 11/09/11 11:00
Date Received: 11/10/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	96		%	0.10	NA	1	-	11/14/11 15:01	30,2540G	MD



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-07
Client ID: TP-07
Sample Location: NEW BEDFORD, MA
Matrix: Soil

Date Collected: 11/09/11 11:15
Date Received: 11/10/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	95		%	0.10	NA	1	-	11/14/11 15:01	30,2540G	MD



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-08
Client ID: TP-08
Sample Location: NEW BEDFORD, MA
Matrix: Soil

Date Collected: 11/09/11 11:30
Date Received: 11/10/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92		%	0.10	NA	1	-	11/14/11 15:01	30,2540G	MD



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-09
Client ID: TP-09
Sample Location: NEW BEDFORD, MA
Matrix: Soil

Date Collected: 11/09/11 11:50
Date Received: 11/10/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82		%	0.10	NA	1	-	11/14/11 15:01	30,2540G	MD



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-10
Client ID: TP-10
Sample Location: NEW BEDFORD, MA
Matrix: Soil

Date Collected: 11/09/11 12:00
Date Received: 11/10/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84		%	0.10	NA	1	-	11/14/11 15:01	30,2540G	MD



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

SAMPLE RESULTS

Lab ID: L1118751-11
Client ID: TP-11
Sample Location: NEW BEDFORD, MA
Matrix: Soil

Date Collected: 11/09/11 12:40
Date Received: 11/10/11
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88		%	0.10	NA	1	-	11/14/11 15:01	30,2540G	MD



Lab Duplicate Analysis

Batch Quality Control

Project Name: NEW BEDFORD PITS

Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751

Report Date: 11/17/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG502225-1 QC Sample: L1118739-01 Client ID: DUP Sample						
Solids, Total	78	79	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 04-11 QC Batch ID: WG502233-1 QC Sample: L1118751-04 Client ID: TP-04						
Solids, Total	94	94	%	0		20

Project Name: NEW BEDFORD PITS

Lab Number: L1118751

Project Number: 70514.LSP.LIBERTY

Report Date: 11/17/11

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1118751-01A	Amber 120ml unpreserved	A	N/A	2	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),MCP-PB-6010T-10(180)
L1118751-01B	Amber 250ml unpreserved	A	N/A	2	Y	Absent	MCP-8270-10(14)
L1118751-02A	Amber 120ml unpreserved	A	N/A	2	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),MCP-PB-6010T-10(180)
L1118751-02B	Amber 250ml unpreserved	A	N/A	2	Y	Absent	MCP-8270-10(14)
L1118751-03A	Amber 120ml unpreserved	A	N/A	2	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),MCP-PB-6010T-10(180)
L1118751-03B	Amber 250ml unpreserved	A	N/A	2	Y	Absent	MCP-8270-10(14)
L1118751-04A	Amber 120ml unpreserved	A	N/A	2	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),MCP-PB-6010T-10(180)
L1118751-04B	Amber 250ml unpreserved	A	N/A	2	Y	Absent	MCP-8270-10(14)
L1118751-05A	Amber 120ml unpreserved	A	N/A	2	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),MCP-PB-6010T-10(180)
L1118751-05B	Amber 250ml unpreserved	A	N/A	2	Y	Absent	MCP-8270-10(14)
L1118751-06A	Amber 120ml unpreserved	A	N/A	2	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),MCP-PB-6010T-10(180)
L1118751-06B	Amber 250ml unpreserved	A	N/A	2	Y	Absent	MCP-8270-10(14)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1118751-07A	Amber 120ml unpreserved	A	N/A	2	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),MCP-PB-6010T-10(180)
L1118751-07B	Amber 250ml unpreserved	A	N/A	2	Y	Absent	MCP-8270-10(14)
L1118751-08A	Amber 120ml unpreserved	A	N/A	2	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),MCP-PB-6010T-10(180)
L1118751-08B	Amber 250ml unpreserved	A	N/A	2	Y	Absent	MCP-8270-10(14)
L1118751-09A	Amber 120ml unpreserved	A	N/A	2	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),MCP-PB-6010T-10(180)
L1118751-09B	Amber 250ml unpreserved	A	N/A	2	Y	Absent	MCP-8270-10(14)
L1118751-10A	Amber 120ml unpreserved	A	N/A	2	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),MCP-PB-6010T-10(180)
L1118751-10B	Amber 250ml unpreserved	A	N/A	2	Y	Absent	MCP-8270-10(14)
L1118751-11A	Amber 120ml unpreserved	A	N/A	2	Y	Absent	MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),MCP-PB-6010T-10(180)
L1118751-11B	Amber 250ml unpreserved	A	N/A	2	Y	Absent	MCP-8270-10(14)

*Values in parentheses indicate holding time in days



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report



Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

Data Qualifiers

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: NEW BEDFORD PITS
Project Number: 70514.LSP.LIBERTY

Lab Number: L1118751
Report Date: 11/17/11

REFERENCES

- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised November 17, 2011 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223D, 9222D. Organic Parameters: 608, 8081, 8082, 8330, 8151A, 624, 8260, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014A, 9040B, 9045C, 6010B, 7471A, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8330, 8151A, 8081A, 8082, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B;Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8151A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050C, 9065,1311, 1312, 3005A, 3050B. Organic Parameters: SW-846 3540C, 3546, 3550B, 3580A, 3630C, 5030B, 5035, 8260B, 8270C, 8330, 8151A, 8015B, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 6020, 6020A, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8081B, 8082, 8082A, 8151A, 8330, NJ OQA-QAM-025 Rev.7, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-04-1-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 9010B, 9030B.. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8015B, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. **NELAP Accredited.**
Drinking Water (Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 1312, 200.7, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE.
Organic Parameters: EPA 3510C, 3005A, 3630C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 6010B, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH3-H. Organic Parameters: 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5035, 8015B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. **NELAP Accredited via NY-DOH.**

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commission on Environmental Quality Certificate/Lab ID: T104704476-09-1. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 5220D, 5310C, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8270C, 8330A, 625, 8082, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9010, 9012A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8270C, 8330A/B-prep, 8082, 8081A, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:

EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO₂ in a soil matrix, NO₃ in a soil matrix, SO₄ in a soil matrix.



WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

CHAIN OF CUSTODY

PAGE 1 OF 2

Client Information

Client: CDM
Address: ICP
CAMBRIDGE, MA, 02139
Phone: 617-452-6274
FAX: SAME
Email: SWANSONWR@CDM.COM

Project Information

Project Name: NEW BEDFORD TEST BEDS
Project Location: NEW BEDFORD, MA,
Project #: 10S14, LSR, LIBERTY
Project Manager: W, SWANSON
ALPHA Quote #: N/A
Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
Date Due: 11/17/11 Time:

Other Project Specific Requirements/Comments/Detection Limits:
If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

RCRA 5 METALS = TOTAL AS, Cd, Cr, Hg, Pb

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
187SI, 1	TP-01	110911	0835	S	EOP
2	TP-02		0900		
3	TP-03		0945		
4	TP-04		0955		
5	TP-05		1010		
6	TP-06		1100		
7	TP-07		1115		
8	TP-08		1130		
9	TP-09		1150		
10	TP-10		1200		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
MAMCP or CT RCP?

FORM NO: 01-01 (rev. 18-Jan-2010)

Date Rec'd in Lab: 11/10/11

ALPHA Job #: L1118751

Report Information - Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables

Billing Information

Same as Client Info PO #: N/A

Regulatory Requirements/Report Limits

State / Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

Yes No Are MCP Analytical Methods Required?
 Yes No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
 Yes No Are CT RCP (Reasonable Confidence Protocol) Required?

ANALYSIS
SVOC'S
RCRA 5 METALS

SAMPLE HANDLING

Filtration: Done Not needed
 Lab to do
Preservation: Lab to do
(Please specify below)

Sample Specific Comments

Container Type Preservative

A A A A A

Relinquished By:

Date/Time

Received By:

Date/Time

[Signature]

11/01/0800

[Signature]

11-10-11 17:50

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



ANALYTICAL REPORT

Lab Number:	L1209261
Client:	CDM Smith, Inc. 1 Cambridge Place 50 Hampshire Street Cambridge, MA 02139
ATTN:	Kate Murphy
Phone:	(617) 452-6302
Project Name:	LIBERTY ST.
Project Number:	70514.LSP.LIBERTY
Report Date:	06/01/12

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1209261-01	TP-A 4'	NEW BEDFORD	05/24/12 08:50
L1209261-02	TP-B 4'	NEW BEDFORD	05/24/12 09:10
L1209261-03	TP-C 4'	NEW BEDFORD	05/24/12 09:30
L1209261-04	TP-D 4'	NEW BEDFORD	05/24/12 10:10
L1209261-05	TP-E 5'	NEW BEDFORD	05/24/12 10:20
L1209261-06	TP-F 4.5'	NEW BEDFORD	05/24/12 10:30
L1209261-07	TP-C MATERIAL	NEW BEDFORD	05/24/12 09:35
L1209261-08	TRIP BLANK	NEW BEDFORD	05/24/12 00:00

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

Case Narrative (continued)

MCP Related Narratives

Metals

In reference to question H:


The WG538554-4/-5 MS/MSD recoveries for Lead (197%/229%) , performed on L1209261-03, do not apply because the sample concentration is greater than four times the spike amount added.

In reference to question I:

All samples were analyzed for a subset of MCP elements per the Chain of Custody.

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 providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Cynthia McQueen

Title: Technical Director/Representative

Date: 06/01/12

METALS

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

SAMPLE RESULTS

Lab ID: L1209261-01
 Client ID: TP-A 4'
 Sample Location: NEW BEDFORD
 Matrix: Soil
 Percent Solids: 83%

Date Collected: 05/24/12 08:50
 Date Received: 05/24/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Lead, Total	67		mg/kg	0.27	--	1	05/31/12 08:50	06/01/12 14:42	EPA 3050B	97,6010B	MG



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

SAMPLE RESULTS

Lab ID: L1209261-02
 Client ID: TP-B 4'
 Sample Location: NEW BEDFORD
 Matrix: Soil
 Percent Solids: 86%

Date Collected: 05/24/12 09:10
 Date Received: 05/24/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Lead, Total	210		mg/kg	2.2	--	1	05/31/12 08:50	06/01/12 14:44	EPA 3050B	97,6010B	MG



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

SAMPLE RESULTS

Lab ID: L1209261-03
 Client ID: TP-C 4'
 Sample Location: NEW BEDFORD
 Matrix: Soil
 Percent Solids: 78%

Date Collected: 05/24/12 09:30
 Date Received: 05/24/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Lead, Total	400		mg/kg	2.4	--	1	05/31/12 08:50	06/01/12 14:19	EPA 3050B	97,6010B	MG



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

SAMPLE RESULTS

Lab ID: L1209261-04
 Client ID: TP-D 4'
 Sample Location: NEW BEDFORD
 Matrix: Soil
 Percent Solids: 83%

Date Collected: 05/24/12 10:10
 Date Received: 05/24/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Lead, Total	240		mg/kg	2.2	--	1	05/31/12 08:50	06/01/12 14:47	EPA 3050B	97,6010B	MG



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

SAMPLE RESULTS

Lab ID: L1209261-05
 Client ID: TP-E 5'
 Sample Location: NEW BEDFORD
 Matrix: Soil
 Percent Solids: 73%

Date Collected: 05/24/12 10:20
 Date Received: 05/24/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Lead, Total	550		mg/kg	2.6	--	1	05/31/12 08:50	06/01/12 14:49	EPA 3050B	97,6010B	MG



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

SAMPLE RESULTS

Lab ID: L1209261-06
 Client ID: TP-F 4.5'
 Sample Location: NEW BEDFORD
 Matrix: Soil
 Percent Solids: 81%

Date Collected: 05/24/12 10:30
 Date Received: 05/24/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Lead, Total	380		mg/kg	2.4	--	1	05/31/12 08:50	06/01/12 14:52	EPA 3050B	97,6010B	MG



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01-06 Batch: WG538554-1									
Lead, Total	ND	mg/kg	2.0	--	1	05/31/12 08:50	06/01/12 14:12	97,6010B	MG

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis Batch Quality Control

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Westborough Lab Associated sample(s): 01-06 Batch: WG538554-2 WG538554-3 SRM Lot Number: 0518-10-02								
Lead, Total	94		96		80-120	2		30

Matrix Spike Analysis Batch Quality Control

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG538554-4 WG538554-5 QC Sample: L1209261-03 Client ID: TP-C4'												
Lead, Total	400	50.7	500	197	Q	520	229	Q	75-125	4		35

**Lab Serial Dilution
Analysis
Batch Quality Control**

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
MCP Total Metals - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG538554-7 QC Sample: L1209261-03 Client ID: TP-C 4'						
Lead, Total	400	400	mg/kg	0		10



INORGANICS & MISCELLANEOUS

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

SAMPLE RESULTS

Lab ID: L1209261-01
Client ID: TP-A 4'
Sample Location: NEW BEDFORD
Matrix: Soil

Date Collected: 05/24/12 08:50
Date Received: 05/24/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83		%	0.10	NA	1	-	05/25/12 00:10	30,2540G	RD



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

SAMPLE RESULTS

Lab ID: L1209261-02
Client ID: TP-B 4'
Sample Location: NEW BEDFORD
Matrix: Soil

Date Collected: 05/24/12 09:10
Date Received: 05/24/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86		%	0.10	NA	1	-	05/25/12 00:10	30,2540G	RD



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

SAMPLE RESULTS

Lab ID: L1209261-03
Client ID: TP-C 4'
Sample Location: NEW BEDFORD
Matrix: Soil

Date Collected: 05/24/12 09:30
Date Received: 05/24/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78		%	0.10	NA	1	-	05/25/12 00:10	30,2540G	RD



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

SAMPLE RESULTS

Lab ID: L1209261-04
Client ID: TP-D 4'
Sample Location: NEW BEDFORD
Matrix: Soil

Date Collected: 05/24/12 10:10
Date Received: 05/24/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83		%	0.10	NA	1	-	05/25/12 00:10	30,2540G	RD



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

SAMPLE RESULTS

Lab ID: L1209261-05
Client ID: TP-E 5'
Sample Location: NEW BEDFORD
Matrix: Soil

Date Collected: 05/24/12 10:20
Date Received: 05/24/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73		%	0.10	NA	1	-	05/25/12 00:10	30,2540G	RD



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

SAMPLE RESULTS

Lab ID: L1209261-06
Client ID: TP-F 4.5'
Sample Location: NEW BEDFORD
Matrix: Soil

Date Collected: 05/24/12 10:30
Date Received: 05/24/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81		%	0.10	NA	1	-	05/25/12 00:10	30,2540G	RD



Lab Duplicate Analysis

Batch Quality Control

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG538164-1 QC Sample: L1209261-03 Client ID: TP-C 4'						
Solids, Total	78	76	%	3		20

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 05/24/2012 21:27

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1209261-01A	Vial MeOH preserved	A	N/A	4.4	Y	Absent	HOLD-8260HLW(14)
L1209261-01B	Vial water preserved	A	N/A	4.4	Y	Absent	HOLD-8260HLW(14)
L1209261-01C	Vial water preserved	A	N/A	4.4	Y	Absent	HOLD-8260HLW(14)
L1209261-01D	Amber 250ml unpreserved	A	N/A	4.4	Y	Absent	TS(7),MCP-PB-6010T-10(180)
L1209261-01E	Amber 250ml unpreserved	A	N/A	4.4	Y	Absent	TS(7),MCP-PB-6010T-10(180)
L1209261-02A	Amber 120ml unpreserved	A	N/A	4.4	Y	Absent	TS(7),MCP-PB-6010T-10(180)
L1209261-03A	Amber 120ml unpreserved	A	N/A	4.4	Y	Absent	TS(7),MCP-PB-6010T-10(180)
L1209261-04A	Amber 120ml unpreserved	A	N/A	4.4	Y	Absent	TS(7),MCP-PB-6010T-10(180)
L1209261-05A	Amber 120ml unpreserved	A	N/A	4.4	Y	Absent	TS(7),MCP-PB-6010T-10(180)
L1209261-06A	Amber 120ml unpreserved	A	N/A	4.4	Y	Absent	TS(7),MCP-PB-6010T-10(180)
L1209261-07A	Amber 120ml unpreserved	A	N/A	4.4	Y	Absent	HOLD()
L1209261-08A	Vial MeOH preserved	A	N/A	4.4	Y	Absent	HOLD-8260HLW(14)
L1209261-08B	Vial water preserved	A	N/A	4.4	Y	Absent	HOLD-8260HLW(14)
L1209261-08C	Vial water preserved	A	N/A	4.4	Y	Absent	HOLD-8260HLW(14)

*Values in parentheses indicate holding time in days

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- | | |
|-----------|---|
| A | - Spectra identified as "Aldol Condensation Product". |
| B | - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. |
| C | - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses. |
| D | - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte. |
| E | - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument. |
| G | - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated. |
| H | - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection. |
| I | - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference. |
| M | - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte. |
| NJ | - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search. |

Report Format: Data Usability Report



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

Data Qualifiers

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209261
Report Date: 06/01/12

REFERENCES

- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised May 11, 2012 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D, Fecal Coliform-EC Medium 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterolert, E.Coli 9223.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Dalapon, Volatile Organics, Acid Extractables (Phenols), Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223D, 9222D. Organic Parameters: 608, 624, 625, 8081A, 8082, 8330, 8151A, 8260B, 8270C, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014A, 9030B, 9040B, 9045C, 6010B, 7471A, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8330, 8151A, 8081A, 8082, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6010C, 6020, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9030B, 9040B, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260B, 8270C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8081B, 8151A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 6010C, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050, 9065, 1311, 1312, 3005A, 3050B, 3060A. Organic Parameters: SW-846 3540C, 3546, 3550B, 3580A, 3630C, 5030B, 5035, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, 8151A, 8015B, 8082, 8082A, 8081A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, 2540G, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ OQA-QAM-025 Rev.7, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 624, 8260B, 8270C, 8270D, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012A, 9014, 9065, 9050A, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8015B, 8015C, 8081A, 8081B, 8151A, 8330, 8082 8082A, 3540C, 3546, 3580, 3580A, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. **NELAP Accredited.**
Drinking Water (Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 1312, 3005A, 200.7, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P, BE. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 3060A, 6010B, 6010C, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH3-H. Organic Parameters: 3540C, 3546, 3580A, 3630C, 5035, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. **NELAP Accredited via NY-DOH.**
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commission on Environmental Quality Certificate/Lab ID: T104704476-09-1. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 3005A, 3015, 1312, 6010B, 6010C, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X. Organic Parameters: EPA 8260B)

Solid & Hazardous Waste (Inorganic Parameters: EPA 3050B, 1311, 1312, 6010B, 6010C, 9030B, 9010B, 9012A, 9014. Organic Parameters: EPA 5035, 5030B, 8260B, 8015B, 8015C.)

Department of Defense, L-A-B Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 6010C, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 9012A, 9040B, 9045C, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:

EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO₂ in a soil matrix, NO₃ in a soil matrix, SO₄ in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease



CHAIN OF CUSTODY

PAGE 1 OF 1

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANFIELD, MA
TEL: 508-822-8300
FAX: 508-822-3288

Client Information

Client: DM Smith
Address: 50 Humphreys St
Manchester, MA
Phone: 617-492-6302
Fax: XXXX
Email: mmurphy@dm-smith.com

Project Information

Project Name: Liberty St.
Project Location: New Bedford
Project #: 705142SP, LIBERTY
Project Manager: Kate Murphy
ALPHA Quote #:
Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
Date Due: 6/1/12 Time:
 These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:
If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All CAM methods for Inorganic analyses require MS every 20 soil samples)

TCRP of 20 X limit
MS/MSD on Pb samples

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
09261	1 TP-A 4'	5/24/12	0850	SO	EDT
	2 TP-B 4'		0910		X
	3 TP-C 4'		0930		X
	4 TP-D 4'		1010		X
	5 TP-E 5'		1020		X
	6 TP-F 4.5'		1030		X
	7 TP-C material		0935		X
	8 Trip blank				X

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
MAMCP or CT RCP?

Relinquished By: AS Date/Time: 5/24/12 1200

Container Type: _____
Preservative: _____
Received By: MM Date/Time: 5/24/12 1220

Date Rec'd in Lab: 5/24/12
Report Information - Data Deliverables
 FAX EMAIL
 ADEX Add'l Deliverables
Regulatory Requirements/Report Limits

State/Fed Program: _____ Criteria: _____
MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO
Billing Information
 Same as Client Info PO #: _____

ANALYSIS	Yes	No	Are MCP Analytical Methods Required?	Is Matrix Spike (MS) Required on this SDG? (if yes see note in Comments)	Are CT RCP (Reasonable Confidence Protocols) Required?
Lead	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
8260	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
SVOCS	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
PCBs	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
PH	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
TRCRA 8	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
React/Flash	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
Pest/Herb	<input checked="" type="checkbox"/>	<input type="checkbox"/>			

SAMPLE HANDLING
Filtration: _____
 Done
 Not needed
 Lab to do
 Preservation
 Lab to do
(Please specify below)

Sample Specific Comments
ONLY RUN PB HOLD
ANALYSIS - HOLD
REST UNTIL
INSTRUMENT
MS/MSD
HOLD DO NOT
UNTIL
DIRECTED

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



ANALYTICAL REPORT

Lab Number:	L1209758
Client:	CDM Smith, Inc. 1 Cambridge Place 50 Hampshire Street Cambridge, MA 02139
ATTN:	Kate Murphy
Phone:	(617) 452-6302
Project Name:	LIBERTY ST.
Project Number:	70514.LSP.LIBERTY
Report Date:	06/08/12

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1209758-01	TP-B 4'	NEW BEDFORD	05/24/12 09:10
L1209758-02	TP-C 4'	NEW BEDFORD	05/24/12 09:30
L1209758-03	TP-D 4'	NEW BEDFORD	05/24/12 10:10
L1209758-04	TP-E 5'	NEW BEDFORD	05/24/12 10:20
L1209758-05	TP-F 4.5'	NEW BEDFORD	05/24/12 10:30

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

Case Narrative (continued)

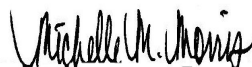
MCP Related Narratives

Report Submission

All MCP required questions were answered with affirmative responses; therefore, there are no relevant protocol-specific QC and/or performance standard non-conformances to report.

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 providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Michelle M. Morris

Title: Technical Director/Representative

Date: 06/08/12

METALS

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

SAMPLE RESULTS

Lab ID: L1209758-01
 Client ID: TP-B 4'
 Sample Location: NEW BEDFORD
 Matrix: Soil

Date Collected: 05/24/12 09:10
 Date Received: 05/24/12
 Field Prep: Not Specified
 TCLP/SPLP Ext. Date: 06/05/12 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Lead, TCLP	ND		mg/l	0.50	--	1	06/06/12 16:02	06/07/12 21:15	EPA 3015	1,6010B	MG



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

SAMPLE RESULTS

Lab ID: L1209758-02
 Client ID: TP-C 4'
 Sample Location: NEW BEDFORD
 Matrix: Soil

Date Collected: 05/24/12 09:30
 Date Received: 05/24/12
 Field Prep: Not Specified
 TCLP/SPLP Ext. Date: 06/05/12 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Lead, TCLP	ND		mg/l	0.50	--	1	06/06/12 16:02	06/07/12 21:17	EPA 3015	1,6010B	MG



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

SAMPLE RESULTS

Lab ID: L1209758-03
 Client ID: TP-D 4'
 Sample Location: NEW BEDFORD
 Matrix: Soil

Date Collected: 05/24/12 10:10
 Date Received: 05/24/12
 Field Prep: Not Specified
 TCLP/SPLP Ext. Date: 06/05/12 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Lead, TCLP	ND		mg/l	0.50	--	1	06/06/12 16:02	06/07/12 21:20	EPA 3015	1,6010B	MG



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

SAMPLE RESULTS

Lab ID: L1209758-04
 Client ID: TP-E 5'
 Sample Location: NEW BEDFORD
 Matrix: Soil

Date Collected: 05/24/12 10:20
 Date Received: 05/24/12
 Field Prep: Not Specified
 TCLP/SPLP Ext. Date: 06/05/12 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Lead, TCLP	ND		mg/l	0.50	--	1	06/06/12 16:02	06/07/12 21:23	EPA 3015	1,6010B	MG



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

SAMPLE RESULTS

Lab ID: L1209758-05
 Client ID: TP-F 4.5'
 Sample Location: NEW BEDFORD
 Matrix: Soil

Date Collected: 05/24/12 10:30
 Date Received: 05/24/12
 Field Prep: Not Specified
 TCLP/SPLP Ext. Date: 06/05/12 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab											
Lead, TCLP	ND		mg/l	0.50	--	1	06/06/12 16:02	06/07/12 21:32	EPA 3015	1,6010B	MG



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Westborough Lab for sample(s): 01-05 Batch: WG540415-1									
Lead, TCLP	ND	mg/l	0.50	--	1	06/06/12 16:02	06/07/12 20:48	1,6010B	MG

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 06/05/12 11:50

Lab Control Sample Analysis Batch Quality Control

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 01-05 Batch: WG540415-2								
Lead, TCLP	92		-		75-125	-		20



Matrix Spike Analysis
Batch Quality Control

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG540415-4 QC Sample: L1209823-01 Client ID: MS Sample												
Lead, TCLP	1.8	5.1	6.4	90		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG540415-3 QC Sample: L1209823-01 Client ID: DUP Sample						
Lead, TCLP	1.8	1.8	mg/l	0		20

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1209758-01A	Amber 120ml unpreserved	A	N/A	4.4	Y	Absent	-
L1209758-01X	Plastic 250ml HNO3 preserved spl	A	<2	4.4	Y	Absent	PB-CI(180)
L1209758-02A	Amber 120ml unpreserved	A	N/A	4.4	Y	Absent	-
L1209758-02X	Plastic 250ml HNO3 preserved spl	A	<2	4.4	Y	Absent	PB-CI(180)
L1209758-03A	Amber 120ml unpreserved	A	N/A	4.4	Y	Absent	-
L1209758-03X	Plastic 250ml HNO3 preserved spl	A	<2	4.4	Y	Absent	PB-CI(180)
L1209758-04A	Amber 120ml unpreserved	A	N/A	4.4	Y	Absent	-
L1209758-04X	Plastic 250ml HNO3 preserved spl	A	<2	4.4	Y	Absent	PB-CI(180)
L1209758-05A	Amber 120ml unpreserved	A	N/A	4.4	Y	Absent	-
L1209758-05X	Plastic 250ml HNO3 preserved spl	A	<2	4.4	Y	Absent	PB-CI(180)

*Values in parentheses indicate holding time in days

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report



Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

Data Qualifiers

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: LIBERTY ST.
Project Number: 70514.LSP.LIBERTY

Lab Number: L1209758
Report Date: 06/08/12

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised May 11, 2012 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D, Fecal Coliform-EC Medium 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterolert, E.Coli 9223.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Dalapon, Volatile Organics, Acid Extractables (Phenols), Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223D, 9222D. Organic Parameters: 608, 624, 625, 8081A, 8082, 8330, 8151A, 8260B, 8270C, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014A, 9030B, 9040B, 9045C, 6010B, 7471A, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8330, 8151A, 8081A, 8082, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

Page 20 of 23
for: *Non-Potable Water* (Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1,

SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6010C, 6020, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9030B, 9040B, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260B, 8270C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8081B, 8151A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 6010C, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050, 9065, 1311, 1312, 3005A, 3050B, 3060A. Organic Parameters: SW-846 3540C, 3546, 3550B, 3580A, 3630C, 5030B, 5035, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, 8151A, 8015B, 8082, 8082A, 8081A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, 2540G, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ OQA-QAM-025 Rev.7, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 624, 8260B, 8270C, 8270D, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012A, 9014, 9065, 9050A, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8015B, 8015C, 8081A, 8081B, 8151A, 8330, 8082 8082A, 3540C, 3546, 3580, 3580A, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. **NELAP Accredited.**
Drinking Water (Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 1312, 3005A, 200.7, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P, BE. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 3060A, 6010B, 6010C, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH3-H. Organic Parameters: 3540C, 3546, 3580A, 3630C, 5035, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. **NELAP Accredited via NY-DOH.**
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commission on Environmental Quality Certificate/Lab ID: T104704476-09-1. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 3005A, 3015, 1312, 6010B, 6010C, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X. Organic Parameters: EPA 8260B)

Solid & Hazardous Waste (Inorganic Parameters: EPA 3050B, 1311, 1312, 6010B, 6010C, 9030B, 9010B, 9012A, 9014. Organic Parameters: EPA 5035, 5030B, 8260B, 8015B, 8015C.)

Department of Defense, L-A-B Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 6010C, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 9012A, 9040B, 9045C, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:

EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO₂ in a soil matrix, NO₃ in a soil matrix, SO₄ in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease

CHAIN OF CUSTODY

PAGE 1 OF 1



WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3238

Client Information

Client: CDMA Smith
Address: 50 Hunsman St
Wendover, MA
Phone: 617-482-6302
Fax: XXXX
Email: MMurphy@cdmsmith.com

Project Information
Project Name: Liberty St
Project Location: New Bedford
Project #: 7AS14.2SP.118297
Project Manager: Kate Murphy
ALPHA Quote #:

Turn-Around Time
 Standard RUSH (only confirmed if pre-approved)
Date Due: 6/11/12 Time:

Other Project Specific Requirements/Comments/Detection Limits:
If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All CAM methods for Inorganic analyses require MS every 20 soil samples)
MS/MSD on Pb samples

ALPHA/MSD (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
	TP-A 4'	5/24/12	0850	SO	ODT
	TP-B 4'		0910		
	TP-C 4'		0930		
	TP-D 4'		1010		
	TP-E 5'		1030		
	TP-F 4.5'		1030		
	TP-C material		0935		
	Trip blank				

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MAMCP or CT RCP?

FORM NO. 01-01 (rev. 18-Jan-2010)

Relinquished By: CDMSmith Date/Time: 5/24/12 1200

Received By: [Signature] Date/Time: 5/24/12 1220

Container Type	Preservative

Date Rec'd in Lab: 5/24/12 ALPHA Job #: W209297

Report Information - Data Deliverables
 FAX EMAIL
 INDEX Add'l Deliverables

Billing Information
 Same as Client Info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

MAMCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

Are MCP Analytical Methods Required?
 Yes No
Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
 Yes No
Are CT RCP (Reasonable Confidence Protocols) Required?
 Yes No

ANALYSIS	RESULTS	COMMENTS
Lead	8260	
PCB's		
PH		
TRCRA 8		
React/Fluor		
Rest/Herb		
TCUP-Pb		

SAMPLE HANDLING
Filtration: Done Not needed
 Lab to do
 Lab to do
(Please specify below)

Sample Specific Comments
ONLY RUN PB HOLD
REST ON TLE
MS/MSD
HOLD PB NOT
UTIL DIVERSED

Please print clearly, legibly and completely. Samples cannot be bagged in and returned to the client until all samples submitted are subject to Alpha's terms and conditions. See reverse side.

17209758



TRC Lab Reports

GROUNDWATER ANALYTICAL

Groundwater Analytical, Inc.
P.O. Box 1200
228 Main Street
Buzzards Bay, MA 02532

Telephone (508) 759-4441
FAX (508) 759-4475
www.groundwateranalytical.com

November 11, 2009

Mr. Derek McClellan
Loitherstein Environmental Engineering, Inc
45 Beulah Street
Framingham, MA 01701-5243

LABORATORY REPORT

Project: **Lot 256/29086**
Lab ID: **129220**
Received: **11-04-09**

Dear Derek:

Enclosed are the analytical results for the above referenced project. The project was processed for Priority turnaround.

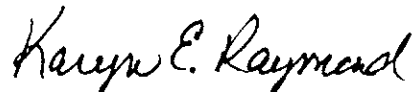
This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC or NVLAP standards, except as may be specifically noted, or described in the project narrative. The analytical results relate only to the samples received. This report may only be used or reproduced in its entirety.

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

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Karyn E. Raymond
Project Manager

KER/elm
Enclosures

Sample Receipt Report

Project: Lot 256/29086

Client: Loitherstein Environmental Engineering, Inc

Lab ID: 129220

Delivery: GWA Courier

Airbill: n/a

Lab Receipt: 11-04-09

Temperature: 2.8°C

Chain of Custody: Present

Custody Seal(s): n/a

Lab ID	Field ID	Matrix	Sampled	Method	Notes			
129220-1	Under Stockpile	Soil	11/3/09 10:00	MA DEP EPH with PAHs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Notes
C415547	250 mL Amber Glass	Proline	BX34133	None	n/a	n/a	n/a	

Lab ID	Field ID	Matrix	Sampled	Method	Notes			
129220-2	ESW (0-1')	Soil	11/3/09 11:15	MA DEP EPH with PAHs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Notes
C415541	250 mL Amber Glass	Proline	BX34133	None	n/a	n/a	n/a	

Lab ID	Field ID	Matrix	Sampled	Method	Notes			
129220-3	Btm-1 (1')	Soil	11/3/09 11:30	MA DEP EPH with PAHs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Notes
C415542	250 mL Amber Glass	Proline	BX34133	None	n/a	n/a	n/a	


Lab ID	Field ID	Matrix	Sampled	Method	Notes			
129220-4	Btm-2 (1')	Soil	11/3/09 11:40	MA DEP EPH with PAHs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Notes
C415548	250 mL Amber Glass	Proline	BX34133	None	n/a	n/a	n/a	

Lab ID	Field ID	Matrix	Sampled	Method	Notes			
129220-5	Btm-3 (6")	Soil	11/3/09 11:50	MA DEP EPH with PAHs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	Notes
C415545	250 mL Amber Glass	Proline	BX34133	None	n/a	n/a	n/a	

Data Certification

Project: Lot 256/29086
 Client: Loitherstein Environmental Engineering, Inc

Lab ID: 129220
 Received: 11-04-09 16:15

MA DEP Compendium of Analytical Methods					
Project Location:		n/a		MA DEP RTN: n/a	
This Form provides certifications for the following data set:					
MA DEP EPH:		129220-1,-2,-3,-4,-5			
Sample Matrices:		Groundwater ()	Soil/Sediment (X)	Drinking Water ()	Other ()
MCP SW-846	8260B ()	8151A ()	8330 ()	6010B ()	7470A/1A ()
Methods Used	8270C ()	8081A ()	VPH ()	6020A ()	9012A ² ()
As specified in MA DEP Compendium of Analytical Methods.	8082 ()	8021B ()	EPH (X)	7000 S ³ ()	Other ()
(check all that apply)	1. List Release Tracking Number (RTN), if known. 2. SW-846 Method 9012A (Equivalent to 9014) or MA DEP Physiologically Available Cyanide (PAC) Method 3. S - SW-846 Methods 7000 Series. List individual method and analyte.				
An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status.					
A.	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of-Custody documentation for the data set?				Yes
B.	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?				Yes
C.	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty," as described in Section 2.0 of the MA DEP document CAM VII A, <i>Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data</i> ?				Yes
D.	<u>VPH and EPH methods only</u> : Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?				Yes
A response to questions E and F below is required for "Presumptive Certainty" status.					
E.	Were all QC performance standards and recommendations for the specified methods achieved?				Yes
F.	Were results for all analyte-list compounds/elements for the specified method(s) reported?				Yes
All No answers are addressed in the attached Project Narrative.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.					
Signature:				Position:	Project Manager
Printed Name:	Karyn E. Raymond			Date:	11-11-09

**Massachusetts DEP EPH Method
Extractable Petroleum Hydrocarbons by GC/FID**

Field ID:	Under Stockpile	Matrix:	Soil
Project:	Lot 256/29086	Container:	250 mL Amber Glass
Client:	Loitherstein Environmental Engineering, Inc	Preservation:	Cool
Laboratory ID:	129220-1	QC Batch ID:	EP-3040-M
Sampled:	11-03-09 10:00	Instrument ID:	GC-12 Agilent 6890
Received:	11-04-09 16:15	Sample Weight:	15 g
Extracted:	11-05-09 13:00	Final Volume:	1 mL
Analyzed (AL):	11-10-09 06:04	% Solids:	86
Analyzed (AR):	11-10-09 06:50	Aliphatic Dilution Factor:	1
Analyst:	KMC	Aromatic Dilution Factor:	1

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †		BRL	mg/Kg	35
n-C19 to n-C36 Aliphatic Hydrocarbons †	280		mg/Kg	35
n-C11 to n-C22 Aromatic Hydrocarbons †◊	280		mg/Kg	35

Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	290		mg/Kg	35
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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene		BRL	mg/Kg	0.58
91-57-6	2-Methylnaphthalene		BRL	mg/Kg	0.58
85-01-8	Phenanthrene	1.5		mg/Kg	0.58
83-32-9	Acenaphthene		BRL	mg/Kg	0.58
208-96-8	Acenaphthylene		BRL	mg/Kg	0.58
86-73-7	Fluorene		BRL	mg/Kg	0.58
120-12-7	Anthracene		BRL	mg/Kg	0.58
206-44-0	Fluoranthene	2.2		mg/Kg	0.58
129-00-0	Pyrene	2.0		mg/Kg	0.58
56-55-3	Benzo[a]anthracene	0.95		mg/Kg	0.58
218-01-9	Chrysene	1.3		mg/Kg	0.58
205-99-2	Benzo[b]fluoranthene	1.1		mg/Kg	0.58
207-08-9	Benzo[k]fluoranthene	0.77		mg/Kg	0.58
50-32-8	Benzo[a]pyrene	1.0		mg/Kg	0.58
193-39-5	Indeno[1,2,3-c,d]pyrene		BRL	mg/Kg	0.58
53-70-3	Dibenzo[a,h]anthracene		BRL	mg/Kg	0.58
191-24-2	Benzo[g,h,i]perylene	0.87		mg/Kg	0.58

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits	
Fractionation:	2-Fluorobiphenyl	3.1	2.8	89 %	40 - 140 %
	2-Bromonaphthalene	3.1	2.9	92 %	
Extraction:	Chloro-octadecane	3.1	1.4	45 %	40 - 140 %
	ortho-Terphenyl	3.1	3.1	100 %	

QA/QC Certification	
1. Were all QA/QC procedures required by the method followed?	Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved?	Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1?	No
Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.	

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.
◊ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

**Massachusetts DEP EPH Method
Extractable Petroleum Hydrocarbons by GC/FID**

Field ID:	ESW (0-1')	Matrix:	Soil
Project:	Lot 256/29086	Container:	250 mL Amber Glass
Client:	Loitherstein Environmental Engineering, Inc	Preservation:	Cool
Laboratory ID:	129220-2	QC Batch ID:	EP-3040-M
Sampled:	11-03-09 11:15	Instrument ID:	GC-12 Agilent 6890
Received:	11-04-09 16:15	Sample Weight:	15 g
Extracted:	11-05-09 13:00	Final Volume:	1 mL
Analyzed (AL):	11-10-09 15:45	% Solids:	84
Analyzed (AR):	11-10-09 16:32	Aliphatic Dilution Factor:	1
Analyst:	KMC	Aromatic Dilution Factor:	1

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †		BRL	mg/Kg	35
n-C19 to n-C36 Aliphatic Hydrocarbons †	69		mg/Kg	35
n-C11 to n-C22 Aromatic Hydrocarbons † ^o	100		mg/Kg	35

Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	120		mg/Kg	35
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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene		BRL	mg/Kg	0.58
91-57-6	2-Methylnaphthalene		BRL	mg/Kg	0.58
85-01-8	Phenanthrene	2.0		mg/Kg	0.58
83-32-9	Acenaphthene		BRL	mg/Kg	0.58
208-96-8	Acenaphthylene		BRL	mg/Kg	0.58
86-73-7	Fluorene		BRL	mg/Kg	0.58
120-12-7	Anthracene		BRL	mg/Kg	0.58
206-44-0	Fluoranthene	3.9		mg/Kg	0.58
129-00-0	Pyrene	3.4		mg/Kg	0.58
56-55-3	Benzo[a]anthracene	1.4		mg/Kg	0.58
218-01-9	Chrysene	1.7		mg/Kg	0.58
205-99-2	Benzo[b]fluoranthene	1.7		mg/Kg	0.58
207-08-9	Benzo[k]fluoranthene	1.4		mg/Kg	0.58
50-32-8	Benzo[a]pyrene	1.9		mg/Kg	0.58
193-39-5	Indeno[1,2,3-c,d]pyrene	1.3		mg/Kg	0.58
53-70-3	Dibenzo[a,h]anthracene		BRL	mg/Kg	0.58
191-24-2	Benzo[g,h,i]perylene	1.6		mg/Kg	0.58

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits	
Fractionation:	2-Fluorobiphenyl	3.1	2.8	91 %	40 - 140 %
	2-Bromonaphthalene	3.1	2.8	89 %	
Extraction:	Chloro-octadecane	3.1	2.1	69 %	40 - 140 %
	ortho-Terphenyl	3.1	3.1	100 %	

QA/QC Certification	
1. Were all QA/QC procedures required by the method followed?	Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved?	Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1?	No
Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.	

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

o n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID:	Btm-1 (1')	Matrix:	Soil
Project:	Lot 256/29086	Container:	250 mL Amber Glass
Client:	Loitherstein Environmental Engineering, Inc	Preservation:	Cool
Laboratory ID:	129220-3	QC Batch ID:	EP-3040-M
Sampled:	11-03-09 11:30	Instrument ID:	GC-12 Agilent 6890
Received:	11-04-09 16:15	Sample Weight:	15 g
Extracted:	11-05-09 13:00	Final Volume:	1 mL
Analyzed (AL):	11-10-09 17:10	% Solids:	84
Analyzed (AR):	11-10-09 17:56	Aliphatic Dilution Factor:	1
Analyst:	KMC	Aromatic Dilution Factor:	1

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †		BRL	mg/Kg	35
n-C19 to n-C36 Aliphatic Hydrocarbons †		BRL	mg/Kg	35
n-C11 to n-C22 Aromatic Hydrocarbons †‡	64		mg/Kg	35

Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	73		mg/Kg	35
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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene		BRL	mg/Kg	0.59
91-57-6	2-Methylnaphthalene		BRL	mg/Kg	0.59
85-01-8	Phenanthrene	0.92		mg/Kg	0.59
83-32-9	Acenaphthene		BRL	mg/Kg	0.59
208-96-8	Acenaphthylene		BRL	mg/Kg	0.59
86-73-7	Fluorene		BRL	mg/Kg	0.59
120-12-7	Anthracene		BRL	mg/Kg	0.59
206-44-0	Fluoranthene	1.6		mg/Kg	0.59
129-00-0	Pyrene	1.5		mg/Kg	0.59
56-55-3	Benzo[a]anthracene	0.60		mg/Kg	0.59
218-01-9	Chrysene	0.81		mg/Kg	0.59
205-99-2	Benzo[b]fluoranthene	0.70		mg/Kg	0.59
207-08-9	Benzo[k]fluoranthene	0.65		mg/Kg	0.59
50-32-8	Benzo[a]pyrene	0.82		mg/Kg	0.59
193-39-5	Indeno[1,2,3-c,d]pyrene		BRL	mg/Kg	0.59
53-70-3	Dibenzo[a,h]anthracene		BRL	mg/Kg	0.59
191-24-2	Benzo[g,h,i]perylene	0.65		mg/Kg	0.59

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits	
Fractionation:	2-Fluorobiphenyl	3.1	2.7	86 %	40 - 140 %
	2-Bromonaphthalene	3.1	2.7	84 %	
Extraction:	Chloro-octadecane	3.1	2.1	65 %	40 - 140 %
	ortho-Terphenyl	3.1	3.0	97 %	

QA/QC Certification

- | | |
|---|-----|
| 1. Were all QA/QC procedures required by the method followed? | Yes |
| 2. Were all performance/acceptance standards for the required QA/QC procedures achieved? | Yes |
| 3. Were any significant modifications made to the method, as specified in Section 11.3.1.1? | No |

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.
‡ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID: Btm-2 (1')
 Project: Lot 256/29086
 Client: Loitherstein Environmental Engineering, Inc
 Laboratory ID: 129220-4
 Sampled: 11-03-09 11:40
 Received: 11-04-09 16:15
 Extracted: 11-05-09 13:00
 Analyzed (AL): 11-10-09 02:51
 Analyzed (AR): 11-10-09 03:37
 Analyst: KMC

Matrix: Soil
 Container: 250 mL Amber Glass
 Preservation: Cool
 QC Batch ID: EP-3040-M
 Instrument ID: GC-12 Agilent 6890
 Sample Weight: 15 g
 Final Volume: 1 mL
 % Solids: 83
 Aliphatic Dilution Factor: 1
 Aromatic Dilution Factor: 1

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †		BRL	mg/Kg	36
n-C19 to n-C36 Aliphatic Hydrocarbons †	73		mg/Kg	36
n-C11 to n-C22 Aromatic Hydrocarbons †‡	52		mg/Kg	36

Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	60		mg/Kg	36
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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene		BRL	mg/Kg	0.60
91-57-6	2-Methylnaphthalene		BRL	mg/Kg	0.60
85-01-8	Phenanthrene	0.83		mg/Kg	0.60
83-32-9	Acenaphthene		BRL	mg/Kg	0.60
208-96-8	Acenaphthylene		BRL	mg/Kg	0.60
86-73-7	Fluorene		BRL	mg/Kg	0.60
120-12-7	Anthracene		BRL	mg/Kg	0.60
206-44-0	Fluoranthene	1.2		mg/Kg	0.60
129-00-0	Pyrene	1.1		mg/Kg	0.60
56-55-3	Benzo[a]anthracene		BRL	mg/Kg	0.60
218-01-9	Chrysene	0.71		mg/Kg	0.60
205-99-2	Benzo[b]fluoranthene	0.63		mg/Kg	0.60
207-08-9	Benzo[k]fluoranthene		BRL	mg/Kg	0.60
50-32-8	Benzo[a]pyrene	0.72		mg/Kg	0.60
193-39-5	Indeno[1,2,3-c,d]pyrene		BRL	mg/Kg	0.60
53-70-3	Dibenzo[a,h]anthracene		BRL	mg/Kg	0.60
191-24-2	Benzo[g,h,i]perylene	0.66		mg/Kg	0.60

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits	
Fractionation:	2-Fluorobiphenyl	3.2	2.9	89 %	40 - 140 %
	2-Bromonaphthalene	3.2	2.8	88 %	
Extraction:	Chloro-octadecane	3.2	2.4	73 %	40 - 140 %
	ortho-Terphenyl	3.2	3.1	95 %	

QA/QC Certification	
1. Were all QA/QC procedures required by the method followed?	Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved?	Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1?	No
Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.	

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
 Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 † Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.
 ‡ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID:	Btm-3 (6")	Matrix:	Soil
Project:	Lot 256/29086	Container:	250 mL Amber Glass
Client:	Loitherstein Environmental Engineering, Inc	Preservation:	Cool
Laboratory ID:	129220-5	QC Batch ID:	EP-3040-M
Sampled:	11-03-09 11:50	Instrument ID:	GC-12 Agilent 6890
Received:	11-04-09 16:15	Sample Weight:	16 g
Extracted:	11-05-09 13:00	Final Volume:	1 mL
Analyzed (AL):	11-10-09 18:50	% Solids:	84
Analyzed (AR):	11-10-09 19:37	Aliphatic Dilution Factor:	1
Analyst:	KMC	Aromatic Dilution Factor:	1

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †	35		mg/Kg	33
n-C19 to n-C36 Aliphatic Hydrocarbons †	110		mg/Kg	33
n-C11 to n-C22 Aromatic Hydrocarbons † ‡	150		mg/Kg	33

Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	170		mg/Kg	33
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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene		BRL	mg/Kg	0.56
91-57-6	2-Methylnaphthalene		BRL	mg/Kg	0.56
85-01-8	Phenanthrene	1.9		mg/Kg	0.56
83-32-9	Acenaphthene		BRL	mg/Kg	0.56
208-96-8	Acenaphthylene		BRL	mg/Kg	0.56
86-73-7	Fluorene		BRL	mg/Kg	0.56
120-12-7	Anthracene		BRL	mg/Kg	0.56
206-44-0	Fluoranthene	2.7		mg/Kg	0.56
129-00-0	Pyrene	2.2		mg/Kg	0.56
56-55-3	Benzo[a]anthracene	1.1		mg/Kg	0.56
218-01-9	Chrysene	1.4		mg/Kg	0.56
205-99-2	Benzo[b]fluoranthene	1.4		mg/Kg	0.56
207-08-9	Benzo[k]fluoranthene	0.91		mg/Kg	0.56
50-32-8	Benzo[a]pyrene	1.3		mg/Kg	0.56
193-39-5	Indeno[1,2,3-c,d]pyrene	0.88		mg/Kg	0.56
53-70-3	Dibenzo[a,h]anthracene		BRL	mg/Kg	0.56
191-24-2	Benzo[g,h,i]perylene	0.65		mg/Kg	0.56

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits	
Fractionation:	2-Fluorobiphenyl	3.0	2.4	82 %	40 - 140 %
	2-Bromonaphthalene	3.0	2.4	81 %	
Extraction:	Chloro-octadecane	3.0	1.8	59 %	40 - 140 %
	ortho-Terphenyl	3.0	2.8	93 %	

QA/QC Certification

- | | |
|---|-----|
| 1. Were all QA/QC procedures required by the method followed? | Yes |
| 2. Were all performance/acceptance standards for the required QA/QC procedures achieved? | Yes |
| 3. Were any significant modifications made to the method, as specified in Section 11.3.1.1? | No |

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.
‡ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Project Narrative

Project: Lot 256/29086
Client: Loitherstein Environmental Engineering, Inc

Lab ID: 129220
Received: 11-04-09 16:15

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1. No documentation discrepancies, changes, or amendments were noted.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1. No method modifications, non-conformances or analytical issues were noted.

GROUNDWATER ANALYTICAL

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 Buzzards Bay, MA 02532
 Telephone (508) 759-4444 • FAX (508) 759-4475
 www.groundwateranalytical.com

CHAIN-OF-CUSTODY RECORD AND WORK ORDER

Project Name: **Lot 256**
 Project Number: **29086**
 Sampler Name: **Derek McClellan**
 Project Manager: **kk**

Firm: **LEEI**
 Address: **45 Beulah St.**
 City / State / Zip: **Framingham, MA 01701**
 Telephone: **508-872-6400**

INSTRUCTIONS: Use separate line for each container (except replicates).

Sampling DATE	SAMPLE IDENTIFICATION	Matrix		Container(s)		LABORATORY NUMBER (Lab Use Only)
		Type	Preservation	Matrix	Preservation	
11/30/00	Under Stockpile	X	1	1	1	
11/30/00	ESW (cont)	X	1	1	1	
11/30/00	Bfm-1 (G1)	X	1	1	1	
11/30/00	Bfm-2 (G1)	X	1	1	1	
11/30/00	Bfm-3 (G1)	X	1	1	1	

CHAIN-OF-CUSTODY RECORD

NOTE: All samples submitted subject to Standard Terms and Conditions on reverse hereof.

Relinquished by Sampler: **Derek McClellan** Date: **11/30/00** Time: **2:30**
 Received by: **LEEI Cold Storage** Date: **11/30/00** Time: **2:30**
 Relinquished by: **[Signature]** Date: **11/30/00** Time: **1445**
 Received by: **[Signature]** Date: **11/30/00** Time: **1445**

Relinquished by: **[Signature]** Date: **11/30/00** Time: **1445**
 Received by: **[Signature]** Date: **11/30/00** Time: **1445**

Method of Shipment: OWA Container Express Mail Federal Express
 UPS Hand

Shipping/ARBill Number: _____
 Custody Seal Number: _____

ANALYSIS REQUEST

General Chemistry: pH Conductivity Temperature Dissolved Solids Ammonia Nitrate Nitrite Phosphate Sulfate Chloride Fluoride Cyanide Silica Boron Cadmium Chromium Copper Lead Manganese Mercury Nickel Selenium Silver Vanadium Zinc

Trace Metals: Arsenic Barium Bismuth Cadmium Chromium Cobalt Copper Lead Manganese Mercury Nickel Selenium Silver Vanadium Zinc

Specialty: Asbestos PCBs PAHs VOCs SVOCs Pesticides Herbicides Fungicides Pharmaceuticals Explosives Radon Tritium Uranium Radium Strontium Barium Calcium Magnesium Sodium Potassium Chloride Sulfate Nitrate Nitrite Ammonia Phosphate Silica Boron Cadmium Chromium Cobalt Copper Lead Manganese Mercury Nickel Selenium Silver Vanadium Zinc

TURNAROUND

10 Business Days
 5 Business Days
 RUSH (RAN - Rush requires Rush Authorization Number)
 Please Fax to: _____
 Please Email to: _____

BILLING

Purchase Order No.: _____
 Third Party Billing: _____
 GWA Quote: _____

DATA QUALITY OBJECTIVES

Regulatory Program: State CT ME RI VT NH NY NJ DE MD VA NC SC GA FL HI AK AZ CA CO NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS OK MO IL IN OH PA WV KY TN MS AL LA TX OK NM UT WY MT ND SD NE KS <

Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans*, US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste*, US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

**Quality Control Report
Laboratory Control Samples**

Category:	MA DEP EPH Method	LCS	Instrument ID:	GC-12 Agilent 6890	LCSD	Instrument ID:	GC-12 Agilent 6890
QC Batch ID:	EP-3040-M	Extracted:	11-05-09 13:00	Extracted:	11-05-09 13:00	Analyzed (AL):	11-09-09 14:39
Matrix:	Soil	Analyzed (AL):	11-09-09 13:07	Analyzed (AR):	11-09-09 15:25	Analyst:	KMC
Units:	mg/Kg	Analyst:	KMC	Analyst:	KMC		

CAS Number	Analyte	LCS			LCS Duplicate			QC Limits		
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
111-84-2	n-Nonane (C ₉)	3.3	1.6	48 %	3.3	1.6	48 %	1 %	30 - 140 %	25%
124-18-5	n-Decane (C ₁₀)	3.3	1.8	55 %	3.3	1.8	55 %	1 %	40 - 140 %	25%
112-40-3	n-Dodecane (C ₁₂)	3.3	2.1	62 %	3.3	2.1	64 %	2 %	40 - 140 %	25%
629-59-4	n-Tetradecane (C ₁₄)	3.3	2.0	61 %	3.3	2.1	62 %	2 %	40 - 140 %	25%
544-76-3	n-Hexadecane (C ₁₆)	3.3	2.2	67 %	3.3	2.2	68 %	2 %	40 - 140 %	25%
593-45-3	n-Octadecane (C ₁₈)	3.3	2.4	74 %	3.3	2.6	78 %	5 %	40 - 140 %	25%
n/a	n-C9 to n-C18 Group	20	12	61 %	20	12	63 %	2 %	40 - 140 %	25%
629-92-5	n-Nonadecane (C ₁₉)	3.3	2.5	75 %	3.3	2.6	78 %	4 %	40 - 140 %	25%
112-95-8	n-Eicosane (C ₂₀)	3.3	2.4	73 %	3.3	2.5	77 %	5 %	40 - 140 %	25%
629-97-0	n-Docosane (C ₂₂)	3.3	2.4	74 %	3.3	2.6	77 %	5 %	40 - 140 %	25%
646-31-1	n-Tetracosane (C ₂₄)	3.3	2.5	75 %	3.3	2.6	78 %	4 %	40 - 140 %	25%
630-01-3	n-Hexacosane (C ₂₆)	3.3	2.3	71 %	3.3	2.5	74 %	5 %	40 - 140 %	25%
630-02-4	n-Octacosane (C ₂₈)	3.3	2.3	70 %	3.3	2.4	74 %	5 %	40 - 140 %	25%
638-68-6	n-Triacontane (C ₃₀)	3.3	2.3	70 %	3.3	2.5	74 %	5 %	40 - 140 %	25%
630-06-8	n-Hexatriacontane (C ₃₆)	3.3	2.0	61 %	3.3	2.1	64 %	6 %	40 - 140 %	25%
n/a	n-C19 to n-C36 Group	26	19	71 %	26	20	75 %	5 %	40 - 140 %	25%
91-20-3	Naphthalene	3.3	2.1	63 %	3.3	2.2	65 %	3 %	40 - 140 %	25%
91-57-6	2-Methylnaphthalene	3.3	2.3	70 %	3.3	2.4	73 %	5 %	40 - 140 %	25%
208-96-8	Acenaphthylene	3.3	2.3	70 %	3.3	2.4	73 %	4 %	40 - 140 %	25%
83-32-9	Acenaphthene	3.3	2.3	71 %	3.3	2.4	74 %	4 %	40 - 140 %	25%
86-73-7	Fluorene	3.3	2.4	74 %	3.3	2.5	76 %	3 %	40 - 140 %	25%
85-01-8	Phenanthrene	3.3	2.7	81 %	3.3	2.8	84 %	3 %	40 - 140 %	25%
120-12-7	Anthracene	3.3	2.5	75 %	3.3	2.5	76 %	2 %	40 - 140 %	25%
206-44-0	Fluoranthene	3.3	3.1	93 %	3.3	3.1	95 %	3 %	40 - 140 %	25%
129-00-0	Pyrene	3.3	3.0	92 %	3.3	3.1	95 %	3 %	40 - 140 %	25%
56-55-3	Benzo[a]anthracene	3.3	2.6	79 %	3.3	2.7	82 %	3 %	40 - 140 %	25%
218-01-9	Chrysene	3.3	3.0	91 %	3.3	3.1	93 %	2 %	40 - 140 %	25%
205-99-2	Benzo[b]fluoranthene	3.3	2.7	82 %	3.3	2.8	84 %	3 %	40 - 140 %	25%
207-08-9	Benzo[k]fluoranthene	3.3	2.8	85 %	3.3	2.9	88 %	3 %	40 - 140 %	25%
50-32-8	Benzo[a]pyrene	3.3	2.9	89 %	3.3	3.0	91 %	3 %	40 - 140 %	25%
193-39-5	Indeno[1,2,3-c,d]pyrene	3.3	3.0	89 %	3.3	3.1	93 %	4 %	40 - 140 %	25%
53-70-3	Dibenzo[a,h]anthracene	3.3	3.0	92 %	3.3	3.1	94 %	3 %	40 - 140 %	25%
191-24-2	Benzo[g,h,i]perylene	3.3	2.8	83 %	3.3	2.8	86 %	3 %	40 - 140 %	25%
n/a	PAH Group	56	46	81 %	56	47	84 %	3 %	40 - 140 %	25%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery	QC Limits
Fractionation: 2-Fluorobiphenyl	2.7	2.4	89 %	2.7	2.5	93 %	40 - 140 %
2-Bromonaphthalene	2.7	2.3	85 %	2.7	2.1	78 %	40 - 140 %
Extraction: Chloro-octadecane	2.7	1.8	67 %	2.7	1.9	70 %	40 - 140 %
ortho-Terphenyl	2.7	2.5	93 %	2.7	2.6	96 %	40 - 140 %

Fractionation Breakthrough Evaluation						QC Limits
91-20-3	Naphthalene	LCS	0 %	LCSD	2 %	5%
91-57-6	2-Methylnaphthalene	LCS	0 %	LCSD	1 %	5%

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004). Method modified by use of microwave accelerated solvent extraction technique.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units. The LCS and LCSD are prepared from separate source standards than those used for calibration.

**Quality Control Report
Method Blank**

Category: MA DEP EPH
QC Batch ID: EP-3040-M
Matrix: Soil

Instrument ID: GC-12 Agilent 6890
Extracted: 11-05-09 13:00
Analyzed (AL): 11-09-09 16:12
Analyzed (AR): 11-09-09 16:58
Analyst: KMC

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †	BRL		mg/Kg	30
n-C19 to n-C36 Aliphatic Hydrocarbons †	BRL		mg/Kg	30
n-C11 to n-C22 Aromatic Hydrocarbons † ^o	BRL		mg/Kg	30

Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	BRL		mg/Kg	30
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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		mg/Kg	0.50
91-57-6	2-Methylnaphthalene	BRL		mg/Kg	0.50
85-01-8	Phenanthrene	BRL		mg/Kg	0.50
83-32-9	Acenaphthene	BRL		mg/Kg	0.50
208-96-8	Acenaphthylene	BRL		mg/Kg	0.50
86-73-7	Fluorene	BRL		mg/Kg	0.50
120-12-7	Anthracene	BRL		mg/Kg	0.50
206-44-0	Fluoranthene	BRL		mg/Kg	0.50
129-00-0	Pyrene	BRL		mg/Kg	0.50
56-55-3	Benzo[a]anthracene	BRL		mg/Kg	0.50
218-01-9	Chrysene	BRL		mg/Kg	0.50
205-99-2	Benzo[b]fluoranthene	BRL		mg/Kg	0.50
207-08-9	Benzo[k]fluoranthene	BRL		mg/Kg	0.50
50-32-8	Benzo[a]pyrene	BRL		mg/Kg	0.50
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		mg/Kg	0.50
53-70-3	Dibenzo[a,h]anthracene	BRL		mg/Kg	0.50
191-24-2	Benzo[g,h,i]perylene	BRL		mg/Kg	0.50

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits	
Fractionation:	2-Fluorobiphenyl	2.7	2.4	90 %	40 - 140 %
	2-Bromonaphthalene	2.7	2.3	88 %	40 - 140 %
Extraction:	Chloro-octadecane	2.7	2.0	76 %	40 - 140 %
	ortho-Terphenyl	2.7	2.6	99 %	40 - 140 %

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

o n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states.
Copies of our current certificates may be obtained from our website:

<http://www.groundwateranalytical.com/qualifications.htm>

CONNECTICUT

Department of Health Services, PH-0586 Potable Water, Wastewater, Solid Waste and Soil
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/Out_State.pdf

MASSACHUSETTS

Department of Environmental Protection, M-MA-103 Potable Water and Non-Potable Water
<http://public.dep.state.ma.us/labcert/labcert.aspx>

Department of Labor, Asbestos Analytical Services, Class A
Division of Occupational Safety, AA000195
http://www.mass.gov/dos/forms/la-rpt_list_aa.pdf

NEW HAMPSHIRE

Department of Environmental Services, 202708 Potable Water, Non-Potable Water, Solid and Chemical Materials
<http://www4.egov.nh.gov/DES/NHELAP>

NEW YORK

Department of Health, 11754 Potable Water, Non-Potable Water, Solid and Hazardous Waste
<http://www.wadsworth.org/labcert/elap/comm.html>

RHODE ISLAND

Department of Health, Potable and Non-Potable Water Microbiology, Organic and Inorganic Chemistry
Division of Laboratories, LAO00054
<http://www.health.ri.gov/labs/outofstatelabs.pdf>

U.S. DEPARTMENT OF AGRICULTURE

USDA, Soil Permit, S-53921 Foreign soil import permit

VERMONT

Department of Health, VT-87643 Potable Water
http://healthvermont.gov/enviro/ph_lab/water_test.aspx#cert

Certifications and Approvals

MASSACHUSETTS

Department of Environmental Protection, M-MA-103

Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

Potable Water (Drinking Water)		Non-Potable Water (Wastewater)	
Analyte	Method	Analyte	Method
1,2-Dibromo-3-Chloropropane	EPA 504.1	Ammonia-N	Lachat 10-107-06-1-B
1,2-Dibromoethane	EPA 504.1	Antimony	EPA 200.7
Alkalinity, Total	SM 2320-B	Antimony	EPA 200.8
Antimony	EPA 200.8	Arsenic	EPA 200.7
Arsenic	EPA 200.8	Arsenic	EPA 200.8
Barium	EPA 200.7	Beryllium	EPA 200.7
Barium	EPA 200.8	Beryllium	EPA 200.8
Beryllium	EPA 200.7	Beta-BHC	EPA 608
Beryllium	EPA 200.8	Biochemical Oxygen Demand	SM 5210-B
Cadmium	EPA 200.7	Cadmium	EPA 200.7
Cadmium	EPA 200.8	Cadmium	EPA 200.8
Calcium	EPA 200.7	Calcium	EPA 200.7
Chlorine, Residual Free	SM 4500-CL-G	Chemical Oxygen Demand	SM 5220-D
Chromium	EPA 200.7	Chlordane	EPA 608
Copper	EPA 200.7	Chloride	EPA 300.0
Copper	EPA 200.8	Chlorine, Total Residual	SM 4500-CL-G
Cyanide, Total	Lachat 10-204-00-1-A	Chromium	EPA 200.7
E. Coli (Treatment and Distribution)	EC-MUG SM 9221-F	Chromium	EPA 200.8
E. Coli (Treatment and Distribution)	Enz. Sub. SM 9223	Cobalt	EPA 200.7
E. Coli (Treatment and Distribution)	NA-MUG SM 9222-G	Cobalt	EPA 200.8
Fecal Coliform (Source Water)	MF SM 9222-D	Copper	EPA 200.7
Fluoride	EPA 300.0	Copper	EPA 200.8
Fluoride	SM 4500-F-C	Cyanide, Total	Lachat 10-204-00-1-A
Heterotrophic Plate Count	SM 9215-B	DDD	EPA 608
Lead	EPA 200.8	DDE	EPA 608
Mercury	EPA 245.1	DDT	EPA 608
Nickel	EPA 200.7	Delta-BHC	EPA 608
Nickel	EPA 200.8	Dieldrin	EPA 608
Nitrate-N	EPA 300.0	Endosulfan I	EPA 608
Nitrate-N	Lachat 10-107-04-1-C	Endosulfan II	EPA 608
Nitrite-N	EPA 300.0	Endosulfan Sulfate	EPA 608
Nitrite-N	Lachat 10-107-04-1-C	Endrin	EPA 608
pH	SM 4500-H-B	Endrin Aldehyde	EPA 608
Selenium	EPA 200.8	Fluoride	EPA 300.0
Silver	EPA 200.7	Gamma-BHC	EPA 608
Silver	EPA 200.8	Hardness (CaCO ₃), Total	EPA 200.7
Sodium	EPA 200.7	Hardness (CaCO ₃), Total	SM 2340-B
Sulfate	EPA 300.0	Heptachlor	EPA 608
Thallium	EPA 200.8	Heptachlor Epoxide	EPA 608
Total Coliform (Treatment and Distribution)	Enz. Sub. SM 9223	Iron	EPA 200.7
Total Coliform (Treatment and Distribution)	MF SM 9222-B	Kjeldahl-N	Lachat 10-107-06-02-D
Total Dissolved Solids	SM 2540-C	Lead	EPA 200.7
Trihalomethanes	EPA 524.2	Magnesium	EPA 200.7
Turbidity	SM 2130-B	Manganese	EPA 200.7
Volatile Organic Compounds	EPA 524.2	Manganese	EPA 200.8
		Mercury	EPA 245.1
		Molybdenum	EPA 200.7
		Molybdenum	EPA 200.8
		Nickel	EPA 200.7
		Nickel	EPA 200.8
		Nitrate-N	EPA 300.0
		Nitrate-N	Lachat 10-107-04-1-C
		Non-Filterable Residue	SM 2540-D
		Oil and Grease	EPA 1664

Certifications and Approvals

MASSACHUSETTS

Department of Environmental Protection, M-MA-103

Groundwater Analytical maintains MassDEP environmental laboratory certification for only the methods and analytes listed below. Analyses for certified analytes are conducted in accordance with MassDEP certification standards, except as may be specifically noted in the project narrative.

Non-Potable Water (Wastewater) Analyte	Method
Orthophosphate	Lachat 10-115-01-1-A
pH	SM 4500-H-B
Phenolics, Total	EPA 420.4
Phenolics, Total	Lachat 10-210-00-1-B
Phosphorus, Total	Lachat 10-115-01-1-C
Phosphorus, Total	SM 4500-P-B,E
Polychlorinated Biphenyls (Oil)	EPA 600/4-81-045
Polychlorinated Biphenyls (Water)	EPA 608
Potassium	EPA 200.7
Selenium	EPA 200.7
Selenium	EPA 200.8
Silver	EPA 200.7
Sodium	EPA 200.7
Specific Conductivity	SM 2510-B
Strontium	EPA 200.7
Sulfate	EPA 300.0
SVOC-Acid Extractables	EPA 625
SVOC-Base/Neutral Extractables	EPA 625
Thallium	EPA 200.7
Thallium	EPA 200.8
Titanium	EPA 200.7
Total Dissolved Solids	SM 2540-C
Total Organic Carbon	SM 5310-B
Toxaphene	EPA 608
Vanadium	EPA 200.7
Vanadium	EPA 200.8
Volatile Aromatics	EPA 602
Volatile Aromatics	EPA 624
Volatile Halocarbons	EPA 624
Zinc	EPA 200.7
Zinc	EPA 200.8

December 23, 2009

David Sullivan
TRC Solutions - Lowell
650 Suffolk Street
Lowell, MA 01852

Project Location: City Of New Bedford
Client Job Number:
Project Number: 115058
Laboratory Work Order Number: 09L0487

Enclosed are results of analyses for samples received by the laboratory on December 17, 2009. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

TRC Solutions - Lowell
650 Suffolk Street
Lowell, MA 01852
ATTN: David Sullivan

REPORT DATE: 12/23/2009

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 115058

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 09L0487

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: City Of New Bedford

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TB	09L0487-01	Trip Blank Soil		SM 2540G SW-846 8260B	
TRC-BTM-1	09L0487-02	Soil		SM 2540G SW-846 8260B	
TRC-BTM-2	09L0487-03	Soil		SM 2540G SW-846 8260B	
TRC-BTM-22	09L0487-04	Soil		SM 2540G SW-846 8260B	
TRC-BTM-3	09L0487-05	Soil		SM 2540G SW-846 8260B	
TRC-ESW	09L0487-06	Soil		SM 2540G SW-846 8260B	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8260B

Qualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Carbon Disulfide, Diethyl Ether

B008548-BSD1

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Significant uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Dichlorodifluoromethane (Freon 12)

09L0487-01[TB], 09L0487-02[TRC-BTM-1], 09L0487-03[TRC-BTM-2], 09L0487-04[TRC-BTM-22], 09L0487-05[TRC-BTM-3], 09L0487-06[TRC-ESW], B008548-BLK1, B008548-BS1, B008548-BSD1, B008548-MS1

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy are associated with reported result.

Analyte & Samples(s) Qualified:

1,4-Dioxane, 2-Butanone (MEK), Acetone, Tetrahydrofuran

09L0487-01[TB], 09L0487-02[TRC-BTM-1], 09L0487-03[TRC-BTM-2], 09L0487-04[TRC-BTM-22], 09L0487-05[TRC-BTM-3], 09L0487-06[TRC-ESW], B008548-BLK1, B008548-BS1, B008548-BSD1, B008548-MS1

SW-846 8260B

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits somewhere between 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, tert-butyl alcohol, acetone, 1,4-dioxane, vinyl chloride, chloromethane, dichlorodifluoromethane, 2-hexanone, naphthalene, acrylonitrile, 1,2,3-trichloropropane, methylene chloride, n-butylbenzene, and tert-butylbenzene, bromomethane

Duplicate laboratory fortified blank RPDs were all within control limits specified by the method except for "difficult analytes" where RPDs of 50% are used and/or unless otherwise listed in this narrative. Difficult analyte: 1,4-dioxane

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Michael A. Erickson
Laboratory Director



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TB

Sampled: 12/17/2009 00:00

Sample ID: 09L0487-01

Sample Matrix: Trio Blank Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RI	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg wet	1	V-16	SW-846 8260B	12/18/09	12/18/09 8:37	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Benzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Bromobenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Bromochloromethane	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Bromodichloromethane	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Bromoform	ND	0.010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Bromomethane	ND	0.010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
2-Butanone (MEK)	ND	0.040	mg/Kg wet	1	V-16	SW-846 8260B	12/18/09	12/18/09 8:37	MFF
n-Butylbenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Carbon Disulfide	ND	0.0060	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Carbon Tetrachloride	ND	0.010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Chlorobenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Chloroethane	ND	0.020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Chloroform	ND	0.0040	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Chloromethane	ND	0.010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Dibromomethane	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet	1	V-05	SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Diethyl Ether	ND	0.020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,4-Dioxane	ND	0.10	mg/Kg wet	1	V-16	SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Ethylbenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TB

Sampled: 12/17/2009 00:00

Sample ID: 09L0487-01

Sample Matrix: Trin Blank Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Methylene Chloride	ND	0.020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Naphthalene	ND	0.0040	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
n-Propylbenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Styrene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Tetrahydrofuran	ND	0.010	mg/Kg wet	1	V-16	SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Toluene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Trichloroethylene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
Vinyl Chloride	ND	0.010	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
m+p Xylene	ND	0.0040	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF
o-Xylene	ND	0.0020	mg/Kg wet	1		SW-846 8260B	12/18/09	12/18/09 8:37	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	103	70-130	12/18/09 8:37
Toluene-d8	101	70-130	12/18/09 8:37
4-Bromofluorobenzene	97.3	70-130	12/18/09 8:37

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-BTM-1

Sampled: 12/17/2009 10:10

Sample ID: 09L0487-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.082	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 7:43	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Bromoform	ND	0.0082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Bromomethane	ND	0.0082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
2-Butanone (MEK)	ND	0.033	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 7:43	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Carbon Disulfide	ND	0.0049	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Carbon Tetrachloride	ND	0.0082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Chlorodibromomethane	ND	0.00082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Chloroethane	ND	0.016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Chloroform	ND	0.0033	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Chloromethane	ND	0.0082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,2-Dibromoethane (EDB)	ND	0.00082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.016	mg/Kg dry	1	V-05	SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,1-Dichloroethylene	ND	0.0033	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,3-Dichloropropane	ND	0.00082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,1-Dichloropropene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
cis-1,3-Dichloropropene	ND	0.00082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
trans-1,3-Dichloropropene	ND	0.00082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Diethyl Ether	ND	0.016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Diisopropyl Ether (DIPE)	ND	0.00082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,4-Dioxane	ND	0.082	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-BTM-1

Sampled: 12/17/2009 10:10

Sample ID: 09L0487-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RI	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
p-isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Methylene Chloride	ND	0.016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Naphthalene	ND	0.0033	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,1,2,2-Tetrachloroethane	ND	0.00082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Tetrahydrofuran	ND	0.0082	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
Vinyl Chloride	ND	0.0082	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
m+p Xylene	ND	0.0033	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 7:43	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	108	70-130	12/18/09 7:43
Toluene-d8	102	70-130	12/18/09 7:43
4-Bromofluorobenzene	98.9	70-130	12/18/09 7:43



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-BTM-1

Sampled: 12/17/2009 10:10

Sample ID: 09L0487-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.6		% Wt	1		SM 2540G	12/21/09	12/21/09 15:21	FWD

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-BTM-2

Sampled: 12/17/2009 10:15

Sample ID: 09L0487-03

Sample Matrix: Soil

Volatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.069	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 8:10	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Benzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Bromobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Bromochloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Bromodichloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Bromoform	ND	0.0069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Bromomethane	ND	0.0069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
2-Butanone (MEK)	ND	0.028	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 8:10	MFF
n-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
sec-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
tert-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Carbon Disulfide	ND	0.0042	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Carbon Tetrachloride	ND	0.0069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Chlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Chlorodibromomethane	ND	0.00069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Chloroethane	ND	0.014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Chloroform	ND	0.0028	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Chloromethane	ND	0.0069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
2-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
4-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,2-Dibromoethane (EDB)	ND	0.00069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Dibromomethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,2-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,3-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,4-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.014	mg/Kg dry	1	V-05	SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,1-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,2-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,1-Dichloroethylene	ND	0.0028	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
cis-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
trans-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,3-Dichloropropane	ND	0.00069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
2,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,1-Dichloropropene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
cis-1,3-Dichloropropene	ND	0.00069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
trans-1,3-Dichloropropene	ND	0.00069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Diethyl Ether	ND	0.014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Diisopropyl Ether (DIPE)	ND	0.00069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,4-Dioxane	ND	0.069	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Ethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-BTM-2

Sampled: 12/17/2009 10:15

Sample ID: 09L0487-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
2-Hexanone (MBK)	ND	0.014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Isopropylbenzene (Cumene)	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0028	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Methylene Chloride	ND	0.014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Naphthalene	ND	0.0028	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
n-Propylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Styrene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,1,1,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,1,2,2-Tetrachloroethane	ND	0.00069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Tetrachloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Tetrahydrofuran	ND	0.0069	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Toluene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,2,3-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,2,4-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,1,1-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,1,2-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Trichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,2,3-Trichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,2,4-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
1,3,5-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
Vinyl Chloride	ND	0.0069	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
m+p Xylene	ND	0.0028	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF
o-Xylene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 8:10	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	108	70-130	12/18/09 8:10
Toluene-d8	103	70-130	12/18/09 8:10
4-Bromofluorobenzene	97.9	70-130	12/18/09 8:10



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-BTM-2

Sampled: 12/17/2009 10:15

Sample ID: 09L0487-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.6		% Wt	1		SM 2540G	12/21/09	12/21/09 15:21	FWD



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-BTM-22

Sampled: 12/17/2009 10:20

Sample ID: 09L0487-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.070	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 9:03	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Benzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Bromobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Bromochloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Bromodichloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Bromoform	ND	0.0070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Bromomethane	ND	0.0070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
2-Butanone (MEK)	ND	0.028	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 9:03	MFF
n-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
sec-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
tert-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Carbon Disulfide	ND	0.0042	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Carbon Tetrachloride	ND	0.0070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Chlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Chlorodibromomethane	ND	0.00070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Chloroethane	ND	0.014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Chloroform	ND	0.0028	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Chloromethane	ND	0.0070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
2-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
4-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,2-Dibromoethane (EDB)	ND	0.00070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Dibromomethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,2-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,3-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,4-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.014	mg/Kg dry	1	V-05	SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,1-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,2-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,1-Dichloroethylene	ND	0.0028	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
cis-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
trans-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,3-Dichloropropane	ND	0.00070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
2,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,1-Dichloropropene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
cis-1,3-Dichloropropene	ND	0.00070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
trans-1,3-Dichloropropene	ND	0.00070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Diethyl Ether	ND	0.014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Diisopropyl Ether (DIPE)	ND	0.00070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,4-Dioxane	ND	0.070	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Ethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-BTM-22

Sampled: 12/17/2009 10:20

Sample ID: 09L0487-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
2-Hexanone (MBK)	ND	0.014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Isopropylbenzene (Cumene)	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0028	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Methylene Chloride	ND	0.014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Naphthalene	ND	0.0028	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
n-Propylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Styrene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,1,1,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,1,2,2-Tetrachloroethane	ND	0.00070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Tetrachloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Tetrahydrofuran	ND	0.0070	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Toluene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,2,3-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,2,4-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,1,1-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,1,2-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Trichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,2,3-Trichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,2,4-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
1,3,5-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
Vinyl Chloride	ND	0.0070	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
m+p Xylene	ND	0.0028	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF
o-Xylene	ND	0.0014	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:03	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	106	70-130	12/18/09 9:03
Toluene-d8	102	70-130	12/18/09 9:03
4-Bromofluorobenzene	101	70-130	12/18/09 9:03



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-BTM-22

Sampled: 12/17/2009 10:20

Sample ID: 09L0487-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.8		% Wt	1		SM 2540G	12/21/09	12/21/09 15:21	FWD



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-BTM-3

Sampled: 12/17/2009 10:30

Sample ID: 09L0487-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.067	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 9:56	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Benzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Bromobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Bromochloromethane	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Bromodichloromethane	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Bromoform	ND	0.0067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Bromomethane	ND	0.0067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
2-Butanone (MEK)	ND	0.027	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 9:56	MFF
n-Butylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
sec-Butylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
tert-Butylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Carbon Disulfide	ND	0.0040	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Carbon Tetrachloride	ND	0.0067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Chlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Chlorodibromomethane	ND	0.00067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Chloroethane	ND	0.013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Chloroform	ND	0.0027	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Chloromethane	ND	0.0067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
2-Chlorotoluene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
4-Chlorotoluene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,2-Dibromoethane (EDB)	ND	0.00067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Dibromomethane	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,2-Dichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,3-Dichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,4-Dichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.013	mg/Kg dry	1	V-05	SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,1-Dichloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,2-Dichloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,1-Dichloroethylene	ND	0.0027	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
cis-1,2-Dichloroethylene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
trans-1,2-Dichloroethylene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,2-Dichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,3-Dichloropropane	ND	0.00067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
2,2-Dichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,1-Dichloropropene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
cis-1,3-Dichloropropene	ND	0.00067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
trans-1,3-Dichloropropene	ND	0.00067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Diethyl Ether	ND	0.013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Diisopropyl Ether (DIPE)	ND	0.00067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,4-Dioxane	ND	0.067	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Ethylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-BTM-3

Sampled: 12/17/2009 10:30

Sample ID: 09L0487-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RI	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
2-Hexanone (MBK)	ND	0.013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Isopropylbenzene (Cumene)	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0027	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Methylene Chloride	ND	0.013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Naphthalene	ND	0.0027	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
n-Propylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Styrene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,1,1,2-Tetrachloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,1,2,2-Tetrachloroethane	ND	0.00067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Tetrachloroethylene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Tetrahydrofuran	ND	0.0067	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Toluene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,2,3-Trichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,2,4-Trichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,1,1-Trichloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,1,2-Trichloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Trichloroethylene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,2,3-Trichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,2,4-Trimethylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
1,3,5-Trimethylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
Vinyl Chloride	ND	0.0067	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
m+p Xylene	ND	0.0027	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF
o-Xylene	ND	0.0013	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 9:56	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	106	70-130	12/18/09 9:56
Toluene-d8	104	70-130	12/18/09 9:56
4-Bromofluorobenzene	97.0	70-130	12/18/09 9:56



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-BTM-3

Sampled: 12/17/2009 10:30

Sample ID: 09L0487-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.7		% Wt	1		SM 2540G	12/21/09	12/21/09 15:21	FWD



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-ESW

Sampled: 12/17/2009 10:40

Sample ID: 09L0487-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.076	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 10:23	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Bromoform	ND	0.0076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Bromomethane	ND	0.0076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 10:23	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Carbon Disulfide	ND	0.0046	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Carbon Tetrachloride	ND	0.0076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Chlorodibromomethane	ND	0.00076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Chloroethane	ND	0.015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Chloromethane	ND	0.0076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,2-Dibromoethane (EDB)	ND	0.00076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.015	mg/Kg dry	1	V-05	SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,3-Dichloropropane	ND	0.00076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
cis-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
trans-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Diethyl Ether	ND	0.015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Diisopropyl Ether (DIPE)	ND	0.00076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,4-Dioxane	ND	0.076	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-ESW

Sampled: 12/17/2009 10:40

Sample ID: 09L0487-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Methylene Chloride	ND	0.015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Naphthalene	ND	0.0030	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,1,2,2-Tetrachloroethane	ND	0.00076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Tetrahydrofuran	ND	0.0076	mg/Kg dry	1	V-16	SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
Vinyl Chloride	ND	0.0076	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260B	12/18/09	12/18/09 10:23	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	103	70-130	12/18/09 10:23
Toluene-d8	102	70-130	12/18/09 10:23
4-Bromofluorobenzene	97.8	70-130	12/18/09 10:23



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: City Of New Bedford

Sample Description:

Work Order: 09L0487

Date Received: 12/17/2009

Field Sample #: TRC-ESW

Sampled: 12/17/2009 10:40

Sample ID: 09L0487-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.5		% Wt	1		SM 2540G	12/21/09	12/21/09 15:21	FWD

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
09L0487-02 [TRC-BTM-1]	B008593	12/21/09
09L0487-03 [TRC-BTM-2]	B008593	12/21/09
09L0487-04 [TRC-BTM-22]	B008593	12/21/09
09L0487-05 [TRC-BTM-3]	B008593	12/21/09
09L0487-06 [TRC-ESW]	B008593	12/21/09

Prep Method: SW-846 5035-SW-846 8260B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
09L0487-01 [TB]	B008548	5	10	12/18/09
09L0487-02 [TRC-BTM-1]	B008548	7.1	10	12/18/09
09L0487-03 [TRC-BTM-2]	B008548	7.8	10	12/18/09
09L0487-04 [TRC-BTM-22]	B008548	7.8	10	12/18/09
09L0487-05 [TRC-BTM-3]	B008548	8.1	10	12/18/09
09L0487-06 [TRC-ESW]	B008548	7.1	10	12/18/09

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B008548 - SW-846 5035										
Blank (B008548-BL.K1) Prepared & Analyzed: 12/18/09										
Acetone	ND	0.10	mg/Kg wet							V-16
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.010	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							V-16
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.010	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.010	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							V-05
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							V-16
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B008548 - SW-846 5035										
Blank (B008548-BLK1)										
Prepared & Analyzed: 12/18/09										
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							V-16
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0539		mg/Kg wet	0.0500		108	70-130			
Surrogate: Toluene-d8	0.0510		mg/Kg wet	0.0500		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0499		mg/Kg wet	0.0500		99.8	70-130			
LCS (B008548-BS1)										
Prepared & Analyzed: 12/18/09										
Acetone	0.222	0.10	mg/Kg wet	0.200		111	70-160			V-16 †
tert-Amyl Methyl Ether (TAME)	0.0192	0.0010	mg/Kg wet	0.0200		96.1	70-130			
Benzene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
Bromobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130			
Bromochloromethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Bromodichloromethane	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130			
Bromoform	0.0185	0.010	mg/Kg wet	0.0200		92.5	70-130			
Bromomethane	0.0209	0.010	mg/Kg wet	0.0200		104	40-130			†
2-Butanone (MEK)	0.210	0.040	mg/Kg wet	0.200		105	70-160			V-16 †
n-Butylbenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
sec-Butylbenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
tert-Butylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-160			†
tert-Butyl Ethyl Ether (TBEE)	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130			
Carbon Disulfide	0.0256	0.0060	mg/Kg wet	0.0200		128	70-130			
Carbon Tetrachloride	0.0181	0.010	mg/Kg wet	0.0200		90.5	70-130			
Chlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
Chlorodibromomethane	0.0234	0.0010	mg/Kg wet	0.0200		117	70-130			
Chloroethane	0.0248	0.020	mg/Kg wet	0.0200		124	70-130			
Chloroform	0.0224	0.0040	mg/Kg wet	0.0200		112	70-130			
Chloromethane	0.0196	0.010	mg/Kg wet	0.0200		98.1	70-130			
2-Chlorotoluene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130			
4-Chlorotoluene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0176	0.010	mg/Kg wet	0.0200		88.0	70-130			
1,2-Dibromoethane (EDB)	0.0201	0.0010	mg/Kg wet	0.0200		101	70-130			
Dibromomethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2-Dichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
1,3-Dichlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130			
1,4-Dichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130			

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B008548 - SW-846 5035										
LCS (B008548-BS1)				Prepared & Analyzed: 12/18/09						
Dichlorodifluoromethane (Freon 12)	0.0160	0.020	mg/Kg wet	0.0200		80.2	40-160			V-05 †
1,1-Dichloroethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
1,2-Dichloroethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,1-Dichloroethylene	0.0246	0.0040	mg/Kg wet	0.0200		123	70-130			
cis-1,2-Dichloroethylene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130			
trans-1,2-Dichloroethylene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2-Dichloropropane	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130			
1,3-Dichloropropane	0.0205	0.0010	mg/Kg wet	0.0200		103	70-130			
2,2-Dichloropropane	0.0166	0.0020	mg/Kg wet	0.0200		83.1	70-130			
1,1-Dichloropropene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130			
cis-1,3-Dichloropropene	0.0183	0.0010	mg/Kg wet	0.0200		91.7	70-130			
trans-1,3-Dichloropropene	0.0188	0.0010	mg/Kg wet	0.0200		94.2	70-130			
Diethyl Ether	0.0256	0.020	mg/Kg wet	0.0200		128	70-130			
Diisopropyl Ether (DIPE)	0.0226	0.0010	mg/Kg wet	0.0200		113	70-130			
1,4-Dioxane	0.190	0.10	mg/Kg wet	0.200		95.0	40-160			V-16 †
Ethylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
Hexachlorobutadiene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-160			
2-Hexanone (MBK)	0.197	0.020	mg/Kg wet	0.200		98.5	70-160			†
Isopropylbenzene (Cumene)	0.0242	0.0020	mg/Kg wet	0.0200		121	70-130			
p-Isopropyltoluene (p-Cymene)	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0204	0.0040	mg/Kg wet	0.0200		102	70-130			
Methylene Chloride	0.0205	0.020	mg/Kg wet	0.0200		102	40-160			†
4-Methyl-2-pentanone (MIBK)	0.199	0.020	mg/Kg wet	0.200		99.3	70-160			†
Naphthalene	0.0192	0.0040	mg/Kg wet	0.0200		96.1	40-130			†
n-Propylbenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Styrene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1,1,2-Tetrachloroethane	0.0179	0.0020	mg/Kg wet	0.0200		89.4	70-130			
1,1,2,2-Tetrachloroethane	0.0207	0.0010	mg/Kg wet	0.0200		103	70-130			
Tetrachloroethylene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130			
Tetrahydrofuran	0.0188	0.010	mg/Kg wet	0.0200		94.1	70-130			V-16
Toluene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130			
1,2,3-Trichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130			
1,2,4-Trichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130			
1,1,1-Trichloroethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,1,2-Trichloroethane	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130			
Trichloroethylene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Trichlorofluoromethane (Freon 11)	0.0237	0.010	mg/Kg wet	0.0200		118	70-130			
1,2,3-Trichloropropane	0.0158	0.0020	mg/Kg wet	0.0200		79.2	70-130			
1,2,4-Trimethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
1,3,5-Trimethylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
Vinyl Chloride	0.0181	0.010	mg/Kg wet	0.0200		90.4	40-130			†
m+p Xylene	0.0411	0.0040	mg/Kg wet	0.0400		103	70-130			
o-Xylene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0537		mg/Kg wet	0.0500		107	70-130			
Surrogate: Toluene-d8	0.0516		mg/Kg wet	0.0500		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.0497		mg/Kg wet	0.0500		99.4	70-130			

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B008548 - SW-846 5035										
I.C.S Dup (B008548-BSD1) Prepared & Analyzed: 12/18/09										
Acetone	0.244	0.10	mg/Kg wet	0.200		122	70-160	9.39	25	V-16 †
tert-Amyl Methyl Ether (TAME)	0.0207	0.0010	mg/Kg wet	0.0200		103	70-130	7.22	25	
Benzene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	4.68	25	
Bromobenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	3.92	25	
Bromochloromethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	2.81	25	
Bromodichloromethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	4.16	25	
Bromoform	0.0191	0.010	mg/Kg wet	0.0200		95.7	70-130	3.40	25	
Bromomethane	0.0227	0.010	mg/Kg wet	0.0200		114	40-130	8.44	25	†
2-Butanone (MEK)	0.231	0.040	mg/Kg wet	0.200		115	70-160	9.38	25	V-16 †
n-Butylbenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	1.80	25	
sec-Butylbenzene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130	0.809	25	
tert-Butylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-160	0.849	25	†
tert-Butyl Ethyl Ether (TBEE)	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130	4.53	25	
Carbon Disulfide	0.0262	0.0060	mg/Kg wet	0.0200		131 *	70-130	2.40	25	L-07
Carbon Tetrachloride	0.0181	0.010	mg/Kg wet	0.0200		90.6	70-130	0.110	25	
Chlorobenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	2.78	25	
Chlorodibromomethane	0.0240	0.0010	mg/Kg wet	0.0200		120	70-130	2.45	25	
Chloroethane	0.0260	0.020	mg/Kg wet	0.0200		130	70-130	4.73	25	
Chloroform	0.0228	0.0040	mg/Kg wet	0.0200		114	70-130	1.77	25	
Chloromethane	0.0206	0.010	mg/Kg wet	0.0200		103	70-130	4.68	25	
2-Chlorotoluene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130	3.66	25	
4-Chlorotoluene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	2.73	25	
1,2-Dibromo-3-chloropropane (DBCP)	0.0188	0.010	mg/Kg wet	0.0200		94.2	70-130	6.81	25	
1,2-Dibromoethane (EDB)	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130	5.88	25	
Dibromomethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	7.04	25	
1,2-Dichlorobenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	2.82	25	
1,3-Dichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	1.92	25	
1,4-Dichlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		99.0	70-130	0.608	25	
Dichlorodifluoromethane (Freon 12)	0.0167	0.020	mg/Kg wet	0.0200		83.6	40-160	4.15	25	V-05 †
1,1-Dichloroethane	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	4.63	25	
1,2-Dichloroethane	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130	6.37	25	
1,1-Dichloroethylene	0.0253	0.0040	mg/Kg wet	0.0200		127	70-130	2.88	25	
cis-1,2-Dichloroethylene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.20	25	
trans-1,2-Dichloroethylene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	5.23	25	
1,2-Dichloropropane	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130	3.66	25	
1,3-Dichloropropane	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130	3.07	25	
2,2-Dichloropropane	0.0170	0.0020	mg/Kg wet	0.0200		85.1	70-130	2.38	25	
1,1-Dichloropropene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	2.09	25	
cis-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.5	70-130	6.13	25	
trans-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.3	70-130	3.24	25	
Diethyl Ether	0.0263	0.020	mg/Kg wet	0.0200		131 *	70-130	2.70	25	L-07
Diisopropyl Ether (DIPE)	0.0237	0.0010	mg/Kg wet	0.0200		118	70-130	4.41	25	
1,4-Dioxane	0.193	0.10	mg/Kg wet	0.200		96.4	40-160	1.51	50	V-16 † †
Ethylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	2.76	25	
Hexachlorobutadiene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-160	3.03	25	
2-Hexanone (MBK)	0.216	0.020	mg/Kg wet	0.200		108	70-160	9.08	25	†
Isopropylbenzene (Cumene)	0.0247	0.0020	mg/Kg wet	0.0200		124	70-130	2.13	25	
p-Isopropyltoluene (p-Cymene)	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	1.22	25	
Methyl tert-Butyl Ether (MTBE)	0.0223	0.0040	mg/Kg wet	0.0200		112	70-130	8.80	25	
Methylene Chloride	0.0213	0.020	mg/Kg wet	0.0200		106	40-160	3.83	25	†
4-Methyl-2-pentanone (MIBK)	0.220	0.020	mg/Kg wet	0.200		110	70-160	10.1	25	†
Naphthalene	0.0222	0.0040	mg/Kg wet	0.0200		111	40-130	14.2	25	†

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B008548 - SW-846 5035										
LCS Dup (B008548-BSD1)				Prepared & Analyzed: 12/18/09						
n-Propylbenzene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	2.16	25	
Styrene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130	3.08	25	
1,1,1,2-Tetrachloroethane	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130	2.98	25	
1,1,2,2-Tetrachloroethane	0.0220	0.0010	mg/Kg wet	0.0200		110	70-130	6.37	25	
Tetrachloroethylene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	3.57	25	
Tetrahydrofuran	0.0211	0.010	mg/Kg wet	0.0200		106	70-130	11.6	25	V-16
Toluene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	2.14	25	
1,2,3-Trichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	5.71	25	
1,2,4-Trichlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	3.56	25	
1,1,1-Trichloroethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	2.73	25	
1,1,2-Trichloroethane	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	4.99	25	
Trichloroethylene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	5.11	25	
Trichlorofluoromethane (Freon 11)	0.0246	0.010	mg/Kg wet	0.0200		123	70-130	3.81	25	
1,2,3-Trichloropropane	0.0177	0.0020	mg/Kg wet	0.0200		88.7	70-130	11.3	25	
1,2,4-Trimethylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130	0.301	25	
1,3,5-Trimethylbenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.58	25	
Vinyl Chloride	0.0192	0.010	mg/Kg wet	0.0200		96.1	40-130	6.11	25	†
m+p Xylene	0.0426	0.0040	mg/Kg wet	0.0400		106	70-130	3.54	25	
o-Xylene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	3.22	25	
Surrogate: 1,2-Dichloroethane-d4	0.0540		mg/Kg wet	0.0500		108	70-130			
Surrogate: Toluene-d8	0.0520		mg/Kg wet	0.0500		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.0507		mg/Kg wet	0.0500		101	70-130			
Matrix Spike (B008548-MS1)				Source: 09L0487-03 Prepared & Analyzed: 12/18/09						
Acetone	0.163	0.072	mg/Kg dry	0.144	ND	113	70-130			V-16
tert-Amyl Methyl Ether (TAME)	0.0140	0.00072	mg/Kg dry	0.0144	ND	97.1	70-130			
Benzene	0.0151	0.0014	mg/Kg dry	0.0144	ND	105	70-130			
Bromobenzene	0.0134	0.0014	mg/Kg dry	0.0144	ND	93.3	70-130			
Bromochloromethane	0.0152	0.0014	mg/Kg dry	0.0144	ND	105	70-130			
Bromodichloromethane	0.0133	0.0014	mg/Kg dry	0.0144	ND	92.1	70-130			
Bromoform	0.0121	0.0072	mg/Kg dry	0.0144	ND	84.3	70-130			
Bromomethane	0.0154	0.0072	mg/Kg dry	0.0144	ND	107	70-130			
2-Butanone (MEK)	0.153	0.029	mg/Kg dry	0.144	ND	106	70-130			V-16
n-Butylbenzene	0.0142	0.0014	mg/Kg dry	0.0144	ND	98.4	70-130			
sec-Butylbenzene	0.0146	0.0014	mg/Kg dry	0.0144	ND	101	70-130			
tert-Butylbenzene	0.0140	0.0014	mg/Kg dry	0.0144	ND	97.3	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0141	0.00072	mg/Kg dry	0.0144	ND	98.0	70-130			
Carbon Disulfide	0.0158	0.0043	mg/Kg dry	0.0144	ND	109	70-130			
Carbon Tetrachloride	0.0106	0.0072	mg/Kg dry	0.0144	ND	73.8	70-130			
Chlorobenzene	0.0138	0.0014	mg/Kg dry	0.0144	ND	95.9	70-130			
Chlorodibromomethane	0.0155	0.00072	mg/Kg dry	0.0144	ND	108	70-130			
Chloroethane	0.0166	0.014	mg/Kg dry	0.0144	ND	115	70-130			
Chloroform	0.0158	0.0029	mg/Kg dry	0.0144	ND	110	70-130			
Chloromethane	0.0132	0.0072	mg/Kg dry	0.0144	ND	91.7	70-130			
2-Chlorotoluene	0.0143	0.0014	mg/Kg dry	0.0144	ND	99.0	70-130			
4-Chlorotoluene	0.0143	0.0014	mg/Kg dry	0.0144	ND	99.0	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0116	0.0072	mg/Kg dry	0.0144	ND	80.9	70-130			
1,2-Dibromoethane (EDB)	0.0147	0.00072	mg/Kg dry	0.0144	ND	102	70-130			
Dibromomethane	0.0153	0.0014	mg/Kg dry	0.0144	ND	106	70-130			
1,2-Dichlorobenzene	0.0135	0.0014	mg/Kg dry	0.0144	ND	93.9	70-130			
1,3-Dichlorobenzene	0.0131	0.0014	mg/Kg dry	0.0144	ND	90.9	70-130			
1,4-Dichlorobenzene	0.0131	0.0014	mg/Kg dry	0.0144	ND	90.7	70-130			

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B008548 - SW-846 5035										
Matrix Spike (B008548-MS1)										
Source: 09L0487-03										
Prepared & Analyzed: 12/18/09										
Dichlorodifluoromethane (Freon 12)	0.0107	0.014	mg/Kg dry	0.0144	ND	74.3	70-130			V-05
1,1-Dichloroethane	0.0158	0.0014	mg/Kg dry	0.0144	ND	109	70-130			
1,2-Dichloroethane	0.0153	0.0014	mg/Kg dry	0.0144	ND	106	70-130			
1,1-Dichloroethylene	0.0162	0.0029	mg/Kg dry	0.0144	ND	113	70-130			
cis-1,2-Dichloroethylene	0.0144	0.0014	mg/Kg dry	0.0144	ND	100	70-130			
trans-1,2-Dichloroethylene	0.0142	0.0014	mg/Kg dry	0.0144	ND	98.8	70-130			
1,2-Dichloropropane	0.0149	0.0014	mg/Kg dry	0.0144	ND	104	70-130			
1,3-Dichloropropane	0.0150	0.00072	mg/Kg dry	0.0144	ND	104	70-130			
2,2-Dichloropropane	0.0102	0.0014	mg/Kg dry	0.0144	ND	70.5	70-130			
1,1-Dichloropropene	0.0152	0.0014	mg/Kg dry	0.0144	ND	106	70-130			
cis-1,3-Dichloropropene	0.0126	0.00072	mg/Kg dry	0.0144	ND	87.4	70-130			
trans-1,3-Dichloropropene	0.0120	0.00072	mg/Kg dry	0.0144	ND	83.4	70-130			
Diethyl Ether	0.0173	0.014	mg/Kg dry	0.0144	ND	120	70-130			
Diisopropyl Ether (DIPE)	0.0160	0.00072	mg/Kg dry	0.0144	ND	111	70-130			
1,4-Dioxane	0.178	0.072	mg/Kg dry	0.144	ND	123	70-130			V-16
Ethylbenzene	0.0143	0.0014	mg/Kg dry	0.0144	ND	99.3	70-130			
Hexachlorobutadiene	0.0123	0.0014	mg/Kg dry	0.0144	ND	85.2	70-130			
2-Hexanone (MBK)	0.153	0.014	mg/Kg dry	0.144	ND	107	70-130			
Isopropylbenzene (Cumene)	0.0161	0.0014	mg/Kg dry	0.0144	ND	112	70-130			
p-Isopropyltoluene (p-Cymene)	0.0138	0.0014	mg/Kg dry	0.0144	ND	95.8	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0147	0.0029	mg/Kg dry	0.0144	ND	102	70-130			
Methylene Chloride	0.0145	0.014	mg/Kg dry	0.0144	7.20E-4	96.0	70-130			
4-Methyl-2-pentanone (MIBK)	0.156	0.014	mg/Kg dry	0.144	ND	108	70-130			
Naphthalene	0.0113	0.0029	mg/Kg dry	0.0144	ND	78.2	70-130			
n-Propylbenzene	0.0148	0.0014	mg/Kg dry	0.0144	ND	102	70-130			
Styrene	0.0139	0.0014	mg/Kg dry	0.0144	ND	96.4	70-130			
1,1,1,2-Tetrachloroethane	0.0117	0.0014	mg/Kg dry	0.0144	ND	81.3	70-130			
1,1,2,2-Tetrachloroethane	0.0156	0.00072	mg/Kg dry	0.0144	ND	108	70-130			
Tetrachloroethylene	0.0146	0.0014	mg/Kg dry	0.0144	ND	102	70-130			
Tetrahydrofuran	0.0152	0.0072	mg/Kg dry	0.0144	ND	106	70-130			V-16
Toluene	0.0148	0.0014	mg/Kg dry	0.0144	ND	103	70-130			
1,2,3-Trichlorobenzene	0.0116	0.0014	mg/Kg dry	0.0144	ND	80.5	70-130			
1,2,4-Trichlorobenzene	0.0122	0.0014	mg/Kg dry	0.0144	ND	84.5	70-130			
1,1,1-Trichloroethane	0.0128	0.0014	mg/Kg dry	0.0144	ND	88.8	70-130			
1,1,2-Trichloroethane	0.0148	0.0014	mg/Kg dry	0.0144	ND	103	70-130			
Trichloroethylene	0.0148	0.0014	mg/Kg dry	0.0144	ND	103	70-130			
Trichlorofluoromethane (Freon 11)	0.0159	0.0072	mg/Kg dry	0.0144	ND	110	70-130			
1,2,3-Trichloropropane	0.0128	0.0014	mg/Kg dry	0.0144	ND	88.6	70-130			
1,2,4-Trimethylbenzene	0.0133	0.0014	mg/Kg dry	0.0144	ND	92.4	70-130			
1,3,5-Trimethylbenzene	0.0141	0.0014	mg/Kg dry	0.0144	ND	97.9	70-130			
Vinyl Chloride	0.0121	0.0072	mg/Kg dry	0.0144	ND	84.3	70-130			
m+p Xylene	0.0282	0.0029	mg/Kg dry	0.0288	ND	97.8	70-130			
o-Xylene	0.0145	0.0014	mg/Kg dry	0.0144	ND	100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0386		mg/Kg dry	0.0360		107	70-130			
Surrogate: Toluene-d8	0.0375		mg/Kg dry	0.0360		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.0359		mg/Kg dry	0.0360		99.7	70-130			

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
- L-07 Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
 - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Significant uncertainty is associated with the reported value which is likely to be biased on the low side.
 - V-16 Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy are associated with reported result.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260B in Soil</i>	
Acetone	CT,NH,NY
Benzene	CT,NH,NY
Bromobenzene	NH,NY
Bromochloromethane	NH,NY
Bromodichloromethane	CT,NH,NY
Bromoform	CT,NH,NY
Bromomethane	CT,NH,NY
2-Butanone (MEK)	CT,NH,NY
n-Butylbenzene	CT,NH,NY
sec-Butylbenzene	CT,NH,NY
tert-Butylbenzene	CT,NH,NY
Carbon Disulfide	CT,NH,NY
Carbon Tetrachloride	CT,NH,NY
Chlorobenzene	CT,NH,NY
Chlorodibromomethane	CT,NH,NY
Chloroethane	CT,NH,NY
Chloroform	CT,NH,NY
Chloromethane	CT,NH,NY
2-Chlorotoluene	CT,NH,NY
4-Chlorotoluene	CT,NH,NY
Dibromomethane	NH,NY
1,2-Dichlorobenzene	CT,NH,NY
1,3-Dichlorobenzene	CT,NH,NY
1,4-Dichlorobenzene	CT,NH,NY
Dichlorodifluoromethane (Freon 12)	NY
1,1-Dichloroethane	CT,NH,NY
1,2-Dichloroethane	CT,NH,NY
1,1-Dichloroethylene	CT,NH,NY
cis-1,2-Dichloroethylene	CT,NH,NY
trans-1,2-Dichloroethylene	CT,NH,NY
1,2-Dichloropropane	CT,NH,NY
1,3-Dichloropropane	NH,NY
2,2-Dichloropropane	NH,NY
1,1-Dichloropropene	NH,NY
cis-1,3-Dichloropropene	CT,NH,NY
trans-1,3-Dichloropropene	CT,NH,NY
Ethylbenzene	CT,NH,NY
Hexachlorobutadiene	NH,NY
2-Hexanone (MBK)	CT,NH,NY
Isopropylbenzene (Cumene)	CT,NH,NY
Methylene Chloride	CT,NH,NY
4-Methyl-2-pentanone (MIBK)	CT,NH,NY
Naphthalene	NH,NY
Styrene	CT,NH,NY
1,1,1,2-Tetrachloroethane	CT,NH,NY
1,1,2,2-Tetrachloroethane	CT,NH,NY
Tetrachloroethylene	CT,NH,NY

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260B in Soil</i>	
Toluene	CT,NH,NY
1,2,4-Trichlorobenzene	NH,NY
1,1,1-Trichloroethane	CT,NH,NY
1,1,2-Trichloroethane	CT,NH,NY
Trichloroethylene	CT,NH,NY
Trichlorofluoromethane (Freon 11)	CT,NH,NY
1,2,3-Trichloropropane	NH,NY
1,2,4-Trimethylbenzene	CT,NH,NY
1,3,5-Trimethylbenzene	CT,NH,NY
Vinyl Chloride	CT,NH,NY
m+p Xylene	CT,NH,NY
o-Xylene	CT,NH,NY

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	American Industrial Hygiene Association	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2010
CT	Connecticut Department of Public Health	PH-0567	09/30/2011
NY	New York State Department of Health	10899 NELAP	04/1/2010
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2010
RI	Rhode Island Department of Health	LAO00112	12/30/2010
NC	North Carolina Div. of Water Quality	652	12/31/2009
NJ	New Jersey DEP	MA007 NELAP	06/30/2010
FL	Florida Department of Health	E871027 NELAP	06/30/2010
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2010
WA	State of Washington Department of Ecology	C2065	03/23/2010



con-test
ANALYTICAL LABORATORY

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@conestlabs.com
www.conestlabs.com

CHAIN OF CUSTODY RECORD

39 SPRUCE ST, 2ND FLOOR
EAST LONGMEADOW, MA 01028

Company Name: TRC
Address: 650 Suffolk St.
Lowell MA 01854

Telephone: (978) 656-3575
Project # 115058
Client PO # Unknown

Attention: David Sullivan

DATA DELIVERY (check one):
 FAX EMAIL WEBSITE CLIENT

Project Location: City of NB (City Hall)
Sampled By: J. Sanders / D. Peterson

Fax #: _____
Email: dsullivan@conestlabs.com
Format: EXCEL PDF GIS KEY

Proposal Provided? (For Billing purposes)
 Yes No
Date: 2002 proposal date

State Form Required?
 Yes No

Field ID	Sample Description	Lab #	Date Sampled		Comp- osite	Grab	Matrix Code	Conc. Code	ANALYSIS REQUESTED	# of containers	Preservation	Cont. Code
			Start Date/Time	Stop Date/Time								
TR3		0910487	12/19/09	NA								
TRC-BTM-1		-02			G	S	U					
TRC-BTM-2		-03										
TRC-BTM-2Z		-04										
TRC-BTM-3		-05			V							
TRC-ESW		-06				G	S	U				
Laboratory Comments: <u>Temperature Blank</u>												

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:

H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by (signature) [Signature] Date/Time: 12/17/09 1530

Received by (signature) [Signature] Date/Time: 12/17/09 1530

Relinquished by (signature) [Signature] Date/Time: 12-17-09 1810

Received by (signature) [Signature] Date/Time: 12/17/09 1810

Turnaround **
 7-Day
 10-Day
 Other 5 days
 * Require lab approval
 *24-Hr *48-Hr
 *72-Hr *4-Day

Detection Limit Requirements
 Regulations? MCP
 Data Enhancement Project/PCP? Y N
 Special Requirements or DL's: See Quote

Matrix Code:
 GW = groundwater
 WW = wastewater
 DW = drinking water
 A = air
 S = soil/solid
 SL = sludge
 O = other

Preservation Codes:
 I = lead
 H = HCL
 M = Methanol
 N = Nitric Acid
 S = Sulfuric Acid
 B = Sodium bisulfate
 O = Other

Cont. Code:
 A = amber glass
 G = glass
 P = plastic
 ST = sterile
 V = vial
 S = surtina can
 T = tedlar bag
 O = Other

Client: City of NB
 Comments: Note: Sample labeled 04 cap to 200g (changing weight)

TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

Sample Receipt Checklist

CLIENT NAME: TRC RECEIVED BY: JDP DATE: 12/17/09

- 1) Was the chain(s) of custody relinquished and signed? Yes No
- 2) Does the chain agree with the samples? Yes No
If not, explain:
- 3) Are all the samples in good condition? Yes No
If not, explain:

4) How were the samples received:

On Ice Direct from Sampling Ambient In Cooler(s)

Were the samples received in Temperature Compliance of (2-6°C)? Yes No

Temperature °C by Temp blank 2⁺ Temperature °C by Temp gun _____

5) Are there Dissolved samples for the lab to filter? Yes No

Who was notified _____ Date _____ Time _____

6) Are there any samples "On Hold"? Yes No Stored where:

7) Are there any RUSH or SHORT HOLDING TIME samples? Yes No

Who was notified _____ Date _____ Time _____

8) Location where samples are stored:

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved

Client Signature: _____

Containers sent in to Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz clear jar	
500 mL Amber		4 oz clear jar	5
250 mL Amber (8oz amber)		2 oz clear jar	
1 Liter Plastic		Other glass jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		Air Cassette	
40 mL Vial - type listed below	18	Brass Sleeves	
Colisure / bacteria bottle		Tubes	
Dissolved Oxygen bottle		Summa Cans	
Flashpoint bottle		Regulators	
Encore		Other	

Laboratory Comments:

DI VIALS / ENCORE

FROZEN AT:

40 mL vials: # HCl _____ # Methanol 6
Bisulfate _____ # DI Water 12
Thiosulfate _____ Unpreserved _____

Time and Date Frozen: 12-17-09 19:02 OUT

Do all samples have the proper pH: Yes No N/A

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: **Con-Test Analytical Laboratory** Project #: **09L0487**

Project Location: **City Of New Bedford** MADEP RTN¹:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
 09L0487-01 thru 09L0487-06

Sample Matrices: **Soil**

MCP SW-846 Methods Used	8260B (X)	8151A ()	8330 ()	6010B ()	7470A/1A ()
	8270C ()	8081A ()	VPH ()	6020 ()	9014M ² ()
As specified in MADEP Compendium of Analytical Methods. (check all that apply)	8082 ()	8021B ()	EPH ()	7000 S ³ ()	7196A ()

1 List Release Tracking Number (RTN), if known
 2 M -- SW-846 Method 9014 or MADEP Physiologically Available Cyanide (PAC) Method
 3 S -- SW-846 Methods 7000 Series List individual method and analyte

An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status

A	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of-Custody documentation for the data set?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
C	Does the data included in this report meet all the analytical requirements for "Presumptive Certainty", as described in Section 2.0 (a), (b), (c) and (d) of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
D	VPH and EPH Methods only: Was the VPH or EPH Method conducted without significant modifications (see Section 11.3 of respective Methods)	<input type="checkbox"/> Yes <input type="checkbox"/> No ¹

A response to questions E and F below is required for "Presumptive Certainty" status

E	Were all analytical QC performance standards and recommendations for the specified methods achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ¹
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹

¹All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

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

Signature:  Position: **Laboratory Director**

Printed Name: **Michael A. Erickson** Date: **12/23/09**



39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

6/27/2008
Page 19 of 32

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD
Date Received: 6/18/2008
Field Sample #: SB-210-5

LIMS-BAT #: LIMIT-16916
Job Number: 115058(EDGEOFF)

Sample ID : 08B21995 ‡Sampled : 6/16/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
Acenaphthene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Acenaphthylene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Anthracene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Benzo(a)anthracene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Benzo(a)pyrene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Benzo(b)fluoranthene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Benzo(g,h,i)perylene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Benzo(k)fluoranthene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Chrysene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Dibenz(a,h)anthracene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Fluoranthene	mg/kg dry wt	0.293	06/24/08	BGL	0.231			
Fluorene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Indeno(1,2,3-cd)pyrene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
2-Methylnaphthalene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Naphthalene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Phenanthrene	mg/kg dry wt	ND	06/24/08	BGL	0.231			
Pyrene	mg/kg dry wt	0.337	06/24/08	BGL	0.231			
Extraction Date 8270		6/19/2008	06/24/08	BGL				

Analytical Method:
SW846 8270

SAMPLES ARE EXTRACTED IN METHYLENE CHLORIDE/ACETONE AND FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS. REPORTED RESULTS AND REPORTING LIMITS FOR BENZOIC ACID AND PENTACHLORONITROBENZENE ARE ESTIMATED SINCE RESPONSE FACTOR FOR THESE COMPOUNDS ARE BELOW METHOD SPECIFICATIONS.

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‡ = See attached chain-of-custody record for time sampled

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.



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LOWELL, MA 01852

6/27/2008
Page 20 of 32

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD
Date Received: 6/18/2008
Field Sample #: SB-212-4

LIMS-BAT #: LIMIT-16916
Job Number: 115058(EDGEOFF)

Sample ID : 08B21996 ‡Sampled : 6/16/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
Acenaphthene	mg/kg dry wt	ND	06/24/08	BGL	0.218			
Acenaphthylene	mg/kg dry wt	ND	06/24/08	BGL	0.218			
Anthracene	mg/kg dry wt	ND	06/24/08	BGL	0.218			
Benzo(a)anthracene	mg/kg dry wt	0.284	06/24/08	BGL	0.218			
Benzo(a)pyrene	mg/kg dry wt	0.267	06/24/08	BGL	0.218			
Benzo(b)fluoranthene	mg/kg dry wt	0.363	06/24/08	BGL	0.218			
Benzo(g,h,i)perylene	mg/kg dry wt	ND	06/24/08	BGL	0.218			
Benzo(k)fluoranthene	mg/kg dry wt	ND	06/24/08	BGL	0.218			
Chrysene	mg/kg dry wt	0.314	06/24/08	BGL	0.218			
Dibenz(a,h)anthracene	mg/kg dry wt	ND	06/24/08	BGL	0.218			
Fluoranthene	mg/kg dry wt	0.450	06/24/08	BGL	0.218			
Fluorene	mg/kg dry wt	ND	06/24/08	BGL	0.218			
Indeno(1,2,3-cd)pyrene	mg/kg dry wt	ND	06/24/08	BGL	0.218			
2-Methylnaphthalene	mg/kg dry wt	ND	06/24/08	BGL	0.218			
Naphthalene	mg/kg dry wt	ND	06/24/08	BGL	0.218			
Phenanthrene	mg/kg dry wt	0.326	06/24/08	BGL	0.218			
Pyrene	mg/kg dry wt	0.437	06/24/08	BGL	0.218			
Extraction Date 8270		6/19/2008	06/24/08	BGL				

Analytical Method:
SW846 8270

SAMPLES ARE EXTRACTED IN METHYLENE CHLORIDE/ACETONE AND FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS. REPORTED RESULTS AND REPORTING LIMITS FOR BENZOIC ACID AND PENTACHLORONITROBENZENE ARE ESTIMATED SINCE RESPONSE FACTOR FOR THESE COMPOUNDS ARE BELOW METHOD SPECIFICATIONS.

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LOWELL, MA 01852

6/27/2008
Page 21 of 32

Project Location: CITY OF NEW BEDFORD
Date Received: 6/18/2008
Field Sample #: SB-212-D

Purchase Order No.:

LIMS-BAT #: LIMIT-16916
Job Number: 115058(EDGEOFF)

Sample ID : 08B21997 ‡Sampled : 6/16/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Acenaphthene	mg/kg dry wt	ND	06/24/08	BGL	0.222			
Acenaphthylene	mg/kg dry wt	ND	06/24/08	BGL	0.222			
Anthracene	mg/kg dry wt	ND	06/24/08	BGL	0.222			
Benzo(a)anthracene	mg/kg dry wt	0.448	06/24/08	BGL	0.222			
Benzo(a)pyrene	mg/kg dry wt	0.435	06/24/08	BGL	0.222			
Benzo(b)fluoranthene	mg/kg dry wt	0.604	06/24/08	BGL	0.222			
Benzo(g,h,i)perylene	mg/kg dry wt	ND	06/24/08	BGL	0.222			
Benzo(k)fluoranthene	mg/kg dry wt	0.237	06/24/08	BGL	0.222			
Chrysene	mg/kg dry wt	0.501	06/24/08	BGL	0.222			
Dibenz(a,h)anthracene	mg/kg dry wt	ND	06/24/08	BGL	0.222			
Fluoranthene	mg/kg dry wt	0.810	06/24/08	BGL	0.222			
Fluorene	mg/kg dry wt	ND	06/24/08	BGL	0.222			
Indeno(1,2,3-cd)pyrene	mg/kg dry wt	0.261	06/24/08	BGL	0.222			
2-Methylnaphthalene	mg/kg dry wt	ND	06/24/08	BGL	0.222			
Naphthalene	mg/kg dry wt	ND	06/24/08	BGL	0.222			
Phenanthrene	mg/kg dry wt	0.459	06/24/08	BGL	0.222			
Pyrene	mg/kg dry wt	0.599	06/24/08	BGL	0.222			
Extraction Date 8270		6/19/2008	06/24/08	BGL				

Analytical Method:
SW846 8270

SAMPLES ARE EXTRACTED IN METHYLENE CHLORIDE/ACETONE AND FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS. REPORTED RESULTS AND REPORTING LIMITS FOR BENZOIC ACID AND PENTACHLORONITROBENZENE ARE ESTIMATED SINCE RESPONSE FACTOR FOR THESE COMPOUNDS ARE BELOW METHOD SPECIFICATIONS.

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6/27/2008
 Page 22 of 32

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD
 Date Received: 6/18/2008
 Field Sample #: SB-214-4

LIMS-BAT #: LIMIT-16916
 Job Number: 115058(EDGE OFF)

Sample ID: 08B22000 ‡Sampled: 6/17/2008
 Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
Acenaphthene	mg/kg dry wt	ND	06/24/08	BGL	1.02			
Acenaphthylene	mg/kg dry wt	ND	06/24/08	BGL	1.02			
Anthracene	mg/kg dry wt	1.23	06/24/08	BGL	1.02			
Benzo(a)anthracene	mg/kg dry wt	3.95	06/24/08	BGL	1.02			
Benzo(a)pyrene	mg/kg dry wt	3.57	06/24/08	BGL	1.02			
Benzo(b)fluoranthene	mg/kg dry wt	4.25	06/24/08	BGL	1.02			
Benzo(g,h,i)perylene	mg/kg dry wt	1.49	06/24/08	BGL	1.02			
Benzo(k)fluoranthene	mg/kg dry wt	1.81	06/24/08	BGL	1.02			
Chrysene	mg/kg dry wt	3.97	06/24/08	BGL	1.02			
Dibenz(a,h)anthracene	mg/kg dry wt	ND	06/24/08	BGL	1.02			
Fluoranthene	mg/kg dry wt	5.52	06/24/08	BGL	1.02			
Fluorene	mg/kg dry wt	ND	06/24/08	BGL	1.02			
Indeno(1,2,3-cd)pyrene	mg/kg dry wt	1.97	06/24/08	BGL	1.02			
2-Methylnaphthalene	mg/kg dry wt	ND	06/24/08	BGL	1.02			
Naphthalene	mg/kg dry wt	ND	06/24/08	BGL	1.02			
Phenanthrene	mg/kg dry wt	4.16	06/24/08	BGL	1.02			
Pyrene	mg/kg dry wt	5.90	06/24/08	BGL	1.02			
Extraction Date 8270		6/19/2008	06/24/08	BGL				

Analytical Method:
 SW846 8270

SAMPLES ARE EXTRACTED IN METHYLENE CHLORIDE/ACETONE AND FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS. REPORTED RESULTS AND REPORTING LIMITS FOR BENZOIC ACID AND PENTACHLORONITROBENZENE ARE ESTIMATED SINCE RESPONSE FACTOR FOR THESE COMPOUNDS ARE BELOW METHOD SPECIFICATIONS.

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LOWELL, MA 01852

6/27/2008
Page 24 of 32

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD
Date Received: 6/18/2008
Field Sample #: SB-217-5

LIMS-BAT #: LIMIT-16916
Job Number: 115058(EDGEOFF)

Sample ID: 08B22002 ‡Sampled: 6/17/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
Acenaphthene	mg/kg dry wt	ND	06/26/08	BGL	0.229			
Acenaphthylene	mg/kg dry wt	ND	06/26/08	BGL	0.229			
Anthracene	mg/kg dry wt	ND	06/26/08	BGL	0.229			
Benzo(a)anthracene	mg/kg dry wt	0.643	06/26/08	BGL	0.229			
Benzo(a)pyrene	mg/kg dry wt	0.410	06/26/08	BGL	0.229			
Benzo(b)fluoranthene	mg/kg dry wt	0.710	06/26/08	BGL	0.229			
Benzo(g,h,i)perylene	mg/kg dry wt	0.367	06/26/08	BGL	0.229			
Benzo(k)fluoranthene	mg/kg dry wt	0.243	06/26/08	BGL	0.229			
Chrysene	mg/kg dry wt	0.810	06/26/08	BGL	0.229			
Dibenz(a,h)anthracene	mg/kg dry wt	ND	06/26/08	BGL	0.229			
Fluoranthene	mg/kg dry wt	1.05	06/26/08	BGL	0.229			
Fluorene	mg/kg dry wt	ND	06/26/08	BGL	0.229			
Indeno(1,2,3-cd)pyrene	mg/kg dry wt	0.380	06/26/08	BGL	0.229			
2-Methylnaphthalene	mg/kg dry wt	ND	06/26/08	BGL	0.229			
Naphthalene	mg/kg dry wt	ND	06/26/08	BGL	0.229			
Phenanthrene	mg/kg dry wt	0.930	06/26/08	BGL	0.229			
Pyrene	mg/kg dry wt	1.11	06/26/08	BGL	0.229			
Extraction Date 8270		06/25/2008	06/26/08	BGL				

Analytical Method:
SW846 8270

SAMPLES ARE EXTRACTED IN METHYLENE CHLORIDE/ACETONE AND FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS. REPORTED RESULTS AND REPORTING LIMITS FOR BENZOIC ACID AND PENTACHLORONITROBENZENE ARE ESTIMATED SINCE RESPONSE FACTOR FOR THESE COMPOUNDS ARE BELOW METHOD SPECIFICATIONS.

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LOWELL, MA 01852

6/27/2008
Page 25 of 32

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD
Date Received: 6/18/2008
Field Sample #: SB-219-4

LIMS-BAT #: LIMIT-16916
Job Number: 115058(EDGEOFF)

Sample ID : 08B22003 ‡Sampled : 6/17/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
Acenaphthene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Acenaphthylene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Anthracene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Benzo(a)anthracene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Benzo(a)pyrene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Benzo(b)fluoranthene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Benzo(g,h,i)perylene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Benzo(k)fluoranthene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Chrysene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Dibenz(a,h)anthracene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Fluoranthene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Fluorene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Indeno(1,2,3-cd)pyrene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
2-Methylnaphthalene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Naphthalene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Phenanthrene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Pyrene	mg/kg dry wt	ND	06/25/08	BGL	1.14			
Extraction Date 8270		6/19/2008	06/25/08	BGL				

Analytical Method:
SW846 8270

SAMPLES ARE EXTRACTED IN METHYLENE CHLORIDE/ACETONE AND FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS. REPORTED RESULTS AND REPORTING LIMITS FOR BENZOIC ACID AND PENTACHLORONITROBENZENE ARE ESTIMATED SINCE RESPONSE FACTOR FOR THESE COMPOUNDS ARE BELOW METHOD SPECIFICATIONS.

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6/27/2008
Page 28 of 32

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD
Date Received: 6/18/2008
Field Sample #: SB-221-5

LIMS-BAT #: LIMIT-16916
Job Number: 115058(EDGEOFF)

Sample ID : 08B22004 ‡Sampled : 6/17/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Acenaphthene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Acenaphthylene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Anthracene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Benzo(a)anthracene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Benzo(a)pyrene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Benzo(b)fluoranthene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Benzo(g,h,i)perylene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Benzo(k)fluoranthene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Chrysene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Dibenz(a,h)anthracene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Fluoranthene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Fluorene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Indeno(1,2,3-cd)pyrene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
2-Methylnaphthalene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Naphthalene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Phenanthrene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Pyrene	mg/kg dry wt	ND	06/25/08	BGL	0.178			
Extraction Date 8270		6/19/2008	06/25/08	BGL				

Analytical Method:
SW846 8270

SAMPLES ARE EXTRACTED IN METHYLENE CHLORIDE/ACETONE AND FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS. REPORTED RESULTS AND REPORTING LIMITS FOR BENZOIC ACID AND PENTACHLORONITROBENZENE ARE ESTIMATED SINCE RESPONSE FACTOR FOR THESE COMPOUNDS ARE BELOW METHOD SPECIFICATIONS.

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1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060171</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060171-18</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-210-5</u>
Sample wt(Dry)/vol: <u>8.4589 g</u>	Lab Sample ID: <u>AL09987</u>
Percent Moisture: <u>19.6</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/19/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/23/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-196-27

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-156-29

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0591	U
1	11104-28-2	Aroclor 1221	0.0591	U
1	11141-16-5	Aroclor 1232	0.0591	U
1	53469-21-9	Aroclor 1242	0.0591	U
1	12672-29-6	Aroclor 1248	0.0591	U
1	11097-69-1	Aroclor 1254	0.0591	U
1	11096-82-5	Aroclor 1260	0.0591	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060171</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060171-19</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-210-11</u>
Sample wt(Dry)/vol: <u>8.5632 g</u>	Lab Sample ID: <u>AL09988</u>
Percent Moisture: <u>16.7</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/19/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/23/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-196-28

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-156-30

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0584	U
1	11104-28-2	Aroclor 1221	0.0584	U
1	11141-16-5	Aroclor 1232	0.0584	U
1	53469-21-9	Aroclor 1242	0.0584	U
1	12672-29-6	Aroclor 1248	0.0584	U
1	11097-69-1	Aroclor 1254	0.0584	U
1	11096-82-5	Aroclor 1260	0.0584	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060172</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060172-01</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-211-5</u>
Sample wt(Dry)/vol: <u>7.5487 g</u>	Lab Sample ID: <u>AL09990</u>
Percent Moisture: <u>29.0</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/23/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/25/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-198-16

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-158-16

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION	
			UG/G	Q
1	12674-11-2	Aroclor 1016	0.0662	U
1	11104-28-2	Aroclor 1221	0.0662	U
1	11141-16-5	Aroclor 1232	0.0662	U
1	53469-21-9	Aroclor 1242	0.0662	U
1	12672-29-6	Aroclor 1248	0.0662	U
1	11097-69-1	Aroclor 1254	0.0662	U
1	11096-82-5	Aroclor 1260	0.0662	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060172</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060172-02</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-211-11</u>
Sample wt(Dry)/vol: <u>9.1769 g</u>	Lab Sample ID: <u>AL09991</u>
Percent Moisture: <u>11.3</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/23/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/26/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-198-19

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-158-19

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0545	U
1	11104-28-2	Aroclor 1221	0.0545	U
1	11141-16-5	Aroclor 1232	0.0545	U
1	53469-21-9	Aroclor 1242	0.0545	U
1	12672-29-6	Aroclor 1248	0.0545	U
1	11097-69-1	Aroclor 1254	0.0545	U
1	11096-82-5	Aroclor 1260	0.0545	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060172</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060172-04</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-212-4</u>
Sample wt(Dry)/vol: <u>7.6331 g</u>	Lab Sample ID: <u>AL09993</u>
Percent Moisture: <u>27.2</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/23/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/26/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-198-20

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-158-20

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION	Q
			UG/G	
1	12674-11-2	Aroclor 1016	0.0655	U
1	11104-28-2	Aroclor 1221	0.0655	U
1	11141-16-5	Aroclor 1232	0.0655	U
1	53469-21-9	Aroclor 1242	0.0655	U
1	12672-29-6	Aroclor 1248	0.0655	U
1	11097-69-1	Aroclor 1254	0.0655	U
1	11096-82-5	Aroclor 1260	0.0655	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060172</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060172-05</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-212-10</u>
Sample wt(Dry)/vol: <u>9.2359 g</u>	Lab Sample ID: <u>AL09994</u>
Percent Moisture: <u>13.4</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/23/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/26/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-198-21

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-158-21

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION	
			UG/G	Q
1	12674-11-2	Aroclor 1016	0.0541	U
1	11104-28-2	Aroclor 1221	0.0541	U
1	11141-16-5	Aroclor 1232	0.0541	U
1	53469-21-9	Aroclor 1242	0.0541	U
1	12672-29-6	Aroclor 1248	0.0541	U
1	11097-69-1	Aroclor 1254	0.0541	U
1	11096-82-5	Aroclor 1260	0.0541	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060172</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060172-06</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-212-D</u>
Sample wt(Dry)/vol: <u>7.8768 g</u>	Lab Sample ID: <u>AL09995</u>
Percent Moisture: <u>23.8</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/23/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/26/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-198-22

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-158-22

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0635	U
1	11104-28-2	Aroclor 1221	0.0635	U
1	11141-16-5	Aroclor 1232	0.0635	U
1	53469-21-9	Aroclor 1242	0.0635	U
1	12672-29-6	Aroclor 1248	0.0635	U
1	11097-69-1	Aroclor 1254	0.0635	U
1	11096-82-5	Aroclor 1260	0.0635	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060172</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060172-12</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-213-5</u>
Sample wt(Dry)/vol: <u>9.0142 g</u>	Lab Sample ID: <u>AL10001</u>
Percent Moisture: <u>11.4</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/23/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/26/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-198-26

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-158-26

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0555	U
1	11104-28-2	Aroclor 1221	0.0555	U
1	11141-16-5	Aroclor 1232	0.0555	U
1	53469-21-9	Aroclor 1242	0.0555	U
1	12672-29-6	Aroclor 1248	0.0555	U
1	11097-69-1	Aroclor 1254	0.0555	U
1	11096-82-5	Aroclor 1260	0.0555	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060172</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060172-13</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-213-12</u>
Sample wt(Dry)/vol: <u>9.1084 g</u>	Lab Sample ID: <u>AL10002</u>
Percent Moisture: <u>11.5</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/23/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/26/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-198-27

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-158-27

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0549	U
1	11104-28-2	Aroclor 1221	0.0549	U
1	11141-16-5	Aroclor 1232	0.0549	U
1	53469-21-9	Aroclor 1242	0.0549	U
1	12672-29-6	Aroclor 1248	0.0549	U
1	11097-69-1	Aroclor 1254	0.0549	U
1	11096-82-5	Aroclor 1260	0.0549	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060172</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060172-15</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-214-4</u>
Sample wt(Dry)/vol: <u>8.2840 g</u>	Lab Sample ID: <u>AL10004</u>
Percent Moisture: <u>20.4</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/23/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/26/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-198-28

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-158-28

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0604	U
1	11104-28-2	Aroclor 1221	0.0604	U
1	11141-16-5	Aroclor 1232	0.0604	U
1	53469-21-9	Aroclor 1242	0.0604	U
1	12672-29-6	Aroclor 1248	0.0604	U
1	11097-69-1	Aroclor 1254	0.225	AF
1	11096-82-5	Aroclor 1260	0.0604	U

Laboratory Qualifiers:

AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060172</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060172-16</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-214-10</u>
Sample wt(Dry)/vol: <u>3.8139 g</u>	Lab Sample ID: <u>AL10005</u>
Percent Moisture: <u>63.3</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/23/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/26/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-198-29

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-158-29

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.131	U
1	11104-28-2	Aroclor 1221	0.131	U
1	11141-16-5	Aroclor 1232	0.131	U
1	53469-21-9	Aroclor 1242	0.131	U
1	12672-29-6	Aroclor 1248	0.131	U
1	11097-69-1	Aroclor 1254	0.131	U
1	11096-82-5	Aroclor 1260	0.131	U

Laboratory Qualifiers:

Note: There were several non-target peaks.

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

**1D-1
PCB ANALYSIS DATA SHEET**

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060172</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060172-18</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-215-7.5</u>
Sample wt(Dry)/vol: <u>8.1806 g</u>	Lab Sample ID: <u>AL10007</u>
Percent Moisture: <u>19.1</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/23/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/26/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-198-30

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-158-30

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0611	U
1	11104-28-2	Aroclor 1221	0.0611	U
1	11141-16-5	Aroclor 1232	0.0611	U
1	53469-21-9	Aroclor 1242	0.0611	U
1	12672-29-6	Aroclor 1248	0.0611	U
1	11097-69-1	Aroclor 1254	0.0611	U
1	11096-82-5	Aroclor 1260	0.0611	U

Laboratory Qualifiers:

Note: There were several non-target peaks.

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060172</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060172-19</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-215-9</u>
Sample wt(Dry)/vol: <u>3.6158 g</u>	Lab Sample ID: <u>AL10008</u>
Percent Moisture: <u>64.2</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/23/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/26/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-198-31

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-158-31

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION	Q
			UG/G	
1	12674-11-2	Aroclor 1016	0.138	U
1	11104-28-2	Aroclor 1221	0.138	U
1	11141-16-5	Aroclor 1232	0.138	U
1	53469-21-9	Aroclor 1242	0.138	U
1	12672-29-6	Aroclor 1248	0.138	U
1	11097-69-1	Aroclor 1254	0.138	U
1	11096-82-5	Aroclor 1260	0.138	U

Laboratory Qualifiers:
 U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060173</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060173-01</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-216-4</u>
Sample wt(Dry)/vol: <u>9.5294 g</u>	Lab Sample ID: <u>AL10010</u>
Percent Moisture: <u>10.1</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/20/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/24/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m, ID: 0.25mm; 0.25um

Injection Volume: 1.0 uL

Lab File ID: GC20F-197-7

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m, ID: 0.25mm; 0.20um

Injection Volume: 1.0 uL

Lab File ID: GC20B-157-7

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION	Q
			UG/G	
1	12674-11-2	Aroclor 1016	0.0525	U
1	11104-28-2	Aroclor 1221	0.0525	U
1	11141-16-5	Aroclor 1232	0.0525	U
1	53469-21-9	Aroclor 1242	0.0525	U
1	12672-29-6	Aroclor 1248	0.0525	U
1	11097-69-1	Aroclor 1254	0.0525	U
1	11096-82-5	Aroclor 1260	0.0525	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060173</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060173-04</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-217-5</u>
Sample wt(Dry)/vol: <u>7.6536 g</u>	Lab Sample ID: <u>AL10013</u>
Percent Moisture: <u>25.7</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/20/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/24/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m, ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-197-8

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m, ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-157-8

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION	
			UG/G	Q
1	12674-11-2	Aroclor 1016	0.0653	U
1	11104-28-2	Aroclor 1221	0.0653	U
1	11141-16-5	Aroclor 1232	0.0653	U
1	53469-21-9	Aroclor 1242	0.0653	U
1	12672-29-6	Aroclor 1248	0.0653	U
1	11097-69-1	Aroclor 1254	0.0653	U
1	11096-82-5	Aroclor 1260	0.0653	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060173</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060173-05</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-217-11</u>
Sample wt(Dry)/vol: <u>9.4350 g</u>	Lab Sample ID: <u>AL10014</u>
Percent Moisture: <u>7.30</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/20/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/24/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-197-9

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-157-9

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION	
			UG/G	Q
1	12674-11-2	Aroclor 1016	0.0530	U
1	11104-28-2	Aroclor 1221	0.0530	U
1	11141-16-5	Aroclor 1232	0.0530	U
1	53469-21-9	Aroclor 1242	0.0530	U
1	12672-29-6	Aroclor 1248	0.0530	U
1	11097-69-1	Aroclor 1254	0.0530	U
1	11096-82-5	Aroclor 1260	0.0530	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060173</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060173-07</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-218-4.5</u>
Sample wt(Dry)/vol: <u>8.6066 g</u>	Lab Sample ID: <u>AL10016</u>
Percent Moisture: <u>17.3</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/20/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/24/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m, ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-157-10

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m, ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-197-10

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION	
			UG/G	Q
1	12674-11-2	Aroclor 1016	0.0581	U
1	11104-28-2	Aroclor 1221	0.0581	U
1	11141-16-5	Aroclor 1232	0.0581	U
1	53469-21-9	Aroclor 1242	0.0581	U
1	12672-29-6	Aroclor 1248	0.0581	U
1	11097-69-1	Aroclor 1254	0.158	AF
2	11096-82-5	Aroclor 1260	0.0843	AG

Laboratory Qualifiers:

AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
 AG-Aroclor 1260 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
 U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060173</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060173-08</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-218-10</u>
Sample wt(Dry)/vol: <u>9.3694 g</u>	Lab Sample ID: <u>AL10017</u>
Percent Moisture: <u>12.0</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/20/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/24/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-197-11

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-157-11

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0534	U
1	11104-28-2	Aroclor 1221	0.0534	U
1	11141-16-5	Aroclor 1232	0.0534	U
1	53469-21-9	Aroclor 1242	0.0534	U
1	12672-29-6	Aroclor 1248	0.0534	U
1	11097-69-1	Aroclor 1254	0.0534	U
1	11096-82-5	Aroclor 1260	0.0534	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060173</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060173-10</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-219-4</u>
Sample wt(Dry)/vol: <u>7.6108 g</u>	Lab Sample ID: <u>AL10019</u>
Percent Moisture: <u>23.9</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/20/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/24/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-197-15

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-157-15

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0657	U
1	11104-28-2	Aroclor 1221	0.0657	U
1	11141-16-5	Aroclor 1232	0.0657	U
1	53469-21-9	Aroclor 1242	0.0657	U
1	12672-29-6	Aroclor 1248	0.0657	U
1	11097-69-1	Aroclor 1254	0.0657	U
1	11096-82-5	Aroclor 1260	0.0657	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060173</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060173-11</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-219-9</u>
Sample wt(Dry)/vol: <u>9.3109 g</u>	Lab Sample ID: <u>AL10020</u>
Percent Moisture: <u>10.1</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/20/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/24/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m, ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-197-16

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m, ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-157-16

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION	
			UG/G	Q
1	12674-11-2	Aroclor 1016	0.0537	U
1	11104-28-2	Aroclor 1221	0.0537	U
1	11141-16-5	Aroclor 1232	0.0537	U
1	53469-21-9	Aroclor 1242	0.0537	U
1	12672-29-6	Aroclor 1248	0.0537	U
1	11097-69-1	Aroclor 1254	0.0537	U
1	11096-82-5	Aroclor 1260	0.0537	U

Laboratory Qualifiers:
 U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060173</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060173-12</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-219-D</u>
Sample wt(Dry)/vol: <u>7.3449 g</u>	Lab Sample ID: <u>AL10021</u>
Percent Moisture: <u>27.4</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/20/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/24/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-197-17

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-157-17

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0681	U
1	11104-28-2	Aroclor 1221	0.0681	U
1	11141-16-5	Aroclor 1232	0.0681	U
1	53469-21-9	Aroclor 1242	0.0681	U
1	12672-29-6	Aroclor 1248	0.0681	U
1	11097-69-1	Aroclor 1254	0.0681	U
1	11096-82-5	Aroclor 1260	0.0681	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060173</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060173-14</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-221-5</u>
Sample wt(Dry)/vol: <u>9.4080 g</u>	Lab Sample ID: <u>AL10023</u>
Percent Moisture: <u>7.10</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/20/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/24/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-197-18

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-157-18

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION	Q
			UG/G	
1	12674-11-2	Aroclor 1016	0.0531	U
1	11104-28-2	Aroclor 1221	0.0531	U
1	11141-16-5	Aroclor 1232	0.0531	U
1	53469-21-9	Aroclor 1242	0.0531	U
1	12672-29-6	Aroclor 1248	0.0531	U
1	11097-69-1	Aroclor 1254	0.0531	U
1	11096-82-5	Aroclor 1260	0.0531	U

Laboratory Qualifiers:
 U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name: <u>Northeast Analytical, Inc.</u>	SDG No: <u>08060173</u>
ELAP ID No: <u>11078</u>	LRF ID: <u>08060173-15</u>
Matrix: <u>Soil</u>	Client ID: <u>SB-221-8.5</u>
Sample wt(Dry)/vol: <u>9.7192 g</u>	Lab Sample ID: <u>AL10024</u>
Percent Moisture: <u>9.20</u>	Date Received: <u>06/19/2008</u>
Extraction: <u>SOXHLET</u>	Date Extracted: <u>06/20/2008</u>
Conc. Extract Volume: <u>25000 uL</u>	Date Analyzed: <u>06/24/2008</u>
Method: <u>SW-846 8082 (PCB)</u>	Dilution Factor: <u>1</u>
	Sulfur Cleanup: <u>YES</u>

Column 1 Information:

GC Column: Phenomenex Capillary, MultiResidue-1, 30m; ID: 0.25mm; 0.25um
 Injection Volume: 1.0 uL
 Lab File ID: GC20F-197-19

Column 2 Information:

GC Column: Phenomenex Capillary, MultiResidue-2, 30m; ID: 0.25mm; 0.20um
 Injection Volume: 1.0 uL
 Lab File ID: GC20B-157-19

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION	Q
			UG/G	
1	12674-11-2	Aroclor 1016	0.0514	U
1	11104-28-2	Aroclor 1221	0.0514	U
1	11141-16-5	Aroclor 1232	0.0514	U
1	53469-21-9	Aroclor 1242	0.0514	U
1	12672-29-6	Aroclor 1248	0.0514	U
1	11097-69-1	Aroclor 1254	0.0514	U
1	11096-82-5	Aroclor 1260	0.0514	U

Laboratory Qualifiers:

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.



39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
 TRC SOLUTIONS - LOWELL
 650 SUFFOLK STREET
 LOWELL, MA 01852

6/27/2008
 Page 13 of 32

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD
 Date Received: 6/18/2008
 Field Sample #: SB-221-5

LIMS-BAT #: LIMIT-16916
 Job Number: 115058(EDGEOFF)

Sample ID : 08B22004 ‡Sampled : 6/17/2008
 Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Antimony	mg/kg dry wt	ND	06/24/08	OP	4.27			
Arsenic	mg/kg dry wt	ND	06/24/08	OP	2.67			
Barium	mg/kg dry wt	27.8	06/24/08	OP	5.34			
Beryllium	mg/kg dry wt	ND	06/24/08	OP	0.27			
Cadmium	mg/kg dry wt	ND	06/24/08	OP	0.27			
Chromium	mg/kg dry wt	8.59	06/24/08	OP	0.54			
Lead	mg/kg dry wt	2.49	06/24/08	OP	0.80			
Nickel	mg/kg dry wt	4.95	06/24/08	OP	0.54			
Selenium	mg/kg dry wt	ND	06/24/08	OP	5.34			
Silver	mg/kg dry wt	1.11	06/24/08	OP	0.54			
Thallium	mg/kg dry wt	ND	06/24/08	OP	3.20			
Vanadium	mg/kg dry wt	12.0	06/24/08	OP	5.34			
Zinc	mg/kg dry wt	12.3	06/24/08	OP	1.07			

Analytical Method:
 SW846 6010

SAMPLES ARE DIGESTED WITH MINERAL ACIDS AND ANALYZED BY INDUCTIVELY COUPLED PLASMA EMISSION SPECTROMETRY (ICP).

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.



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LOWELL, MA 01852

6/27/2008
Page 14 of 32

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD
Date Received: 6/18/2008
Field Sample #: ~~SB-210-4~~

LIMS-BAT #: LIMT-16916
Job Number: 115058(EDGEOFF)

Sample ID : 08B21992 ‡Sampled : 6/16/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
Mercury	mg/kg dry wt	0.096	06/20/08	SPL	0.021			

Field Sample #: ~~SB-210-4~~

Sample ID : 08B21993 ‡Sampled : 6/16/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
Mercury	mg/kg dry wt	0.188	06/20/08	SPL	0.020			

Field Sample #: ~~SB-210-4~~

Sample ID : 08B21994 ‡Sampled : 6/16/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
Mercury	mg/kg dry wt	0.082	06/20/08	SPL	0.015			

Field Sample #: SB-210-5

Sample ID : 08B21995 ‡Sampled : 6/16/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
Mercury	mg/kg dry wt	0.154	06/20/08	SPL	0.034			

Field Sample #: SB-212-4

Sample ID : 08B21996 ‡Sampled : 6/16/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
Mercury	mg/kg dry wt	0.265	06/20/08	SPL	0.199			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.



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LOWELL, MA 01852

6/27/2008
Page 15 of 32

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD
Date Received: 6/18/2008
Field Sample #: SB-212-D

LIMS-BAT #: LIMIT-16916
Job Number: 115058(EDGEOFF)

Sample ID : 08B21997 ‡Sampled : 6/16/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
Mercury	mg/kg dry wt	2.47	06/20/08	SPL	0.127			

Field Sample #: SB-214-4

Sample ID : 08B22000 ‡Sampled : 6/17/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
Mercury	mg/kg dry wt	0.272	06/20/08	SPL	0.025			

Field Sample #: SB-216-4

Sample ID : 08B22001 ‡Sampled : 6/17/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
Mercury	mg/kg dry wt	0.446	06/20/08	SPL	0.022			

Field Sample #: SB-217-5

Sample ID : 08B22002 ‡Sampled : 6/17/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
Mercury	mg/kg dry wt	0.111	06/20/08	SPL	0.024			

Field Sample #: SB-219-4

Sample ID : 08B22003 ‡Sampled : 6/17/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
Mercury	mg/kg dry wt	0.281	06/20/08	SPL	0.021			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.



39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

6/27/2008
Page 16 of 32

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD
Date Received: 6/18/2008
Field Sample #: ██████████

LIMS-BAT #: LIMT-16916
Job Number: 115058(EDGEOFF)

Sample ID : 08B21998 ‡Sampled : 6/16/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Mercury	mg/kg dry wt	0.038	06/20/08	SPL	0.021		

Field Sample #: ██████████

Sample ID : 08B21999 ‡Sampled : 6/16/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Mercury	mg/kg dry wt	ND	06/20/08	SPL	0.021		

Field Sample #: SB-221-5

Sample ID : 08B22004 ‡Sampled : 6/17/2008
Not Specified

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Mercury	mg/kg dry wt	ND	06/20/08	SPL	0.014		

Analytical Method:
SW846 3050/7471

SAMPLES ARE DIGESTED WITH ACIDS AND THEN ANALYZED BY
COLD VAPOR (FLAMELESS) ATOMIC ABSORPTION SPECTROPHOTOMETRY

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.



Appendix E

Toxicity Profiles

ZINC⁽¹⁾

Summary of Primary Health Effects in Humans and Experimental Animals

Overview of Zinc Related Health Effects	Health Effects by Route of Exposure and Endpoint of Intent							
	Death	Systemic Effects	Developmental Effects	Reproductive Effects	Genotoxic Effects	Neurological Effects	Immunological Effects	Cancer
Zinc is an essential human nutrient. Deficiency may result in failure to grow, impaired wound healing, skin lesions.	I: 30,000 ppm in air for humans in LOAEL.	I: Respiratory tract effects in humans.	I: No studies were located regarding developmental effects in humans or in animals.	I: No conclusive data was available regarding reproductive effects.	I: Slight increase in chromosomal aberrations in mice.	I: No studies were located regarding neurological effects in humans or in animals.	I: No studies were located regarding immunological effects in humans or in animals.	I: Studies were inadequate to assess the carcinogenicity of zinc in humans.
Large oral doses lead to adverse gastrointestinal effects.	O: 850 mg/kg/day for 3-13 days lethal for ferrets.	O: Gastrointestinal, hematological, and renal effects in humans.	O: Reduced fetal weight, reduction in copper levels in rats.	O: No conclusive data was available regarding reproductive effects.	O: Slight increase in chromosomal aberrations in mice.	O: Lethargy, dizziness observed in humans.	O: Impairment to immune and inflammatory response in humans.	O: Studies were inadequate to assess the carcinogenicity of zinc in humans.
Excess zinc may interfere with the ability to absorb other essential nutrients such as copper and iron.	D: No studies were located.	D: No studies were located.	D: No studies were located.	D: No studies were located.	D: No studies were located.	D: No studies were located.	D: No studies were located.	D: No studies were located.

Notes:

(1): Refer to original source (1990 ATSDR) for details

(I): Inhalation route of exposure.

(O): Oral route of exposure.

(D): Dermal route of exposure.

(2): "No information provided" indicates no information was provided by original source.

(3): "No studies were located" indicates no studies were located by original source.

BARIUM ⁽¹⁾

Summary of Primary Health Effects in Humans and Experimental Animals

Health Effects by Route of Exposure and Endpoint of Intent								
Overview of Barium Related Health Effects	Death	Systemic Effects	Developmental Effects	Reproductive Effects	Genotoxic Effects	Neurological Effects	Immunological Effects	Cancer
Small amounts of barium can produce difficulties in pressure, changes in heart rhythm, changes in nerve reflexes.	<p>I: No studies were located regarding lethality in humans or in animals.</p> <p>O: Acute oral LD50 ranges from 132 to 277 mg/kg/day (rat). Indicates that barium is toxic by acute oral gavage exposure.</p>	<p>I: Minor respiratory effects, G.I. effects, hematological effects.</p> <p>O: Respiratory effects, cardiovascular, gastrointestinal, hematological, musculoskeletal, renal, and minor hepatic effects.</p> <p>D: No conclusive information was available regarding systemic effects.</p>	<p>I: Reduced survival, underdevelopment, lowered, weight gain, and various hematological alterations (rats).</p> <p>O: Limited information was available regarding developmental effects in humans or in animals.</p> <p>D: No studies were located regarding developmental effects in humans or in animals.</p>	<p>I: Disturbance in spermatogenesis, decreased number of sperm (rat).</p> <p>O: No adverse effects were noted at doses as high as 135 mg/kg/day.</p> <p>D: No studies were located regarding reproductive effects in humans or in animals.</p>	<p>I: No studies were located regarding genotoxic effects in humans or in animals.</p> <p>O: No studies were located regarding genotoxicity in humans or in animals.</p> <p>D: No studies were located regarding genotoxic effects in humans or in animals.</p>	<p>I: Limited information is available. Absence of deep tendon reflexes was observed.</p> <p>O: Numbness and tingling around the mouth and neck.</p> <p>D: No studies were located regarding neurological effects in humans or in animals.</p>	<p>I: No studies were located regarding immunological effects in humans or in animals.</p> <p>O: Limited data is available. Acute gavage exposure of rats to doses less than 198 mg/kg/day was not associated with changes in thymus weight.</p> <p>D: No studies were located regarding immunological effects in humans or in animals.</p>	<p>I: No studies were located regarding cancer in humans or in animals.</p> <p>O: No conclusive information was provided regarding carcinogenic effects.</p> <p>D: No adequate human or animal data were available for evaluating carcinogenicity.</p>

Notes:

- (1): Refer to original source (1990 ATSDR) for details
- (I): Inhalation route of exposure.
- (O): Oral route of exposure.
- (D): Dermal route of exposure.
- (2): "No information provided" indicates no information was provided by original source.
- (3): "No studies were located" indicates no studies were located by original source.

C₉-C₁₈ ALIPHATICS ⁽¹⁾ (Based on the Toxicity of Surrogate Compound Nonane)

Summary of Primary Health Effects in Humans and Experimental Animals

Health Effects by Route of Exposure and Endpoint of Intent								
Overview of C ₉ -C ₁₈ Aliphatics Related Health Effects	Death	Systemic Effects	Developmental Effects	Reproductive Effects	Genotoxic Effects	Neurological Effects	Immunological Effects	Cancer
<p>The C9-C18 aliphatics are considered an order of magnitude less toxic with respect to neurotoxicity compared to C5-C8 aliphatics.</p> <p>Little toxicological data exists for Nonane. The RID was based on the comparison of one unhalation rat study for nonane compared to one inhalation mouse study for hexane.</p>	<p>I: There are no data available regarding lethality in humans or animals.</p> <p>O: There are no data available regarding lethality in humans or animals.</p> <p>D: No studies were located regarding lethality in humans or animals.</p>	<p>I: No studies were located regarding systemic effects in humans or animals.</p> <p>O: No studies were located regarding systemic effects in humans or animals.</p> <p>D: No studies were located regarding systemic effects in humans or animals.</p>	<p>I: There are no data available regarding developmental effects in humans or animals.</p> <p>O: There are no data available regarding developmental effects in humans or animals.</p> <p>D: There are no data available regarding developmental effects in humans or animals.</p>	<p>I: No studies were located regarding reproductive effects in humans or in animals.</p> <p>O: No studies were located regarding reproductive effects in humans or in animals.</p> <p>D: No studies were located regarding reproductive effects in humans or in animals.</p>	<p>I: No studies were located regarding genotoxic effects in humans or in animals.</p> <p>I: No studies were located regarding genotoxic effects in humans or in animals.</p> <p>I: No studies were located regarding genotoxic effects in humans or in animals.</p>	<p>I: No studies were located regarding neurological effects in humans. A NOAEL of 590 ppm was established based on a 13-week rat inhalation study.</p> <p>O: No studies were located regarding neurological effects in humans or in animals.</p> <p>D: No studies were located regarding neurological effects in humans or in animals.</p>	<p>I: No studies were located regarding immunological effects in humans or animals.</p> <p>O: No studies were located regarding immunological effects in humans or animals.</p> <p>D: No studies were located regarding immunological effects in humans or animals.</p>	<p>I: No studies were located regarding carcinogenic effects in humans or animals.</p> <p>O: No studies were located regarding carcinogenic effects in humans or animals.</p> <p>O: No studies were located regarding carcinogenic effects in humans or animals.</p>

Notes:

(1): Refer to original source (Interim Final Petroleum Report: Development of Health-Based Alternative to the Total Petroleum Hydrocarbon (TPH) Parameter (MADEP, 1994)) for details.

(I): Inhalation route of exposure.

(O): Oral route of exposure.

(D): Dermal route of exposure.

C₁₁-C₂₀ AROMATICS⁽¹⁾ (Based on the Toxicity of Surrogate Compound Pyrene)

Summary of Primary Health Effects in Humans and Experimental Animals

Health Effects by Route of Exposure and Endpoint of Intent								
Overview of Pyrene Related Health Effects	Death	Systemic Effects	Developmental Effects	Reproductive Effects	Genotoxic Effects	Neurological Effects	Immunological Effects	Cancer
	I: No studies were located regarding lethality in humans or animals.	I: No studies were located regarding systemic effects in humans or animals.	I: No studies were located regarding developmental effects in humans or in animals.	I: No studies were located regarding reproductive effects in humans or in animals.	I: No studies were located regarding genotoxic effects in humans or in animals.	I: No studies were located regarding neurological effects in humans or in animals.	I: No studies were located regarding immunological effects in humans or in animals.	I: No studies were located regarding carcinogenic effects in humans or in animals.
	O: No studies were located regarding lethality in humans.	O: Minimal information is available regarding systemic effects in humans or animals.	O: No studies were located regarding developmental effects in humans.	O: No studies were located regarding reproductive effects in humans.	O: No studies were located regarding genotoxic effects in humans.	O: No studies were located regarding neurological effects in humans or in animals.	O: No studies were located regarding immunological effects in humans or in animals.	O: No studies were located regarding carcinogenic effects in humans.
	D: No studies were located regarding lethality in humans or animals.	D: Can cause skin disorders.	D: No studies were located regarding developmental effects in humans.	D: No studies were located regarding reproductive effects in humans or in animals.	D: No studies were located regarding genotoxic effects in humans.	D: No studies were located regarding neurological effects in humans or in animals.	D: No studies were located regarding immunological effects in humans or in animals.	D: No studies were located that gave evidence of a direct association between dermal exposure and cancer induction.

Notes:

(1): Refer to original source (1990 ATSDR) for details.

(I): Inhalation route of exposure.

(O): Oral route of exposure.

(D): Dermal route of exposure.

C₁₉-C₃₆ ALIPHATICS⁽¹⁾ (Based on the Toxicity of Surrogate Compound Eicosane)

Summary of Primary Health Effects in Humans and Experimental Animals

Health Effects by Route of Exposure and Endpoint of Intent								
Overview of C ₁₉ -C ₃₆ Aliphatics Related Health Effects	Death	Systemic Effects	Developmental Effects	Reproductive Effects	Genotoxic Effects	Neurological Effects	Immunological Effects	Cancer
<p>Although eicosane was identified as a reference compound, there is no quantitative toxicity available for eicosane or other C₁₉-C₃₆ aliphatics.</p> <p>A subchronic toxicity study of white mineral oil was shown to be of "low toxicity". The RID was based on the NOAEL for white mineral oil.</p>	<p>I: There are no data available regarding lethality in humans or animals.</p> <p>O: There are no data available regarding lethality in humans or animals.</p> <p>D: No studies were located regarding lethality in humans or animals.</p>	<p>I: No studies were located regarding systemic effects in humans or animals.</p> <p>O: No studies were located regarding systemic effects in humans or animals.</p> <p>D: No studies were located regarding systemic effects in humans or animals.</p>	<p>I: There are no data available regarding developmental effects in humans or animals.</p> <p>O: There are no data available regarding developmental effects in humans or animals.</p> <p>D: There are no data available regarding developmental effects in humans or animals.</p>	<p>I: No studies were located regarding reproductive effects in humans or in animals.</p> <p>O: No studies were located regarding reproductive effects in humans or in animals.</p> <p>D: No studies were located regarding reproductive effects in humans or in animals.</p>	<p>I: No studies were located regarding genotoxic effects in humans or in animals.</p> <p>I: No studies were located regarding genotoxic effects in humans or in animals.</p> <p>I: No studies were located regarding genotoxic effects in humans or in animals.</p>	<p>I: No studies were located regarding neurological effects in humans. A NOAEL of 590 ppm was established based on a 13-week rat inhalation study.</p> <p>O: No studies were located regarding neurological effects in humans or in animals.</p> <p>D: No studies were located regarding neurological effects in humans or in animals.</p>	<p>I: No studies were located regarding immunological effects in humans or animals.</p> <p>O: No studies were located regarding immunological effects in humans or animals.</p> <p>D: No studies were located regarding immunological effects in humans or animals.</p>	<p>I: No studies were located regarding carcinogenic effects in humans or animals.</p> <p>O: No studies were located regarding carcinogenic effects in humans or animals.</p> <p>O: No studies were located regarding carcinogenic effects in humans or animals.</p>

Notes:

(1): Refer to original source (Interim Final Petroleum Report: Development of Health-Based Alternative to the Total Petroleum Hydrocarbon (TPH) Parameter (MADEP, 1994)) for details.

(I): Inhalation route of exposure.

(O): Oral route of exposure.

(D): Dermal route of exposure.

LEAD ⁽¹⁾

Summary of Primary Health Effects in Humans and Experimental Animals

Health Effects by Route of Exposure and Endpoint of Intent								
Overview of Lead Related Health Effects	Death	Systemic Effects	Developmental Effects	Reproductive Effects	Genotoxic Effects	Neurological Effects	Immunological Effects	Cancer
Lead is especially dangerous to unborn children. More of the lead swallowed by children enters their bodies and they are more sensitive to its effects.	Lethality data for oral exposure is limited to LDLO values. The lowest LDLO value for a dog is 191 mg/kg.	The end points of greatest concern for human health after oral exposure are heme synthesis, and erythropoiesis, neurobehavioral toxicity, cardiovascular toxicity, and vitamin D metabolism and growth.	Studies provide no evidence that oral exposure to lead results in malformations.	Caused irregular estrous cycles in females , testicular damage was seen in male rats.	Conflicting information is available, a clastogenic effect has been suggested.	Nerve conduction velocity is slowed. In children effects such as lower IQ levels have been associated with lead exposure.	No information is provided.	Statistically increased incidences of kidney tumors.

Notes:

(1): Refer to original source (1990 ATSDR) for details

(2): "No information provided" indicates no information was provided by original source.

(3): "No studies were located" indicates no studies were located by original source.

MERCURY ⁽¹⁾

Summary of Primary Health Effects in Humans and Experimental Animals

Overview of Mercury Related Health Effects	Health Effects by Route of Exposure and Endpoint of Intent							
	Death	Systemic Effects	Developmental Effects	Reproductive Effects	Genotoxic Effects	Neurological Effects	Immunological Effects	Cancer
<p>Long term exposure to organic or inorganic mercury can irreversibly damage the brain, kidneys, or developing fetuses.</p> <p>The form of mercury and the way people are exposed to it influence which of these health effects will be more severe.</p>	<p>I: Following acute exposure to high concentrations death was attributed to loss of respiratory function as a result of severe damage to pulmonary tissue.</p> <p>O: The lethal doses ranged from 29 to at least 50 mg/kg.</p> <p>D: No studies were located regarding lethality in humans or experimental animals.</p>	<p>I: Serious cardiovascular and pulmonary effects in humans. Gastrointestinal, hepatic and renal effects.</p> <p>O: Kidney and central nervous system effects.</p> <p>D: Studies report the occurrence of neurotoxic and nephrotoxic effects following dermal exposure.</p>	<p>I: Studies in humans following prenatal exposure to mercury suggest chronic exposure results in increased frequencies of menstrual disturbances and spontaneous abortions.</p> <p>O: No studies were located regarding developmental effects in humans. In animals, increased percentage of fetal resorptions were observed (hamsters).</p> <p>D: No studies were located regarding developmental effects in humans or experimental animals.</p>	<p>I: Exposure to metallic mercury causes prolongation of estrus cycles.</p> <p>O: No studies were located regarding developmental effects in humans. In animals 1 mg /k/day affected male fertility.</p> <p>D: No studies were located regarding reproductive effects in humans or experimental animals.</p>	<p>I: Increased incidence of structural chromosomal anomalies.</p> <p>O: A positive correlation between blood mercury levels and increased frequencies of chromosomal aberrations was reported.</p> <p>D: No studies were located regarding genotoxic effects in humans or experimental animals.</p>	<p>I: Central nervous system is critical system for elemental mercury.</p> <p>O: Studies failed to reveal any evidence of neurotoxicity in mice administered 1 or 3 mg/kg/day of HgCl₂.</p> <p>D: Exposure via the dermal route is one of the most common routes of exposure, therefore symptom such as acrodynia may be related to the dermal route of exposure.</p>	<p>I: No studies were located regarding immunological effects in humans or in animals.</p> <p>O: Evidence indicates immune system is affected.</p> <p>D: Contact allergies have been reported however results are not conclusive.</p>	<p>I: There were no reliable studies indicating that inorganic or organic mercury are carcinogenic.</p> <p>O: There were no reliable studies indicating that inorganic or organic mercury are carcinogenic.</p> <p>D: No studies were located regarding carcinogenic effects in humans or in animals.</p>

Notes:

- (1): Refer to original source (1990 ATSDR) for details
- (I): Inhalation route of exposure.
- (O): Oral route of exposure.
- (D): Dermal route of exposure.
- (2): "No information provided" indicates no information was provided by original source.
- (3): "No studies were located" indicates no studies were located by original source.

NICKEL ⁽¹⁾

Summary of Primary Health Effects in Humans and Experimental Animals

Overview of Nickel Related Health Effects	Health Effects by Route of Exposure and Endpoint of Intent							
	Death	Systemic Effects	Developmental Effects	Reproductive Effects	Genotoxic Effects	Neurological Effects	Immunological Effects	Cancer
Nickel can cause effects on the lung and the immune system, as well as asthma in sensitive people.	I: Acute mice 1.7 mg/m ³ , acute rat 3.3 mg/m ³ .	I: Lung target organ - increased risk of lung cancer, asthma and nasal effects.	I: Reduced fetal body weight (rat).	I: Testicular effects in rats and mice.	I: Limited information available.	I: No studies were located regarding immunological effects in humans or in animals.	I: No studies were located regarding immunological effects in humans or in animals.	I: Occupational studies show an increased risk of nasal, laryngeal, and lung cancer in humans.
Inhalation causes cancer in the lung, nasal cavity and voice box.	O: Acute oral lethality in humans by poisoning is 220 mg/kg. D: No data were available.	O: Hematological system is target organ - increased white blood cell count and increased platelet count (rats). D: Contact dermatitis observed in humans.	O: A reduction in mean birth weight observed in mice. D: No studies were located.	O: A loss of maternal weight, increased spontaneous abortions (mice). D: Data were inadequate. D: No studies were located.	O: No studies were located regarding genotoxic effects in humans or animals. D: No studies were located.	O: No conclusive information was provided regarding neurological effects. D: No studies were located.	O: No studies were located regarding immunological effects in humans or in animals. D: No studies were located.	O: Available studies do not indicate carcinogenicity to animals, but the data are inadequate due to limited data. D: No studies were located.

Notes:

(1): Refer to original source (1988 ATSDR) for details

(I): Inhalation route of exposure.

(O): Oral route of exposure.

(D): Dermal route of exposure.

(2): "No information provided" indicates no information was provided by original source.

(3): "No studies were located" indicates no studies were located by original source.

PCBs⁽¹⁾

Summary of Primary Health Effects in Humans and Experimental Animals

Overview of PCBs Related Health Effects	Health Effects by Route of Exposure and Endpoint of Intent							
	Death	Systemic Effects	Developmental Effects	Reproductive Effects	Genotoxic Effects	Neurological Effects	Immunological Effects	Cancer
Exposure at low levels may cause eye and throat irritation.	I: LC50 for rats is reported to be 4,000 ppm and 13,367 ppm exposures.	I: Pulmonary and ocular effects. Respiratory, hematological, hepatic effects.	I: Exposure for 24 hr/day for 9 days at doses ranging from 138 to 552 ppm produced fetal resorption and retardation of skeletal development.	I: No conclusive data was available regarding reproductive effects.	I: No studies were located regarding genotoxic effects in humans or in animals.	I: Dizziness, vertigo. Central nervous toxicity.	I: No studies were located regarding immunological effects in humans or in animals.	I: No association has been found between the occurrence of cancer in humans and occupational exposure.
Exposure to high levels may cause decreased movement and dizziness.	O: LD50 has been calculated to be 4,728 mg/kg (rats).	O: No conclusive data were provided regarding systemic effects.	O: No studies were located regarding developmental effects in humans or in animals.	O: Acute oral exposure to 500 or 1,000 mg/kg decreases peripheral hormone levels and blocks the estrus cycle (rats).	O: No studies were located regarding genotoxic effects in humans or animals.	O: No conclusive information was provided regarding neurological effects.	O: No studies were located regarding immunological effects in humans or in animals.	O: A statistically significant increase in total malignant tumors were reported in females administered 500 mg/kg/day for 104 weeks.
Short-term exposure to high levels may cause liver, and kidney damage.	D: Dermal LD50 is 15,415 mg/kg.	D: No studies were located.	D: No studies were located.	D: No studies were located.	D: No studies were located.	D: No studies were located.	D: No studies were located.	D: No studies were located.

Notes:

(1): Refer to original source (1990 ATSDR) for details

(I): Inhalation route of exposure.

(O): Oral route of exposure.

(D): Dermal route of exposure.

(2): "No information provided" indicates no information was provided by original source.

(3): "No studies were located" indicates no studies were located by original source.

SILVER ⁽¹⁾

Summary of Primary Health Effects in Humans and Experimental Animals

Overview of Silver Related Health Effects	Health Effects by Route of Exposure and Endpoint of Intent							
	Death	Systemic Effects	Developmental Effects	Reproductive Effects	Genotoxic Effects	Neurological Effects	Immunological Effects	Cancer
<p>No adverse health effect have been reported in humans. Some areas of the skin and other body tissues may turn gray after many exposures.</p>	<p>I: No studies were located regarding lethality in humans or in animals.</p> <p>O: Death was reported in rats receiving 222.2 mg/kg/day of silver nitrate over a longer duration .</p> <p>D: No significant studies were located regarding lethality in humans or in animals.</p>	<p>I: Respiratory effects have been observed infrequently in humans.</p> <p>O: Gray discoloration of the skin has been observed .</p> <p>D: Exposure to silver for extended periods of time or repeated exposure can lead to local skin discoloration.</p>	<p>I: No studies were located regarding developmental effects in humans or in animals.</p> <p>O: No studies were located regarding developmental effects in humans or in animals.</p> <p>D: No studies were located regarding developmental effects in humans or in animals.</p>	<p>I: No studies were located regarding reproductive effects in humans or in animals.</p> <p>O: No significant studies were located regarding reproductive effects in humans or in animals.</p> <p>D: No studies were located regarding reproductive effects in humans or in animals.</p>	<p>I: No studies were located regarding genotoxic effects in humans or in animals.</p> <p>O: No studies were located regarding genotoxic effects in humans or in animals.</p> <p>D: No studies were located regarding genotoxic effects in humans or in animals.</p>	<p>I: No studies were located regarding neurological effects in humans or in animals.</p> <p>O: Direct correlation between the exposure to silver and neurological effects has not been determined.</p> <p>O: No studies were located regarding neurological effects in humans or in animals.</p>	<p>I: No studies were located regarding immunological effects in humans or in animals.</p> <p>O: No information was provided.</p> <p>D: Medical case histories describe mild allergic responses. Sensitization has been observed.</p>	<p>I: No studies were located regarding the carcinogenicity of silver.</p> <p>O: No studies were located regarding the carcinogenicity of silver.</p> <p>D: No studies were located regarding the carcinogenicity of silver.</p>

Notes:

- (1): Refer to original source (1990 ATSDR) for details
- (I): Inhalation route of exposure.
- (O): Oral route of exposure.
- (D): Dermal route of exposure.
- (2): "No information provided" indicates no information was provided by original source.
- (3): "No studies were located" indicates no studies were located by original source.

VANADIUM ⁽¹⁾

Summary of Primary Health Effects in Humans and Experimental Animals

Overview of Vanadium Related Health Effects	Health Effects by Route of Exposure and Endpoint of Intent							
	Death	Systemic Effects	Developmental Effects	Reproductive Effects	Genotoxic Effects	Neurological Effects	Immunological Effects	Cancer
Exposure to vanadium appears to have the greatest effect on the respiratory system, resulting in mucus formation and cough.	<p>I: No studies were located regarding death in humans. One animal study was located. This study determined the LD₅₀ for rabbits to be a single acute exposure to 114 mg/m³ as vanadium pentoxide.</p> <p>O: No studies were located regarding death in humans. An LD₅₀ of 41 mg/kg was set for rats. Chronic exposure of up to 4.1 mg vanadium/kg as vanadyl sulfate in food or water did not affect mortality in rats or mice.</p> <p>D: No studies were located regarding death in humans or animals following exposure.</p>	<p>I: Respiratory effects, such as mucus formation and coughing followed exposure to 0.06 mg/m³. No significant studies were located regarding cardiovascular, gastro-intestinal, hematological, musculo-skeletal, hepatic or renal effects. Moderate eye irritation when exposed to vanadium dusts was reported, as well as weight loss.</p> <p>O: Thallium ingestion of 0.47-1.3 mg vanadium/kg as ammonium vanadyl tartrate for 45-68 days resulted in intestinal cramping and diarrhea. However, workers were exposed to other chemicals a well.</p> <p>D: No studies were located regarding systemic effects in humans or animals following exposure.</p>	<p>I: No studies were located regarding developmental effects in humans or animals.</p> <p>O: No studies were located regarding human exposure. Rats exposed to sodium metavanadate showed an increase in facial and dorsal hemorrhages. The significance of this finding is not known.</p> <p>D: No studies were located regarding developmental effects in humans or in animals.</p>	<p>I: No studies were located regarding respiratory effects in humans or animals.</p> <p>O: No studies were located regarding reproductive effects in humans. Gavage doses of sodium metavanadate given to male and female rats before mating and to female rats during gestation and lactation did not affect fertility, reproduction, or parturition.</p> <p>D: No studies were located regarding reproductive effects in humans or in animals.</p>	<p>I: No studies were located regarding genotoxic effects in humans or animals.</p> <p>O: No studies were located regarding genotoxic effects in humans and animals.</p> <p>D: No studies were located regarding genotoxic effects in humans or in animals.</p>	<p>I: No neurological complaints were made after an acute exposure. However, some workers did complain of dizziness, depression, headache or tremors of the fingers and arms, which may or may not have been due to vanadium.</p> <p>O: No studies were located regarding neurological effects in humans or animals.</p> <p>D: No studies were located regarding neurological effects in humans or animals.</p>	<p>I: One study found no significant effects regarding allergic reactions in humans. No significant effects were found on the spleen of rabbits.</p> <p>O: No studies were located regarding immunological effects in humans. No significant studies regarding animal exposure were located.</p> <p>D: No studies were located regarding immunological effects in humans or animals.</p>	<p>I: No studies were located regarding carcinogenic effects in humans or animals.</p> <p>O: No studies were located that specifically studied cancer in humans or animals. However, some studies that were designed to test other end points noted no increase in tumor frequency in rats and mice chronically exposed to 0.5-4.1 mg vanadium/kg as vanadyl sulfate in drinking water. Although these oral studies were negative for carcinogenicity, they were inadequate for evaluating carcinogenic effects.</p> <p>D: No studies were located regarding the carcinogenicity of vanadium in humans or animals.</p>

Notes:

- (1): Refer to original source (1990 ATSDR) for details
- (I): Inhalation route of exposure.
- (O): Oral route of exposure.
- (D): Dermal route of exposure.
- (2): "No information provided" indicates no information was provided by original source.
- (3): "No studies were located" indicates no studies were located by original source.

A blue L-shaped line is positioned in the top-left corner of the page, consisting of a vertical line extending downwards and a horizontal line extending to the right.

Appendix F

AUL

Activity and Use Limitation (AUL)
recorded on March 11, 2013

Form 1075

NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: Liberty Street Parcel, New Bedford, MA

DEP Release Tracking No.(s): 4-15685 (partial)

This Notice of Activity and Use Limitation ("Notice") is made as of this 5th day of March, 2013, by City of New Bedford, 133 William Street, New Bedford, MA 02740, together with its successors and assigns (collectively "Owner").

W I T N E S S E T H:

WHEREAS, City of New Bedford, MA, is the owner in fee simple of those certain parcels of land located in New Bedford, Bristol County, Massachusetts with the buildings and improvements thereon, pursuant to deeds recorded with the Bristol County Registry of Deeds in Book 182, Page 47 (Map 76, Lot 256), and Book 407, Page 177 (Map 70, Lots 2 and 227);

WHEREAS, said parcels of land, which is more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property") is subject to this Notice of Activity and Use Limitation. The Property is shown on a plan recorded in the Bristol County Registry of Deeds in Plan Book 170, Plan 27;

WHEREAS, the Property comprises part of a disposal site as the result of a release of oil and/or hazardous material. Exhibit B is a sketch plan showing the relationship of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for the Disposal Site in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and (b) the restriction of certain activities occurring in, on, through, over or under the Property. The basis for such restrictions is set forth in an Activity and Use Limitation Opinion ("AUL Opinion"), dated October 22, 2012, (which is attached hereto as Exhibit C and made a part hereof);

NOW, THEREFORE, notice is hereby given that the activity and use limitations set forth in said AUL Opinion are as follows:

1. Activities and Uses Consistent with the AUL Opinion. The AUL Opinion provides that a condition of No Significant Risk to health, safety, public welfare or the environment exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) so long as any of the following activities and uses occur on the Property:

(i) Activities consistent with use of the property as a DPI and DPF maintenance yard including but not limited to parking, storage of equipment and materials such as road salt and sand and use of the property for solar panels.

(ii) Site maintenance that does not cause or result in the removal of soil. Future construction activities, if any, are required to be accomplished under plans described in (iv) below;

(iii) Any emergency utility repair, construction and/or other work (5 working days or less) in soil of any depth provided that promptly following the completion of the project such soils are returned to their original location or properly disposed of off-site and are replaced with acceptable soil as determined by a Licensed Site Professional (LSP);

(iv) Any subsurface utility, construction and/or other work, other than emergency repair, in soil of any depth provided that appropriate Soil Management and Health and Safety Plans are developed and implemented prior to initiation of such activities and provided that following the completion of the project such soils are returned promptly to their original location or properly disposed of off-site and are replaced with acceptable soil as determined by an LSP;

(v) Such other activities or uses which, in the Opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare or the environment than the activities and uses set forth in this Paragraph; and

(vi) Such other activities and uses not identified in Paragraph 2 as being Activities and Uses Inconsistent with the AUL.

2. Activities and Uses Inconsistent with the AUL Opinion. Activities and uses which are inconsistent with the objectives of this Notice of Activity and Use Limitation, and which, if implemented at the Property, may result in a significant risk of harm to health, safety, public welfare or the environment or in a substantial hazard, are as follows:

(i) Use of the Property for residential use;

(ii) Use of site soils for cultivation of fruits, vegetables or other produce destined for human consumption; and

(iii) Activities and/or uses which involve the disturbance of the urban fill material, other than emergency repairs, without prior development of a Soil Management Plan and Health and Safety Plan in accordance with the Obligations and Conditions of this Notice.

3. Obligations and Conditions Set Forth in the AUL Opinion. If applicable, obligations and/or conditions to be undertaken and/or maintained at the Property to maintain a condition of No Significant Risk as set forth in the AUL Opinion shall include the following:

(i) Prior to the performance of any non-emergency intrusive subsurface activities within the designated AUL area including, but not limited to, the excavation of soil at any depth, a written Soil Management Plan and a written Health and Safety Plan must be implemented in accordance with the following guidelines:

(a) The Soil Management Plan shall be prepared by a LSP and must describe soil excavation, handling, storage, transport and disposal procedures, and must include a description of the engineering controls and air monitoring procedures needed to protect off-site receptors from exposures to fugitive dust and particulates and exposures to contaminated material via dermal contact. Workers who may come in contact with the soil should be appropriately trained on the requirements of the Soil Management Plan, and the Soil Management Plan must remain available on site throughout the course of the project. The Soil Management Plan must be in accordance with the LSP Opinion attached hereto as Exhibit C; and

(b) The Health and Safety Plan must be prepared by a Certified Industrial Hygienist or other qualified professional familiar with worker health and safety procedures and requirements. The Health and Safety Plan should specify the type of personal protection, engineering controls, and environmental monitoring necessary to prevent worker and other potential receptor exposures to soil through ingestion, dermal contact and inhalation. Workers who may come in contact with the soil should be appropriately trained on the requirements of the Health and Safety Plan, and the Health and Safety Plan must remain available on site throughout the course of the project.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Property which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by an LSP who shall render an Opinion, in accordance with 310 CMR 40.1080 *et seq.*, as to whether the proposed changes will present a significant risk of harm to health, safety, public welfare or the environment. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of a Response Action Outcome. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk

of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by an LSP in accordance with 310 CMR 40.1080 *et seq.*, and without additional response actions, if necessary, to achieve or maintain a condition of No Significant Risk or to eliminate substantial hazards.

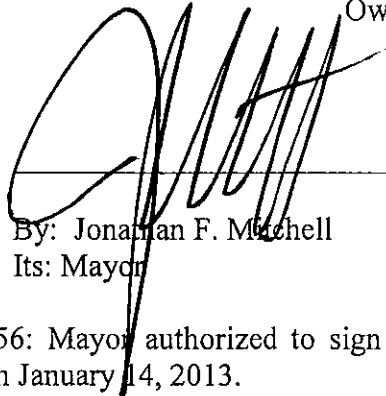
If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by an LSP in accordance with 310 CMR 40.1080 *et seq.*, the owner or operator of the Property subject to this Notice at the time that the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation Into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed.

Owner hereby authorizes and consents to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned LSP, and recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office.

WITNESS the execution hereof under seal this 5th day of March, 2013.

Owner: *City of New Bedford*


By: Jonathan F. Mitchell
Its: Mayor

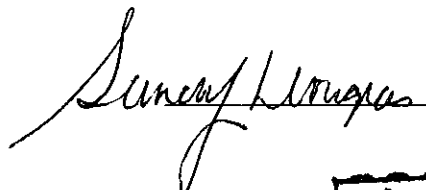
Map 70, Lot 227, and Map 76, Lot 256: Mayor authorized to sign on behalf of the School Committee by School Committee vote on January 14, 2013.

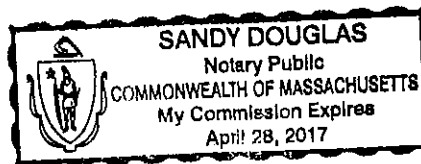
Map 70, Lot 2: Mayor authorized to sign on behalf of Cemetery Board by Cemetery Board vote on February 20, 2013.

COMMONWEALTH OF MASSACHUSETTS

Bristol, ss 3/5, 2013


On this 5th day of March, 2013 before me, the undersigned notary public, personally appeared Jonathan F. Mitchell proved to me through satisfactory evidence of identification, which were personal knowledge, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose.

 (official signature and seal of notary)



The undersigned LSP hereby certifies that he executed the aforesaid Activity and Use Limitation Opinion attached hereto as Exhibit C and made a part hereof and that in his Opinion this Notice of Activity and Use Limitation is consistent with the terms set forth in said Activity and Use Limitation Opinion.

Date: 10/22/2012



William R. Swanson, P.E., LSP



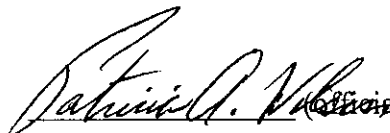
LSP SEAL

COMMONWEALTH OF MASSACHUSETTS

Middlesex County
Bristol, ss

Oct. 22, 2012

On this 22nd day of October, 2012 before me, the undersigned notary public, personally appeared William R. Swanson proved to me through satisfactory evidence of identification, which were MA Drivers License, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose.



(Official signature and seal of notary)

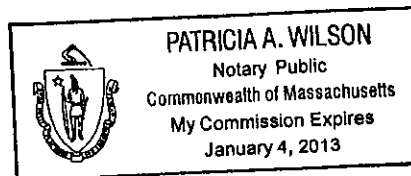


Exhibit A

LEGAL DESCRIPTION
AUL Area – Liberty Street
NEW BEDFORD, MASSACHUSETTS

Beginning at a point at the northeasterly corner of the intersection of Liberty Street and Parker Street, said point being the southwesterly corner of Lot 2, Map 70, land of the City of New Bedford, it being the southwesterly corner of the area herein described;

THENCE: N 28° 18' 30" W a distance of 1,777.2' along the easterly sideline of Liberty Street to a point;

THENCE: N 81° 14' 30" E a distance of 130.9' to a point;

THENCE: S 22° 30' 50" E a distance of 39.7' to a point;

THENCE: S 28° 33' 46" E a distance of 537.9' to a point;

THENCE: S 27° 18' 04" E a distance of 72.7' to a point;

THENCE: S 28° 36' 51" E a distance of 131.5' to a point;

THENCE: S 28° 05' 27" E a distance of 295.4' to a point;

THENCE: S 28° 31' 29" E a distance of 79.4' to a point;

THENCE: S 28° 16' 20" E a distance of 215.4' to a point;

THENCE: S 28° 06' 06" E a distance of 276.4' to a point;

THENCE: S 28° 00' 23" E a distance of 129.9' to a point in the easterly sideline of Parker Street;

THENCE: S 82° 24' 40" W a distance of 126.7' along the northerly side line of Parker Street to the point of beginning.

Said AUL area contains 4.910 +/- acres.

Said Area of Activity And Use Limitation is shown on a plan entitled: "Activity And Use Limitation Plan Of Land Liberty Street New Bedford, Massachusetts" dated: July 20, 2012; Prepared by Land Planning, Inc.; to be recorded at the Bristol County Registry of Deeds Southern District.

Exhibit B

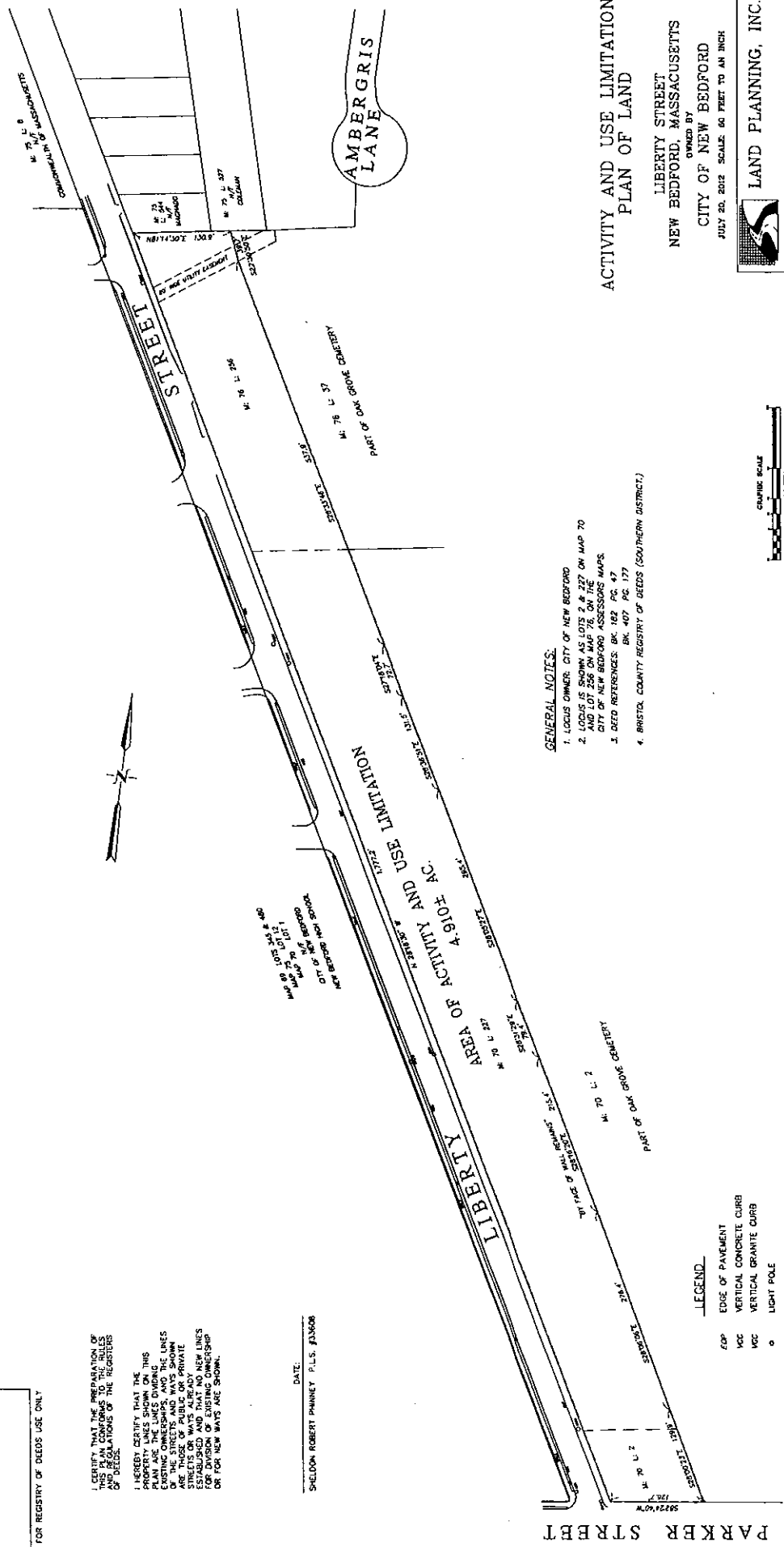
Site Plan

FOR REGISTRY OF DEEDS USE ONLY

I HEREBY CERTIFY THAT THE PROPERTY LINES SHOWN ON THIS MAP ARE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS.

I HEREBY CERTIFY THAT THE PROPERTY LINES SHOWN ON THIS MAP ARE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS. I HAVE ALSO CERTIFIED THE EXISTING OWNERSHIPS, AND THE LINES OF THE STREETS AND WAYS SHOWN ON THIS MAP. I HAVE ALSO CERTIFIED THE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW LINES OF STREETS OR WAYS ARE SHOWN OR FOR NEW WAYS ARE SHOWN.

SHELDON ROBERT PHINNEY P.L.S. #3306
DATE: _____



- GENERAL NOTES.**
1. LOCUS OWNER: CITY OF NEW BEDFORD
 2. LOCUS IS SHOWN AS LOTS 2 & 227 ON MAP 70 AND LOT 226 ON MAP 76, ON THE CITY OF NEW BEDFORD ASSESSORS MAPS
 3. DEED REFERENCES: BK 182 PG 47 BK 407 PG 177
 4. BRISTOL COUNTY REGISTRY OF DEEDS (SOUTHERN DISTRICT.)

- LEGEND.**
- EOP — EDGE OF PAVEMENT
 - VCC — VERTICAL CONCRETE CURB
 - VGC — VERTICAL GRANITE CURB
 - o — LIGHT POLE
 - PL. — CHAIN LINK FENCE



**ACTIVITY AND USE LIMITATION
PLAN OF LAND**

LIBERTY STREET
NEW BEDFORD, MASSACHUSETTS
OWNED BY
CITY OF NEW BEDFORD
JULY 20, 2012 SCALE: 60 FEET TO AN INCH



LAND PLANNING, INC.
HANSON: 115 MAIN STREET, 02834 (781) 284-4144
BELLINGHAM: 187 BARTFORD AVE 02809 (603) 460-4130
K. DRAFTER: 214 WOLFEZETTE ST. 01038 (603) 888-8688

LOG NO.	PL-2859	DATE	1/28/2012
DWG NAME	ACTIVITY AND USE LIMITATION		
CALCS	G. CLANCE		
SHEET NO.	1	TOTAL	1

Exhibit C

Activity and Use Limitation Opinion

In accordance with the requirements of 310 CMR 40.1074, this Licensed Site Professional (LSP) Opinion has been prepared to support a Notice of Activity and Use Limitation (AUL) for the Liberty Street parcel property ("the Property") for the site listed as RTN 4-15685 (partial) located on Liberty Street in New Bedford, Massachusetts.

Site History

The site is a relatively narrow parcel located along and between Liberty Street and Oak Grove Cemetery in New Bedford, Massachusetts. The New Bedford High School (NBHS) is located across Liberty Street to the west. The site is currently owned by the City of New Bedford and operated as a maintenance and storage yard for the Department of Public Infrastructure (DPI) and Public Facilities (DPF). The proposed future use of the site is for solar panels. A site plan is provided in **Exhibit B**.

The subject site (Liberty Street Parcel) is managed by Massachusetts Department of Environmental Protection (MassDEP) under Release Tracking Number (RTN) 4-15685. The overall site for RTN 4-15685 consists of multiple properties owned by the City. The RTN has a Special Project Designation by the MassDEP.

The compounds of concern for the overall site for RTN 4-15685 are polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) and metals related to impacted fill material. The data collected to date indicates the historic fill compounds at the Liberty Street Parcel are mainly related to coal/coal ash and slag. The data collected within the Liberty Street Parcel indicate that PCBs are not a compound of concern for this portion of the site. The highest concentration of PCBs detected on-site was 3.9 ppm. All other PCB data was below the S-1/GW-3 standard of 2 ppm. The average PCB concentration at the 1-3' depth was 1.1 ppm.

The presence of coal/coal ash has been observed in both the TRC borings and the CDM Smith test pits. During the November 2011 test pit program, 2 samples were collected for analysis of coal/coal ash. The data from the suspect coal ash material collected at a depth of approximately 4 feet confirmed the presence of coal ash using microscopy techniques. PAHs were detected below the applicable Method 1 standards.

In the surficial samples collected by CDM Smith, metals were detected below the S-1/GW-3 standards. In the Transect B data set (sub-surface samples), lead was detected at concentrations in excess of the S-2/GW-3 standard (300 ppm). All other metals were below the S-2/GW-3 standard. Lead concentrations ranged from 2.5 ppm to 5580 ppm. One sample collected by TRC at location SB-212 exhibited a concentration of lead in excess of the UCL of 3,000 ppm with a concentration of 5580 ppm. The hot spot analysis of this location included averaging the original sample and the duplicate along with the new data collected by CDM Smith in May 2012. Only data above 300 ppm were considered to be part of the hot spot and used in the average. The average concentration of the hot spot was 1333 ppm which is below the lead UCL (3000 ppm).

Groundwater is not a media of concern for this portion of RTN 4-15685. The proposed use of this parcel is for solar panels whose installation will not encounter groundwater which is located at approximately 7 feet below ground surface.

Reason for Activity and Use Limitation

Based on the conclusions of the Method 1 Risk Characterization, a condition of No Significant Risk exists for the current use of the site as a DPI and DPF storage yard and for the proposed future use for solar panels. Site exposure point concentrations were not below the most stringent S-1 criteria, therefore an AUL is required to restrict future residential use of the property. In addition, the AUL requires a Soil Management Plan and Health and Safety Plan for any future excavation of soil. The Soil Management Plan must include provisions for the management of urban fill material in accordance with the applicable MassDEP policies.

Permitted Activities and Uses Set Forth in this AUL Opinion

This AUL Opinion provides that a condition of No Significant Risk to health, safety, public welfare or the environment exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) so long as any of the following activities and uses occur on the Property:

- (i) Activities consistent with use of the property as a DPI and DPF maintenance yard including but not limited to parking, storage of equipment and materials such as road salt and sand and use of the property for solar panels;
- (ii) Site maintenance that does not cause or result in the removal of soil. Future construction activities, if any, are required to be accomplished under plans described in (iv) below;
- (iii) Any emergency utility repair, construction and/or other work (5 working days or less) in soil of any depth provided that promptly following the completion of the project such soils are returned to their original location or are properly disposed of off-site and are replaced with acceptable soil as determined by a Licensed Site Professional (LSP);
- (iv) Any subsurface utility, construction and/or other work, other than emergency repairs, in soil of any depth provided that appropriate Soil Management and Health and Safety Plans are developed and implemented prior to initiation of such activities and provided that following the completion of the project such soils are returned promptly to their original location or properly disposed of off-site and are replaced with acceptable soil as determined by an LSP;
- (v) Such other activities or uses which, in the opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare or the environment than the activities and uses set forth in this paragraph; and
- (vi) Such other activities and uses not identified in the following paragraph as being Activities and Uses Inconsistent with the AUL.

Activities and Uses Inconsistent with this AUL Opinion

Activities and uses which are inconsistent with the objectives of this AUL Opinion, and which, if implemented at the Property, may result in a significant risk of harm to health, safety, public welfare or the environment are as follows:

- (i) Use of the Property for residential use;
- (ii) Use of contaminated site soils for cultivation of fruits, vegetables or other produce destined for human consumption; and
- (iii) Activities and/or uses which involve the disturbance of the urban fill material, other than emergency repairs, without prior development of a Soil Management Plan and Health and Safety Plan in accordance with the Obligations and Conditions described below.

Obligations and Conditions Set Forth in the AUL Opinion

If applicable, obligations and/or conditions to be undertaken and/or maintained at the Property to maintain a condition of No Significant Risk as set forth in this AUL Opinion shall include the following:

- (i) Prior to the performance of any non-emergency intrusive subsurface activities within the designated AUL area including, but not limited to, excavation of any soil, a written Soil Management Plan and a written Health and Safety Plan must be implemented in accordance with the following guidelines:
 - (a) The Soil Management Plan shall be prepared by a LSP and must describe soil excavation, handling, storage, transport and disposal procedures, and must include a description of the engineering controls and air monitoring procedures needed to protect off-site receptors from exposures to fugitive dust and particulates and exposures to contaminated material via dermal contact. Workers who may come in contact with the soil should be appropriately trained on the requirements of the Soil Management Plan, and the Soil Management Plan must remain available on site throughout the course of the project; and
 - (b) The Health and Safety Plan must be prepared by a Certified Industrial Hygienist or other qualified professional familiar with worker health and safety procedures and requirements. The Health and Safety Plan should specify the type of personal protection, engineering controls, and environmental monitoring necessary to prevent worker and other potential receptor exposures to soil through ingestion, dermal contact and inhalation. Workers who may come in contact with the soil should be appropriately trained on the requirements of the Health and Safety Plan, and the Health and Safety Plan must remain available on site throughout the course of the project.

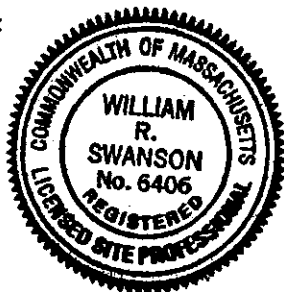
William R. Swanson

William R. Swanson, P.E., LSP

10/22/2012

Date

LSP Seal:



A true copy of instrument as recorded in
 Bristol County (S.D.) Registry of Deeds
 in Book 10707 Page 79
 ATTEST:

M. Mearns
 REGISTER

Notice of Interest Holders
January 14, 2013



ENVIRONMENTAL STEWARDSHIP DEPARTMENT/
NEW BEDFORD CONSERVATION COMMISSION

CITY OF NEW BEDFORD
JONATHAN F. MITCHELL, MAYOR

January 14, 2013

Certified Mail, Return Receipt Requested

Howland Place Realty Trust
Attn. John E. Williams and Curtis J. Mello, Trustees
651 Orchard Street
New Bedford, MA 02744

Re: Notice of Activity and Use Limitation
Liberty Street parcel (Map 76, Lot 256, and Map 70, Lots 2 [portion] and 227)
New Bedford, MA 02740
Release Tracking Number 4-15685

Dear Mr. Williams and Mr. Mello,

The City of New Bedford intends to place a Notice of Activity and Use Limitation (AUL) on the three lots or portions of lots listed above and shown on the attached site plan (the "Property"), of which the City is the owner. This notification is being provided to you pursuant to the Massachusetts Contingency Plan (MCP), 310 CMR 40.1074 (1)(e), as a current holder of a record interest in the area subject to the AUL. The AUL is intended to cover the entire Property.

According to a title review, the record interest in the Property held by you is described as Easement "B" in a deed from the City of New Bedford to Howland Place Realty Trust on April 16, 2004, and recorded in the Bristol County Registry of Deeds, Book 6904, Page 76. I have attached a copy of this document for your reference.

Response actions have been conducted at the Property under the oversight of a Licensed Site Professional (LSP) pursuant to the MCP. The City anticipates filing a Partial Response Action Outcome (RAO) Statement and an AUL for the Property with the Massachusetts Department of Environmental Protection (MassDEP) within the next two months, in support of regulatory closure.

Activities and Uses Consistent with the AUL will likely include:

- (i) Activities consistent with use of the property as a Department of Public Infrastructure (DPI) and Department of Public Facilities (DPF) maintenance yard including but not limited to parking, storage of equipment and materials such as road salt and sand and use of the property for solar panels.
- (ii) Site maintenance that does not cause or result in the removal of soil. Future construction activities, if any, are required to be accomplished under plans described in (iv) below;

(iii) Any emergency utility repair, construction and/or other work (5 working days or less) in soil of any depth provided that promptly following the completion of the project such soils are returned to their original location or properly disposed of off-site and are replaced with acceptable soil as determined by a LSP;

(iv) Any subsurface utility, construction and/or other work, other than emergency repair, in soil of any depth provided that appropriate Soil Management and Health and Safety Plans are developed and implemented prior to initiation of such activities and provided that following the completion of the project such soils are returned promptly to their original location or properly disposed of off-site and are replaced with acceptable soil as determined by an LSP;

(v) Such other activities or uses which, in the Opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare or the environment than the activities and uses set forth in this Paragraph; and

(vi) Such other activities and uses not identified in Paragraph 2 as being Activities and Uses Inconsistent with the AUL.

Activities and Uses Inconsistent with the AUL will likely include:

(i) Use of the Property for residential use;

(ii) Use of site soils for cultivation of fruits, vegetables or other produce destined for human consumption; and

(iii) Activities and/or uses which involve the disturbance of the urban fill material, other than emergency repairs, without prior development of a Soil Management Plan and Health and Safety Plan in accordance with the Obligations and Conditions of this Notice.

Obligations and Conditions of the AUL will likely include:

(i) Prior to the performance of any non-emergency intrusive subsurface activities within the designated AUL area including, but not limited to, the excavation of soil at any depth, a written Soil Management Plan and a written Health and Safety Plan must be implemented in accordance with the following guidelines:

(a) The Soil Management Plan shall be prepared by a LSP and must describe soil excavation, handling, storage, transport and disposal procedures, and must include a description of the engineering controls and air monitoring procedures needed to protect off-site receptors from exposures to fugitive dust and particulates and exposures to contaminated material via dermal contact. Workers who may come in contact with the soil should be appropriately trained on the requirements of the Soil Management Plan, and the Soil Management Plan must remain available on site throughout the course of the project. The Soil Management Plan must be in accordance with the LSP Opinion attached hereto as Exhibit C; and

(b) The Health and Safety Plan must be prepared by a Certified Industrial Hygienist or other qualified professional familiar with worker health and safety procedures and requirements. The Health and Safety Plan should specify the type of personal protection,

engineering controls, and environmental monitoring necessary to prevent worker and other potential receptor exposures to soil through ingestion, dermal contact and inhalation. Workers who may come in contact with the soil should be appropriately trained on the requirements of the Health and Safety Plan, and the Health and Safety Plan must remain available on site throughout the course of the project.

This notification provides you with a 30-day review period from date of receipt to provide comments on the proposed AUL terms, unless you choose to waive the 30-day period by providing me a written statement to that effect. Please contact me if you have any questions. The City of New Bedford intends to record the Notice of AUL in the Registry of Deeds on or after February 22, 2013.

Respectfully,

Cheryl L. Henlin
Environmental Planner
(508) 961-4576 – office direct
Cheryl.Henlin@newbedford-ma.gov

Attachments: Site Plan
Recorded Easement

Copies of Notification and Public Notice
per 40.1403(7)

Murphy, Kathleen G.

From: Cheryl L. Henlin [CHenlin@newbedford-ma.gov]
Sent: Monday, April 01, 2013 1:53 PM
To: Brenda Weis
Cc: Molly Cote; Murphy, Kathleen G.
Subject: Liberty Street Slim AUL
Attachments: Slim AUL as recorded_cert copy_031113.pdf

Board of Health
Attn. Director Brenda Weis
1213 Purchase Street
New Bedford, MA 02740

Re: Notice of Activity and Use Limitation
Liberty Street "Slim" Parcel
Liberty Street and Parker Street (northeast corner)
New Bedford, Massachusetts 02740
Release Tracking Number RTN 4-15685 (partial)

Dear Dr. Weis,

On March 11, 2013, a Notice of Activity and Use Limitation (AUL), a copy of which is attached, was recorded with the Bristol County Registry of Deeds (Southern District) in Book 10707, Pages 79 through 90, for the above referenced property. The AUL encompasses a portion of Map 70, Lot 2, and all of the parcels noted by the City of New Bedford's Assessors Office as Map 70, Lot 227, and Map 76, Lot 256. It identifies certain activities and uses which are inconsistent with maintaining a condition of No Significant Risk at the Site in order to prevent exposure and relocation of urban fill material located at depth. The AUL also identifies those activities and uses which are consistent with maintaining a condition of No Significant Risk as well as those obligations and conditions necessary to ensure that a condition of No Significant Risk continues to exist at the property for the foreseeable future.

This public notice is being provided pursuant to the Massachusetts Contingency Plan, 310 CMR 40.1090 and 310 CMR 40.1403(7)(a). If you have any questions, please do not hesitate to contact me.

Respectfully,

Cheryl Henlin
Environmental Planner

cc: Molly Cote, Massachusetts Department of Environmental Protection
Kathleen Murphy, P.E., LSP, CDM Smith

Murphy, Kathleen G.

From: Cheryl L. Henlin [CHenlin@newbedford-ma.gov]
Sent: Monday, April 01, 2013 1:50 PM
To: Mayor Jon Mitchell
Cc: Mikaela A. McDermott; Molly Cote; Murphy, Kathleen G.
Attachments: Slim AUL as recorded_cert copy_031113.pdf

Mayor Jonathan Mitchell
133 William Street
New Bedford, MA 02740

Re: Notice of Activity and Use Limitation
Liberty Street "Slim" Parcel
Liberty Street and Parker Street (northeast corner)
New Bedford, Massachusetts 02740
Release Tracking Number RTN 4-15685 (partial)

Dear Mayor,

On March 11, 2013, a Notice of Activity and Use Limitation (AUL), a copy of which is attached, was recorded with the Bristol County Registry of Deeds (Southern District) in Book 10707, Pages 79 through 90, for the above referenced property. The AUL encompasses a portion of Map 70, Lot 2, and all of the parcels noted by the City of New Bedford's Assessors Office as Map 70, Lot 227, and Map 76, Lot 256. It identifies certain activities and uses which are inconsistent with maintaining a condition of No Significant Risk at the Site in order to prevent exposure and relocation of urban fill material located at depth. The AUL also identifies those activities and uses which are consistent with maintaining a condition of No Significant Risk as well as those obligations and conditions necessary to ensure that a condition of No Significant Risk continues to exist at the property for the foreseeable future.

This public notice is being provided pursuant to the Massachusetts Contingency Plan, 310 CMR 40.1090 and 310 CMR 40.1403(7)(a). If you have any questions, please do not hesitate to contact me.

Respectfully,

Cheryl Henlin
Environmental Planner

cc: Molly Cote, Massachusetts Department of Environmental Protection
Kathleen Murphy, P.E., LSP, CDM Smith

Murphy, Kathleen G.

From: Cheryl L. Henlin [CHenlin@newbedford-ma.gov]
Sent: Monday, April 01, 2013 1:55 PM
To: Danny Romanowicz
Cc: Molly Cote; Murphy, Kathleen G.
Subject: Liberty Street Slim AUL
Attachments: Slim AUL as recorded_cert copy_031113.pdf

Inspectional Services
Attn. Commissioner Danny Romanowicz
133 William Street
New Bedford, MA 02740

Re: Notice of Activity and Use Limitation
Liberty Street "Slim" Parcel
Liberty Street and Parker Street (northeast corner)
New Bedford, Massachusetts 02740
Release Tracking Number RTN 4-15685 (partial)

Dear Commissioner Romanowicz,

On March 11, 2013, a Notice of Activity and Use Limitation (AUL), a copy of which is attached, was recorded with the Bristol County Registry of Deeds (Southern District) in Book 10707, Pages 79 through 90, for the above referenced property. The AUL encompasses a portion of Map 70, Lot 2, and all of the parcels noted by the City of New Bedford's Assessors Office as Map 70, Lot 227, and Map 76, Lot 256. It identifies certain activities and uses which are inconsistent with maintaining a condition of No Significant Risk at the Site in order to prevent exposure and relocation of urban fill material located at depth. The AUL also identifies those activities and uses which are consistent with maintaining a condition of No Significant Risk as well as those obligations and conditions necessary to ensure that a condition of No Significant Risk continues to exist at the property for the foreseeable future.

This public notice is being provided pursuant to the Massachusetts Contingency Plan, 310 CMR 40.1090 and 310 CMR 40.1403(7)(a). If you have any questions, please do not hesitate to contact me.

Respectfully,

Cheryl Henlin
Environmental Planner

cc: Molly Cote, Massachusetts Department of Environmental Protection
Kathleen Murphy, P.E., LSP, CDM Smith

NOTICE OF ACTIVITY AND USE LIMITATION

**Site Name: Liberty Street Parcel
Site Address: Parker Street and Liberty Street
New Bedford, MA 02740
MADEP Release Tracking Number 4-15685 (partial)**

Pursuant to the Massachusetts Contingency Plan (310 CMR 40.1073(7)), a **NOTICE OF ACTIVITY AND USE LIMITATION** on the above disposal site has been recorded with the **BRISTOL COUNTY REGISTRY OF DEEDS (Southern District)** on **March 11, 2013** in Book 10707, Pages 79 to 90.

The **NOTICE OF ACTIVITY AND USE LIMITATION** (“AUL”) limits the following activities and uses on that portion of the above property in the AUL as the “AUL Area”:

- (i) Use of the Property for residential use;
- (ii) Use of site soils for cultivation of fruits, vegetables or other produce destined for human consumption; and
- (iii) Activities and/or uses which involve the disturbance of the urban fill material, other than emergency repairs, without prior development of a Soil Management Plan and Health and Safety Plan in accordance with the Obligations and Conditions of the AUL.

Any person interested in obtaining additional information or reviewing the **NOTICE OF ACTIVITY AND USE LIMITATION** and the disposal site file may contact Ms. Cheryl Henlin, Environmental Planner with the **CITY OF NEW BEDFORD, 133 WILLIAM STREET, ROOM 304, NEW BEDFORD, MA 02740** at **508-991-6188**.

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aren't measured by alphabet titles, and the Alvarez-Trout bout has all the ingredients of a humdinger of a fight.

This is a classic case of boxer vs. puncher, with Trout in the role as boxer and Alvarez being the hitter.

Trout is 27, with a record of 26-0, with 14 knockouts. Alvarez is still a kid at 22 with a record of 41-0-1, with 30 KOs.

Both fighters own victories over future Hall-of-Famers on their resumes. Trout is coming off an upset win over Miguel Cotto in December, while Alvarez was equally impressive in a unanimous decision over Shane Mosley last May.

Yeah, both Cotto and Mosley have lost a step or two, but they are still cagey, dangerous fighters, with a world of experience.

Alvarez also holds a knockout victory over former world welterweight champion Carlos Baldominr, becoming only the second fighter to stop Baldominr and the first to knock him out, as in counted out. The kid can hit.

Predictions on the fight have been about equally divided. I've never seen Trout, a southpaw, in action, so I'm not qualified to render a prediction. But the fact that he beat Cotto convincingly tells me he must be good.

I have seen Alvarez a couple of times and have been impressed with his progress at such a young age. So was Mosley.

"He's up there with the top (fighters)," said Mosley after his loss to Alvarez. "Mayweather's fast ... Cotto and all those guys I've fought, he's up there with them."

As in the case of most fights between a boxer and a puncher, it's going to come down to who controls the tempo.

Trout's hopes rest on his ability, or

Legals
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Waterways Regulation Program
 Notice of License Application pursuant to M.G.L. Chapter 91 Waterways License Application Number W13-3813
 Catherine Bragg Lanier
 Notification Date: April 8, 2013

Legals
NOTICE OF PETITION FOR TERMINATION OF PARENTAL RIGHTS
 G.L.c.210 SECTION 3
 DOCKET NUMBER: BR13A0026CW
 Commonwealth of Massachusetts
 The Trial Court
 Probate and Family Court
 Bristol Probate and Family Court
 Office of Register
 Suite 240
 Apr. 8

Legals
NOTICE OF ACTIVITY AND USE LIMITATION
 Site Name: Liberty Street Parcel
 Site Address: Parker Street and Liberty Street
 New Bedford, MA 02740
 MassDEP Release Tracking Number 4-15685 (partial)
 Pursuant to the Massachusetts Contingency Plan (310 CMR 40.1073(7)), a NOTICE OF ACTIVITY AND USE LIMITATION on the above disposal site has been recorded with the BRISTOL COUNTY REGISTRY OF DEEDS (Southern District) on March 11, 2013 in Book 10707, Pages 79 to 90. The NOTICE OF ACTIVITY AND USE LIMITATION ("AUL") limits the following activities and uses on that portion of the above property in the AUL as the "AUL Area":
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 Any person interested in obtaining additional information or reviewing the NOTICE OF ACTIVITY AND USE LIMITATION and the disposal site file may contact Ms. Cheryl Henlin, Environmental Planner with the CITY OF NEW BEDFORD, 133 WILLIAM STREET, ROOM 304, NEW BEDFORD, MA 02740 at 508-991-6188.
 Apr. 5

Legals
NOTICE OF PETITION FOR TERMINATION OF PARENTAL RIGHTS
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Legals
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 Commonwealth of Massachusetts
 The Trial Court
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 Bristol Probate and Family Court
 Office of Register
 Suite 240
 Apr. 8

Legals
MORTGAGEE'S SALE OF REAL ESTATE
 765 Kempton Street, New Bedford, MA 02740
 By virtue and in execution of the Power of Sale contained in a certain mortgage given by Johna Veale to Equity One Inc. and through its nominee Mortgage Electronic Registration Systems, Inc. dated November 29, 2004, and recorded with the Bristol

Legals
NOTICE OF PETITION FOR TERMINATION OF PARENTAL RIGHTS
 G.L.c.210 SECTION 3
 DOCKET NUMBER: BR13A0026CW
 Commonwealth of Massachusetts
 The Trial Court
 Probate and Family Court
 Bristol Probate and Family Court
 Office of Register
 Suite 240
 Apr. 8

Legal Notice
Cross Road Storage Self Storage Facility Auction Sale
 Self Storage Facility Operator's Sale for non-payment of Storage Charges pursuant to the power of sale contained in M.G.L. Chapter 105 A, Section 4. The following property will be sold at Public Auction at 11AM on April 24, 2013 on the premises of Cross Road Storage, 50 Cross Road, North Dartmouth, MA. All household furniture, tools, miscellaneous goods held for Shawn Dupras B067, Kristen Ferreira D142, Ryan E. Karpuska B054, Michelle Matteo D145, John Furlong B044, Patricia Henagan B043, Brian Silva F241. Sale by order of Cross Road Storage.

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